

183

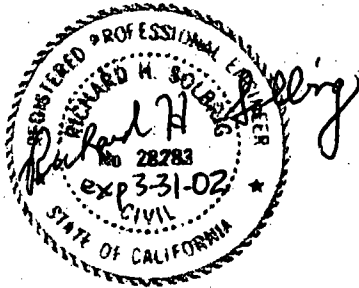
The West Fork, Carson River Water Quality Objectives were exceeded as follows (a ✓ indicates objective exceeded):

Site	Location	TDS		Cl ⁻		TKN		NO ₃ -N		Total N		Total P		SO ₄		Boron		Exch Na %	
		Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence
SW-01	Carson River, Woodfords	55	✓	1.0	✓	0.13	✓	0.02	✓	0.15	✓	0.02		2.0	✓	0.02		20	✓

Certification

I hereby certify that the enclosed monitoring report was prepared under my direct supervision and that I am a duly Registered Engineer under the laws of the State of California.

Sincerely,



Richard Solbrig,
Assistant Manager/Engineer

Enclosures:

1.

February Monthly Report	Pages
Wastewater Treatment plant	2
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Sample site locations	2
Monitoring wells (ERB) and Heavenly Valley Creek (HVC)	1
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Alpine County soils -	0
Total number of pages:	12

- cc: Calif. Dept. of Health Services, ODW - Jess Morehouse
El Dorado Co. Dept. of Environmental Health - Virginia Huber
Nevada Division of Environmental Protection - Wendel McCurry
Alpine County Health Department - Dr. Richard Botto
Alpine County Health Department - Jim Goodloe
Alpine County Board of Supervisors
EPA - Permit and Compliance Branch, W-5 - Bill Pierce
Desert Research Group (Alpine County Consultants) - Bill Albright
STPUD Board of Directors
STPUD General Manager / District Engineer - Robert G. Baer
STPUD Manager of Operations - Ross Johnson
STPUD Laboratory Director - Terry Powers
STPUD Operations Chief Senior Operator - Jeff Lee
STPUD Manager of Alpine County Operations - Hal Bird

**SOUTH TAHOE PUBLIC UTILITY DISTRICT
WASTEWATER TREATMENT PLANT MONTHLY REPORT**

03/05/99
14:38:50

FEBRUARY 1999

Date	Day	FLOW MGD				PRECIP		D.O. mg/L Fin	COD mg/L		BOD mg/L		SS mg/L	
		Inf	2-Hr Peak Inf	Eff	Pond Return	Pond Inf	Inch		Type	Raw	Fin	Raw	Fin	Raw
02/01/99	Mon	4.68	6.0	4.27				4.15	366					
02/02/99	Tue	4.48	6.0	4.29				4.41	344	32.7	145	5.9	136	3.3
02/03/99	Wed	4.43	6.3	4.20				4.81	347					
02/04/99	Thu	4.53	6.2	4.28				4.83	414					
02/05/99	Fri	4.78	6.2	4.63				4.83	368					
02/06/99	Sat	6.06	7.8	4.71			1.07	4.77	396	30.3	193	6.6	137	3.8
02/07/99	Sun	7.62	12.0	7.28		1.00	1.56	4.11	315					
02/08/99	Mon	5.83	6.9	6.23			1.45	4.25	276					
02/09/99	Tue	5.78	7.4	5.99			1.54	4.74	287					
02/10/99	Wed	5.43	6.6	6.36	0.50			5.02	373					
02/11/99	Thu	5.33	6.5	6.93	1.30			5.78	326	21.6	136	5.6	121	2.8
02/12/99	Fri	5.63	6.8	5.38				6.75	331					
02/13/99	Sat	6.75	9.2	6.42			0.02	5.89	378	26.2	185	5.3	125	2.9
02/14/99	Sun	6.43	9.0	5.72				5.44	407					
02/15/99	Mon	5.77	8.5	5.50				4.89	313					
02/16/99	Tue	5.76	6.4	5.71			0.56	4.57	308					
02/17/99	Wed	6.24	8.0	6.19				5.52	246	30.0	118	4.6	98	3.7
02/18/99	Thu	5.69	7.6	6.03			0.37	6.11	306					
02/19/99	Fri	5.74	7.2	5.27				6.00	359					
02/20/99	Sat	6.17	8.4	6.30			0.62	4.49	382	29.4	151		114	4.2
02/21/99	Sun	5.76	7.1	5.59			0.06	5.39	359					
02/22/99	Mon	5.04	6.8	5.10				5.27						
02/23/99	Tue	4.74	5.9	4.89				5.06	312	33.7	134	5.0	119	5.0
02/24/99	Wed	4.75	6.6	1.79		3.00	0.18	5.51	414					
02/25/99	Thu	4.86	6.2	4.75	1.00	1.25	0.12	5.15	373					
02/26/99	Fri	4.80	6.6	6.17	1.10			5.16	423					
02/27/99	Sat	6.53	7.6	7.71	1.30			8.08	384	24.0	166	8.0	160	5.2
02/28/99	Sun	6.36	7.2	6.86	0.90		0.35	6.93	352					
PERMIT MAX		7.7								300		45		60
PERMIT MIN														
PERMIT AVE										60		30		30
TOTAL		155.97	203.0	154.55	6.10	5.25	7.90	147.91	9459	227.9	1228	40.9	1010	30.8
MAXIMUM		7.62	12.0	7.71	1.30	3.00	1.56	8.08	423	33.7	193	8.0	160	5.2
MINIMUM		4.43	5.9	1.79	0.50	1.00	0.02	4.11	246	21.6	118	4.6	98	2.8
AVERAGE		5.57	7.2	5.52	1.02	1.75	0.66	5.28	350	28.5	154	5.8	126	3.8
# Tests		28	28	28	6	3	12	28	27	8	8	7	8	8

**SOUTH TAHOE PUBLIC UTILITY DISTRICT
WASTEWATER TREATMENT PLANT MONTHLY REPORT**

03/05/99
14:38:50

FEBRUARY 1999

Date	Day	SETTLEABLE SOLIDS mL/L		MBAS mg/L		pH Units		TURBIDITY NTU		CI2 mg/L	FINAL COLIFORMS MPN/100 mL			TDS mg/L		ALKALINITY mg/L	
		Raw	Fin	Raw	Fin	Raw	Fin	Fin	Fin		Total	7day-	Median	Raw	Fin	Raw	Fin
02/01/99	Mon	10.0	< 0.1			7.35	7.58	2.40	5.84	<	2	<	2			147	138
02/02/99	Tue	9.0	< 0.1			7.36	7.54	2.20	5.21	<	2	<	2	233	224	142	134
02/03/99	Wed	8.5	< 0.1			7.43	7.46	2.10	4.31	<	2	<	2			137	129
02/04/99	Thu	9.0	< 0.1			7.35	7.30	2.10	4.58	<	2	<	2			140	128
02/05/99	Fri	10.0	< 0.1			7.42	7.35	1.90	3.77	<	2	<	2			144	129
02/06/99	Sat	11.0	< 0.1			7.57	7.64	2.20	4.58	<	2	<	2			151	136
02/07/99	Sun	8.0	< 0.1			7.40	7.28	5.30	2.70	<	2	<	2			113	130
02/08/99	Mon	8.0	< 0.1			7.60	7.32	5.10	5.57	<	2	<	2			118	106
02/09/99	Tue	6.5	< 0.1	0.88	0.037	7.43	7.45	2.85	5.66	<	2	<	2			108	102
02/10/99	Wed	9.0	< 0.1			7.53	7.40	2.40	5.75	<	2	<	2			121	102
02/11/99	Thu	8.0	< 0.1			7.38	7.42	1.90	5.57	<	2	<	2	238	192	126	104
02/12/99	Fri	8.0	< 0.1			7.48	7.40	1.75	4.94	<	2	<	2			130	94
02/13/99	Sat	9.0	< 0.1			7.42	7.66	1.60	5.39	<	2	<	2			157	137
02/14/99	Sun	10.5	< 0.1			7.60	7.46	2.10	4.40	<	2	<	2			154	145
02/15/99	Mon	9.0	< 0.1			7.34	7.49	1.90	4.67	<	2	<	2			149	144
02/16/99	Tue	8.0	< 0.1			7.34	7.26	2.00	4.22	<	2	<	2			126	128
02/17/99	Wed	8.0	< 0.1			7.25	7.35	1.80	4.13	<	2	<	2	204	187	111	110
02/18/99	Thu	8.0	< 0.1			7.55	7.33	1.80	5.12	<	2	<	2			122	108
02/19/99	Fri	8.5	< 0.1			7.56	7.37	1.70	4.58	<	2	<	2			123	115
02/20/99	Sat	10.5	< 0.1			7.58	7.50	2.00	4.85	<	2	<	2			144	134
02/21/99	Sun	10.0	< 0.1			7.59	7.48	2.05	3.95	<	2	<	2			144	134
02/22/99	Mon		< 0.1				7.68	2.70	5.84	<	2	<	2				126
02/23/99	Tue	8.5	< 0.1			7.35	7.58	2.40	5.39	<	2	<	2	238	214	131	126
02/24/99	Wed	9.0	< 0.1			7.46	7.75	2.40	5.12	<	2	<	2			130	125
02/25/99	Thu	8.0	< 0.1			7.50	7.29	3.25	4.40	<	2	<	2			130	122
02/26/99	Fri	10.0	< 0.1			7.49	7.32	2.90	5.93	<	2	<	2			135	124
02/27/99	Sat	9.0	< 0.1			7.35	7.48	2.90	4.76	<	2	<	2			139	130
02/28/99	Sun	10.0	< 0.1			7.40	7.33	3.00	4.22	<	2	<	2			133	132
PERMIT MAX			0.1		2.0		8.5	20			240		23				
PERMIT MIN							6.5										
PERMIT AVE					1.0			10									
TOTAL		241.0	2.8	0.88	0.037	201.08	208.47	68.70	135.45	56	56	913	817	3605	3472		
MAXIMUM		11.0	0.1	0.88	0.037	7.60	7.75	5.30	5.93	2	2	238	224	157	145		
MINIMUM		6.5	0	0.88	0.037	7.25	7.26	1.60	2.70	2	2	204	187	108	94		
AVERAGE		8.9	0.1	0.88	0.037	7.45	7.45	2.45	4.84	2	2	228	204	134	124		
# Tests		27	28	1	1	27	28	28	28	28	28	4	4	27	28		

SOUTH TAHOE
PUBLIC UTILITY DISTRICT
MEMORANDUM



Date: February 25, 1999
To: Bob Baer, Diane Noble
From: Tim Rieger
Topic: Export Line Check

On February 24, 1999, Larry Johnson and I conducted a check of the District's export line from the treatment plant to station 564+06 near the Harvey Place reservoir.

Several wet spots were checked. However, nothing positive was found. District Crews were found working on the C-line at station 539+50. No damage to the export line was found during this check.

CC Terry Powers

SAMPLE LOCATIONS

TAHOE BASIN MONITORING WELLS

<u>Site</u>	<u>Location</u>
ERB	Emergency Retention Basin
CONTROL	North of Post Office
MW02-25, -50	Emergency Retention Basin, S side
MW03-25, -50	Emergency Retention Basin, S side
MW04-25, -50	Emergency Retention Basin, W side
MW07-25, -50	Emergency Retention Basin, N side
MW08-25, -50	Pond #1, SW corner
MW11	S.E. corner of wastewater treatment plant grounds
MW12	South of Emergency Pump Building, for buried sludge
MW13	Pond 2, along Heavenly Valley Creek, for buried sludge

HEAVENLY VALLEY CREEK

HVC-1	At Pioneer Trail
HVC-2	250 ft upstream of Pond #2
HVC-3	25 ft downstream of Johnson Blvd.
HVC-4	Effluent of drain pipe from Lower Shop area
HVC-5	Effluent of drainage pipe along Johnson Blvd, 10 feet upstream of Johnson Blvd.

ALPINE COUNTY MONITORING WELLS

<u>Site</u>	<u>Location</u>
ACMW-01AW	Below main dam at Harvey Place Reservoir
ACMW-01BE	Below auxiliary dam at Harvey Place Reservoir
ACMW-02, N&S	On dam access road at Diamond Valley Road
ACMW-03	Bruns ranch, east side of Highway 88
ACMW-04W	Gansberg ranch, west side of Highway 88
ACMW-05	Dressler ranch
ACMW-06, N&S	Celio ranch, on Diamond Valley Road

ALPINE SOILS

<u>Site</u>	<u>Ranch</u>
S2	Celio
S3	Hall
S4	Gansberg
S5	Gansberg
S6	Neddenriep
S7	Bruns
S8	Dressler

ALPINE GROUNDWATERS

<u>Site</u>	<u>Homeowner</u>
GW-01	Sagues
GW-03	Smith/Springmeyer
GW-04	Celio
GW-05	Neddenriep
GW-07	Gansberg, Jr.
GW-08	Arant
GW-11	Diamond Valley School
GW-14	Sierra Pines Store

ALPINE SURFACEWATERS

<u>Site</u>	<u>Location</u>
SW-01	Carson River, Woodfords
SW-02	Indian Creek, @ HWY 89
SW-03	Indian Creek, @ upper bridge
SW-04	Indian Creek, @ lower bridge
SW-05	Carson River, Paynesville
SW-06	Carson River, Stateline
SW-07	Fredericksberg Ditch, Stateline
SW-08	Irrigation Ditch along Carson River Road
SW-09	Carson River, Dressler Lane
SW-10	Indian Creek, @ Smith-Springmeyer Ranch

TAHOE BASIN MONITORING

03/04/99

Site	Date	ID	Location	Depth msl	Temp C	pH	EC umhos	Cl mg/L	COD mg/L	NO3-N mg/L	Comment
Buried Sludge Monitoring											
MW11	02/23/99	990223-18	Sludge Pond	6267.7	9.0	6.53	84	1.0	< 5.0	0.102	
MW12	02/23/99	990223-19	Sludge Pond	6267.0	8.2	6.17	182	2.3	< 5.0	0.178	
MW13	02/23/99	990223-20	Sludge Pond	6258.5	5.5	6.49	899	4.7	19.6	9.080	
ERB Monitoring											
CONTROL	02/23/99	990223-12	At Post Office	6283.4	8.6	6.82	174	6.1	< 5.0	2.140	
MW01.5	02/23/99	990223-13	SW corner of ERB	6269.2	8.2	6.55	170	3.4	< 5.0	0.693	
MW02-50	02/23/99	990223-14	Black Bart side of ERB	6269.0	8.7	6.14	478	44.9	< 5.0	11.000	
MW03-50	02/23/99	990223-15	Black Bart side of ERB	6269.0	9.9	6.00	445	42.3	< 5.0	7.030	
MW04-50	02/24/99	990224-06	Hank Monk side of ERB	6269.2	9.1	6.11	80	5.8	< 5.0	0.072	
MW07-50	02/23/99	990223-16	North side of ERB	6279.9	7.2	5.80	275	25.4	< 5.0	0.637	
Heavenly Valley Creek											
HVC-1	02/02/99	990202-09	Downstream of Pioneer		1.2	6.52	49	1.2	< 5.0	0.100	
HVC-2	02/02/99	990202-10	250' upstream of Pond #2		0.8	6.88	53	1.6	< 5.0	0.040	
HVC-3	02/02/99	990202-11	25' downstream of Johnson Blvd		0.5	6.90	58	1.9	< 5.0	0.027	
HVC-4	02/02/99	990202-12	Effluent of drain from Lower Sho		3.0	6.88	95	0.8	12.1	0.113	
HVC-5	02/02/99	90202-HVC	Effluent of drainage pipe along J								No flow
Treatment Plant Monitoring											
MW08-25	02/23/99	990223-17	SW side of Pond #1	6249.0	9.1	5.92	969	44.4	81.9	< 0.010	

ALPINE COUNTY MONITORING

03/04/99

Site	Date	ID	Location	Temp C	pH	EC umhos	DO mg/L	Alk mg/L	TDS mg/L	SS mg/L	Turb NTU	Cl mg/L	SO4 mg/L
Alpine Monitoring Wells													
ACMW-01AW	02/16/99	990216-12	Main Dam	9.0	6.64	96		45	74			1.2	
ACMW-01BE	02/16/99	990216-13	Secondary Dam	8.2	6.50	127		57	85			1.6	
ACMW-02N	02/16/99	990216-14	Access Gate	9.8	6.87	139		60	86			2.7	
ACMW-02S	02/16/99	990216-15	Access Gate	9.4	6.74	100		46	69			2.1	
ACMW-04W	02/16/99	990216-16	Gansberg	11.5	5.80	204		55	137			12.4	
ACMW-06N	02/16/99	990216-17	Celio	10.4	6.94	685		259	417			51.8	
ACMW-06S	02/16/99	990216-18	Celio	10.8	11.04	595		178	234			75.9	
Groundwaters													
GW-03	02/09/99	990209-17	Smith/Springmeyer	9.0	7.35	300		125	229			1.5	
GW-11	02/09/99	990209-18	Diamond Val. School	7.0	6.17	100		44	80			1.0	
GW-14	02/09/99	990209-19	Sierra Pines	5.0	6.46	115		50	95			1.1	
GW-04	02/16/99	990216-08	Celio	12.1	7.76	266		115	196			3.1	
GW-05	02/16/99	990216-09	Neddenriep	8.9	6.41	288		61	185			27.7	
GW-07	02/16/99	990216-10	Gansberg	6.1	6.39	133		55	98			2.2	
GW-08	02/16/99	990216-11	Arant	12.0	6.02	218		52	136			17.3	
Reservoirs													
HPR	02/09/99	990209-20	Harvey Place Reservoir	2.2	7.53	415	10.20	96	206	29.60	15	43.1	19.4
ICR	02/09/99	990209-21	Indian Creek Reservoir	1.0	8.14	75	10.40	31	75	43.50	26	1.1	5.2
Surfacewaters: Carson R													
SW-01	02/09/99	990209-15	Carson R Woodfords	2.0	8.02	74	11.80	29	65	1.82	1.2	2.4	2.3
SW-05	02/09/99	990209-16	Carson R Paynesville	2.6	6.83	81	10.60	33	67	5.05	2.8	2.8	2.7

ALPINE COUNTY MONITORING

03/04/99

Site	Date	TotalP mg/L	PO4-P mg/L	TKN mg/L	NH3-N mg/L	NO2-N mg/L	NO3-N mg/L	Total N mg/L	MBAS mg/L
Alpine Monitoring Wells									
ACMW-01A	02/16/99	0.018	<	0.100	< 0.020	< 0.010	0.147	0.257	
ACMW-01B	02/16/99	0.022		0.131	< 0.020	< 0.010	0.892	1.033	
ACMW-02N	02/16/99	0.016		0.169	< 0.020	< 0.010	0.175	0.354	
ACMW-02S	02/16/99	0.010		0.287	< 0.020	< 0.010	< 0.010	0.307	
ACMW-04W	02/16/99	0.014		0.162	< 0.020	< 0.010	2.590	2.762	
ACMW-06N	02/16/99	0.310		0.345	0.029	< 0.010	< 0.010	0.365	
ACMW-06S	02/16/99	0.026		0.648	0.231	0.043	0.059	0.750	
Groundwaters									
GW-03	02/09/99	0.040		0.246	< 0.020	< 0.010	0.648	0.904	
GW-11	02/09/99	0.022		0.144	< 0.020	< 1.000	0.417	1.561	
GW-14	02/09/99	0.056		0.140	< 0.020	< 0.010	0.410	0.560	
GW-04	02/16/99	0.058		0.153	< 0.020	< 0.010	0.748	0.911	
GW-05	02/16/99	0.028		0.106	< 0.020	< 0.010	3.160	3.276	
GW-07	02/16/99	0.092		0.126	< 0.020	< 0.010	1.180	1.316	
GW-08	02/16/99	0.042		0.114	< 0.020	< 0.010	3.190	3.314	
Reservoirs									
HPR	02/09/99	2.030	1.850	13.400	13.600	0.107	1.610	15.117	< 0.025
ICR	02/09/99	0.132	0.034	0.875	0.025	< 0.010	0.085	0.970	
Surfacewaters: Carson R									
SW-01	02/09/99	0.020	0.010	0.216	< 0.020	< 0.010	0.083	0.309	
SW-05	02/09/99	0.056	0.035	0.351	< 0.020	< 0.010	0.136	0.497	

ALPINE COUNTY MONITORING

03/04/99

Site	Date	COD mg/L	BOD mg/L	O & G mg/L	Boron mg/L	Ca mg/L	Mg mg/L	Na mg/L	K mg/L	SAR	Exch Na %	Hardness mg/L	Water Level MSL or Ft
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Alpine Monitoring Wells

ACMW-01A	02/16/99												5482.8
ACMW-01B	02/16/99												5492.7
ACMW-02N	02/16/99												5459.6
ACMW-02S	02/16/99												5461.6
ACMW-04W	02/16/99												4898.7
ACMW-06N	02/16/99												5217.2
ACMW-06S	02/16/99												5205.4

Groundwaters

GW-03	02/09/99												
GW-11	02/09/99												
GW-14	02/09/99												
GW-04	02/16/99												
GW-05	02/16/99												
GW-07	02/16/99												
GW-08	02/16/99												

Reservoirs

HPR	02/09/99	16	3		0.11	14.0	3.2	36.6	7.0	2.30	58.3		48.2
ICR	02/09/99	12	2		0.04	8.0	1.8	4.4	1.9	0.36	24.1		45.5

Surfacewaters: Carson R

SW-01	02/09/99		1		< 0.01	6.9	1.9	3.9	1.5	0.34	23.9		
SW-05	02/09/99		1		0.01	7.3	2.1	4.7	2.4	0.39	25.4		

**ALPINE COUNTY
BACTERIOLOGICAL MONITORING**

03/04/99

Alpine Monitoring Wells

Site	Date	Total Coliform MPN/100mL	Fecal Coliform MPN/100mL	Fecal Streptococci MPN/100mLL
ACMW-01A	02/16/99	< 1.1	< 1.1	
ACMW-01B	02/16/99	1.1	< 1.1	
ACMW-02N	02/16/99	< 1.1	< 1.1	
ACMW-02S	02/16/99	1.1	< 1.1	
ACMW-04W	02/16/99	5.1	< 1.1	
ACMW-06N	02/16/99	< 1.1	< 1.1	
ACMW-06S	02/16/99	< 1.1	< 1.1	

Groundwaters

Site	Date	Total Coliform MPN/100mL	Fecal Coliform MPN/100mL	Fecal Streptococci MPN/100mLL
GW-03	02/09/99	< 1.1	< 1.1	
GW-11	02/09/99	< 1.1	< 1.1	
GW-14	02/09/99	< 1.1	< 1.1	
GW-04	02/16/99	2.2	< 1.1	
GW-05	02/16/99	< 1.1	< 1.1	
GW-07	02/16/99	< 1.1	< 1.1	
GW-08	02/16/99	1.1	< 1.1	

Reservoirs

Site	Date	Total Coliform MPN/100mL	Fecal Coliform MPN/100mL	Fecal Streptococci MPN/100mLL
HPR	02/09/99	500	11	70
ICR	02/09/99	240	30	240

Surfacewaters: Carson R

Site	Date	Total Coliform MPN/100mL	Fecal Coliform MPN/100mL	Fecal Streptococci MPN/100mLL
SW-01	02/09/99	< 30	< 30	
SW-05	02/09/99	< 30	< 30	

**ALPINE COUNTY
BLUE GREEN ALGAE**

ID#	Site	Location	Date	Colonies #	Colony # Cells	Filaments #	Filaments # Cells	Filaments #	Filament Length	Single Cells, #
990209-15	SW-01	Carson R Woodfords	02/09/99	0	0	0	0	0	0	0
990209-16	SW-05	Carson R Paynesville	02/09/99	0	0	0	0	0	0	0
990209-20	HPR	Harvey Place Reservoir	02/09/99	0	0	0	0	0	0	0
990209-21	ICR	Indian Creek Reservoir	02/09/99	0	0	0	0	0	0	0

The West Fork, Carson River Water Quality Objectives were exceeded as follows (a ✓ indicates objective exceeded):

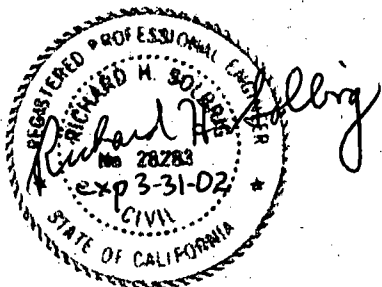
Site	Location	TDS		Cl ⁻		TKN		NO ₃ -N		Total N		Total P		SO ₄		Boron		Exch Na %	
		Limit	Exceedance	Limit	Exceedance	Limit	Exceedance	Limit	Exceedance	Limit	Exceedance	Limit	Exceedance	Limit	Exceedance	Limit	Exceedance	Limit	Exceedance
SW-01	Carson River, Woodfords	55	✓	1.0	✓	0.13	✓	0.02	✓	0.15	✓	0.02		2.0	✓	0.02		20	✓

January Blue Green Algae results are included. Soils results for September and December, 1998 are included.

Certification

I hereby certify that the enclosed monitoring report was prepared under my direct supervision and that I am a duly Registered Engineer under the laws of the State of California.

Sincerely,



Richard Solbrig,
Assistant Manager/Engineer

Enclosures:

1.

January Monthly Report	Pages
Wastewater Treatment plant	2
Permit Compliance Record	1
Export pipeline inspection	1
Sample site locations	2
Monitoring wells (ERB) and Heavenly Valley Creek (HVC)	1
Alpine County Surfacewaters, Groundwaters and Reservoirs	5
Alpine County soils - September & December, 1998	2
Total number of pages:	14

- cc: Calif. Dept. of Health Services, ODW - Jess Morehouse
El Dorado Co. Dept. of Environmental Health - Virginia Huber
Nevada Division of Environmental Protection - Wendel McCurry
Alpine County Health Department - Dr. Richard Botto
Alpine County Health Department - Jim Goodloe
Alpine County Board of Supervisors
EPA - Permit and Compliance Branch, W-5 - Bill Pierce
Desert Research Group (Alpine County Consultants) - Bill Albright
STPUD Board of Directors
STPUD General Manager / District Engineer - Robert G. Baer
STPUD Manager of Operations - Ross Johnson
STPUD Laboratory Director - Terry Powers
STPUD Manager of Alpine County Operations - Hal Bird

**SOUTH TAHOE PUBLIC UTILITY DISTRICT
WASTEWATER TREATMENT PLANT MONTHLY REPORT**

02/08/99
09:27:03

JANUARY 1999

Date	Day	FLOW MGD			Pond Inf	PRECIP		D.O. mg/L Fin	COD mg/L		BOD mg/L		SS mg/L	
		Inf	2-Hr Peak Inf	Eff		Pond Return	Inch		Type	Raw	Fin	Raw	Fin	Raw
01/01/99	Fri	6.15	9.0	6.31				4.19	492					
01/02/99	Sat	5.61	9.2	5.39				6.84	447	45.3	229	8.7	158	5.5
01/03/99	Sun	4.83	6.5	4.80				4.75	432					
01/04/99	Mon	4.22	6.0	4.49				4.67	497					
01/05/99	Tue	4.40	5.8	4.33				5.70	386					
01/06/99	Wed	4.49	6.0	4.02				4.67	444	42.7	175	7.1	166	4.8
01/07/99	Thu	4.38	5.6	4.13				4.27	370					
01/08/99	Fri	4.09	6.2	3.21				4.30	391					
01/09/99	Sat	5.24	6.9	5.33				3.82	394	37.8	184	6.5	159	4.1
01/10/99	Sun	4.61	6.9	4.73				3.67	391					
01/11/99	Mon	4.36	6.0	3.95				5.37	363					
01/12/99	Tue	4.25	5.6	4.38				4.73	377					
01/13/99	Wed	4.15	5.8	3.66				5.85	410	34.0	202	5.6	148	3.4
01/14/99	Thu	4.25	5.5	4.14		0.07	Rain	4.55	347					
01/15/99	Fri	4.69	6.0	4.28		0.60	Snow	5.54	391					
01/16/99	Sat	5.76	7.8	6.09		0.01	Rain	4.55	392	35.8	209	7.0	159	4.7
01/17/99	Sun	5.77	8.3	5.21		0.24	Snow	4.67	370					
01/18/99	Mon	5.68	8.0	5.92		1.38	Snow	4.51	354					
01/19/99	Tue	5.18	6.4	5.10		1.33	Snow	4.96	292					
01/20/99	Wed	5.23	6.1	5.03		0.41	Snow	5.28	314	39.0	141	7.5	104	5.7
01/21/99	Thu	4.71	5.8	4.63				4.97	308					
01/22/99	Fri	4.91	6.2	4.46		0.23	Snow	5.28	412					
01/23/99	Sat	5.68	7.4	5.61		0.79	Snow	3.55	359	37.8	176	8.2	131	4.9
01/24/99	Sun	5.26	6.8	5.19		0.02	Snow	3.99	474					
01/25/99	Mon	4.66	6.2	4.56				4.82	366	36.6	162	8.3	136	4.3
01/26/99	Tue	4.61	5.9	4.38				5.07	338					
01/27/99	Wed	4.64	5.8	4.52				7.64	485					
01/28/99	Thu	4.59	6.0	4.28				5.35	483					
01/29/99	Fri	4.68	6.6	4.29				5.74	481					
01/30/99	Sat	5.60	7.0	5.19				4.34	430	29.4	193	5.7	136	3.4
01/31/99	Sun	5.06	6.4	5.31				3.37	407					
PERMIT MAX		7.7								300		45		60
PERMIT MIN														
PERMIT AVE										60		30		30
TOTAL		151.74	203.7	146.92		5.08		151.01	12397	338.4	1671	64.6	1297	40.6
MAXIMUM		6.15	9.2	6.31		1.38		7.64	497	45.3	229	8.7	166	5.7
MINIMUM		4.09	5.5	3.21		0.01		3.37	292	29.4	141	5.6	104	3.4
AVERAGE		4.89	6.6	4.74		0.51		4.87	400	37.6	186	7.2	144	4.5
# Tests		31	31	31	0	0	10	31	31	9	9	9	9	9

SOUTH TAHOE PUBLIC UTILITY DISTRICT
WASTEWATER TREATMENT PLANT MONTHLY REPORT

02/08/99

09:27:03

JANUARY 1999

Date	Day	SETTLEABLE SOLIDS mL/L		MBAS mg/L		pH Units		TURBIDITY NTU		Cl2 mg/L	FINAL COLIFORMS MPN/100 mL			TDS mg/L		ALKALINITY mg/L	
		Raw	Fin	Raw	Fin	Raw	Fin	Raw	Fin		Total	7day-	Median	Raw	Fin	Raw	Fin
01/01/99	Fri	12.0	< 0.1			7.55	7.54	3.00	1.89		2		2			175	166
01/02/99	Sat	12.0	< 0.1			7.37	7.67	3.00	5.30		2		2			175	167
01/03/99	Sun	10.0	< 0.1			7.42	7.44	3.00	2.79		2		2			169	162
01/04/99	Mon	11.0	< 0.1			7.36	7.60	3.45	4.13	<	2		2			155	149
01/05/99	Tue	10.0	< 0.1	3.68	0.048	7.40	7.48	5.25	2.43		2	<	2			154	140
01/06/99	Wed	9.0	< 0.1			7.30	7.50	3.95	5.48	<	2	<	2	242	234	152	134
01/07/99	Thu	9.5	< 0.1			7.52	7.44	3.85	4.31	<	2	<	2			162	137
01/08/99	Fri	9.0	< 0.1			7.55	7.50	3.40	4.04	<	2	<	2			158	140
01/09/99	Sat	11.0	< 0.1			7.40	7.48	3.10	5.12	<	2	<	2			158	138
01/10/99	Sun	11.0	< 0.1			7.38	7.38	2.80	4.40	<	2	<	2			159	142
01/11/99	Mon	8.5	< 0.1			7.45	7.46	2.60	5.48	<	2	<	2			147	131
01/12/99	Tue	10.0	< 0.1			7.33	7.40	2.50	5.75	<	2	<	2			151	129
01/13/99	Wed	10.5	< 0.1			7.38	7.31	2.30	4.76	<	2	<	2	254	224	143	126
01/14/99	Thu	9.5	< 0.1			7.52	7.32	2.20	5.21	<	2	<	2			145	122
01/15/99	Fri	9.0	< 0.1			7.43	7.18	2.15	5.48	<	2	<	2			145	121
01/16/99	Sat	11.0	< 0.1			7.37	7.32	2.80	3.86	<	2	<	2			147	127
01/17/99	Sun	11.0	< 0.1			7.41	7.26	2.70	5.12	<	2	<	2			151	130
01/18/99	Mon	8.5	< 0.1			7.34	7.28	3.45	5.84	<	2	<	2			130	122
01/19/99	Tue	7.0	< 0.1			7.31	7.40	3.40	4.58	<	2	<	2			122	112
01/20/99	Wed	7.5	< 0.1			7.72	7.42	3.20	5.03	<	2	<	2	215	196	119	105
01/21/99	Thu	8.0	< 0.1			7.52	7.38	2.50	5.12	<	2	<	2			128	109
01/22/99	Fri	9.0	< 0.1			7.39	7.31	2.50	4.31	<	2	<	2			131	118
01/23/99	Sat	10.0	< 0.1			7.56	7.50	2.90	3.95	<	2	<	2			140	126
01/24/99	Sun	11.0	< 0.1			7.50	7.39	3.10	3.86	<	2	<	2			153	130
01/25/99	Mon	9.5	< 0.1			7.45	7.40	2.85	4.13		2	<	2	237	212	136	124
01/26/99	Tue	8.0	< 0.1			7.45	7.47	2.30	4.31	<	2	<	2			134	124
01/27/99	Wed	14.0	< 0.1			7.35	7.42	2.10	4.31	<	2	<	2			139	124
01/28/99	Thu	8.5	< 0.1			7.54	7.52	2.00	4.13	<	2	<	2			136	122
01/29/99	Fri	8.5	< 0.1			7.59	7.42	1.90	5.21	<	2	<	2			140	126
01/30/99	Sat	11.0	< 0.1			7.60	7.50	2.18	3.50	<	2	<	2			164	142
01/31/99	Sun	11.0	< 0.1			7.56	7.37	2.60	3.15	<	2	<	2			155	146
PERMIT MAX			0.1		2.0		8.5	20			240		23				
PERMIT MIN							6.5										
PERMIT AVE					1.0			10									
TOTAL		305.5	3.1	3.68	0.048	231.02	230.06	89.03	136.98		62		62	948	866	4573	4091
MAXIMUM		14.0	0.1	3.68	0.048	7.72	7.67	5.25	5.84		2		2	254	234	175	167
MINIMUM		7.0	0	3.68	0.048	7.30	7.18	1.90	1.89		2		2	215	196	119	105
AVERAGE		9.9	0.1	3.68	0.048	7.45	7.42	2.87	4.42		2		2	237	217	148	132
# Tests		31	31	1	1	31	31	31	31		31		31	4	4	31	31

SOUTH TAHOE
PUBLIC UTILITY DISTRICT
MEMORANDUM

File:
STPUD
MAINTENANCE



Date: January 20, 1999
To: Bob Baer, Diane Noble
From: Tim Rieger
Topic: Export Line Check

On January 19, & 20, 1999, Greg Schrempp and I conducted our check of the District's export line from the treatment plant to station 564+06 near the Harvey Place reservoir.

Several wet spots were checked. However, nothing positive was found. No damage to the pipe was found. Two station marker signs were found missing or damaged. The station marker at 0+00 of last summers project at the intersection of Santa Fe Rd. and Highway 50 has fallen down. We will work to get these. The station marker at 168+00 on the old Sunset stable property has been removed possibly by a logging project in the area. I will send a copy of this memo to Jim Hoggatt.

CC: Jim Hoggatt
Terry Powers

SAMPLE LOCATIONS

TAHOE BASIN MONITORING WELLS

<u>Site</u>	<u>Location</u>
ERB	Emergency Retention Basin
CONTROL	North of Post Office
MW02-25, -50	Emergency Retention Basin, S side
MW03-25, -50	Emergency Retention Basin, S side
MW04-25, -50	Emergency Retention Basin, W side
MW07-25, -50	Emergency Retention Basin, N side
MW08-25, -50	Pond #1, SW corner
MW11	S.E. corner of wastewater treatment plant grounds
MW12	South of Emergency Pump Building, for buried sludge
MW13	Pond 2, along Heavenly Valley Creek, for buried sludge

HEAVENLY VALLEY CREEK

HVC-1	At Pioneer Trail
HVC-2	250 ft upstream of Pond #2
HVC-3	25 ft downstream of Johnson Blvd.
HVC-4	Effluent of drain pipe from Lower Shop area
HVC-5	Effluent of drainage pipe along Johnson Blvd, 10 feet upstream of Johnson Blvd.

ALPINE COUNTY MONITORING WELLS

<u>Site</u>	<u>Location</u>
ACMW-01AW	Below main dam at Harvey Place Reservoir
ACMW-01BE	Below auxiliary dam at Harvey Place Reservoir
ACMW-02, N&S	On dam access road at Diamond Valley Road
ACMW-03	Bruns ranch, east side of Highway 88
ACMW-04W	Gansberg ranch, west side of Highway 88
ACMW-05	Dressler ranch
ACMW-06, N&S	Celio ranch, on Diamond Valley Road

ALPINE SOILS

<u>Site</u>	<u>Ranch</u>
S2	Celio
S3	Hall
S4	Gansberg
S5	Gansberg
S6	Neddenriep
S7	Bruns
S8	Dressler

ALPINE GROUNDWATERS

<u>Site</u>	<u>Homeowner</u>
GW-01	Sagues
GW-03	Smith/Springmeyer
GW-04	Celio
GW-05	Neddenriep
GW-07	Gansberg, Jr.
GW-08	Arant
GW-11	Diamond Valley School
GW-14	Sierra Pines Store

ALPINE SURFACEWATERS

<u>Site</u>	<u>Location</u>
SW-01	Carson River, Woodfords
SW-02	Indian Creek, @ HWY 89
SW-03	Indian Creek, @ upper bridge
SW-04	Indian Creek, @ lower bridge
SW-05	Carson River, Paynesville
SW-06	Carson River, Stateline
SW-07	Fredericksberg Ditch, Stateline
SW-08	Irrigation Ditch along Carson River Road
SW-09	Carson River, Dressler Lane
SW-10	Indian Creek, @ Smith-Springmeyer Ranch

TAHOE BASIN MONITORING

02/08/99

Site	Date	ID	Location	Depth msl	Temp C	pH	EC umhos	Cl mg/L	COD mg/L	NO3-N mg/L	Comment
Buried Sludge Monitoring											
MW11	01/27/99	990127-12	Sludge Pond	6267.6	7.0	6.49	82	1.1	< 5.0	0.131	
MW12	01/27/99	990127-13	Sludge Pond	6266.0	7.6	6.39	183	2.3	< 5.0	0.216	
MW13	01/27/99	990127-14	Sludge Pond	6258.2	4.2	7.17	856	4.9	16.9	7.240	
ERB Monitoring											
CONTROL	01/27/99	990127-06	At Post Office	6283.2	8.6	6.71	170	6.4	< 5.0	2.350	
MW01.5	01/27/99	990127-01.5	SW corner of ERB								Dry
MW02-50	01/27/99	990127-07	Black Bart side of ERB	6268.8	7.9	6.59	493	46.2	14.8	11.100	
MW03-50	01/27/99	990127-08	Black Bart side of ERB	6268.8	8.3	6.16	455	44.3	< 5.0	6.910	
MW04-50	01/27/99	990127-09	Hank Monk side of ERB	6269.0	7.1	5.92	80	5.8	< 5.0	0.045	
MW07-50	01/27/99	990127-10	North side of ERB	6279.6	7.0	6.34	273	26.3	< 5.0	0.593	
Heavenly Valley Creek											
HVC-1	01/05/99	990105-19	Downstream of Pioneer		2.1	6.80	47	0.8	< 5.0	0.068	Water flowing under ice
HVC-2	01/05/99	990105-20	250' upstream of Pond #2		2.0	6.48	54	1.7	< 5.0	0.023	Water flowing under ice
HVC-3	01/05/99	990105-21	25' downstream of Johnson Blvd		0.7	6.76	58	1.7	< 5.0	0.032	Water flowing under ice
HVC-4	01/05/99	90105-HVC	Effluent of drain from Lower Sho								Dry
HVC-5	01/05/99	90105-HVC	Effluent of drainage pipe along J								Dry
Treatment Plant Monitoring											
MW08-25	01/27/99	990127-11	SW side of Pond #1	6248.7	9.4	6.22	1012	48.0	77.6	< 0.010	

ALPINE COUNTY MONITORING

01/27/99

Site	Date	ID	Location	Temp C	pH	EC umhos	DO mg/L	Aik mg/L	TDS mg/L	SS mg/L	Turb NTU	Cl mg/L	SO4 mg/L
Alpine Monitoring Wells													
ACMW-01AW	01/19/99	990119-08	Main Dam	10.5	6.14	101		47	73			1.0	
ACMW-01BE	01/19/99	990119-09	Secondary Dam	8.7	6.31	128		55	90			2.0	
ACMW-02N	01/19/99	990119-10	Access Gate	10.6	6.36	144		62	94			4.3	
ACMW-02S	01/19/99	990119-11	Access Gate	9.4	6.44	97		43	67			2.0	
ACMW-04W	01/19/99	990119-12	Gansberg	10.7	5.85	203		53	140			12.7	
ACMW-06N	01/19/99	990119-13	Celio	9.6	6.81	687		248	427			51.6	
ACMW-06S	01/19/99	990119-14	Celio	8.3	7.84	463		263	450			76.2	
Groundwaters													
GW-03	01/12/99	990112-13	Smith/Springmeyer	11.4	7.45	308		126	225			1.5	
GW-04	01/12/99	990112-14	Celio	7.8	7.12	264		115	198			3.1	
GW-05	01/12/99	990112-15	Neddenriep	9.8	6.46	286		62	180			27.9	
GW-07	01/12/99	990112-16	Gansberg	7.2	6.38	132		54	97			2.1	
GW-08	01/12/99	990112-17	Arant	11.9	6.48	219		52	140			17.4	
GW-11	01/12/99	990112-18	Diamond Val. School	9.3	6.31	99		45	76			1.0	
GW-14	01/12/99	990112-19	Sierra Pines	5.9	6.38	112		51	93			1.1	
Reservoirs													
HPR	01/05/99	990105-16	Harvey Place Reservoir	4.5	7.42	482	6.60	110	236	4.56	3	52.8	22.4
Surfacewaters: Carson R													
SW-01	01/05/99	990105-14	Carson R Woodfords	1.6	6.82	73	12.00	33	56	0.68	.4	1.4	2.2
SW-05	01/05/99	990105-15	Carson R Paynesville	2.8	7.28	79	12.50	37	61	1.19	.47	1.3	2.3

ALPINE COUNTY MONITORING

01/27/99

Site	Date	Total P mg/L	PO4-P mg/L	TKN mg/L	NH3-N mg/L	NO2-N mg/L	NO3-N mg/L	Total N mg/L	MBAS mg/L
Alpine Monitoring Wells									
ACMW-01A	01/19/99	0.028	<	0.100	< 0.020	< 0.010	0.145	0.255	
ACMW-01B	01/19/99	0.024		0.111	< 0.020	< 0.010	1.280	1.401	
ACMW-02N	01/19/99	0.022		0.106	< 0.020	< 0.010	0.123	0.239	
ACMW-02S	01/19/99	0.018		0.146	< 0.020	< 0.010	< 0.010	0.166	
ACMW-04W	01/19/99	0.022		0.162	< 0.020	< 0.010	2.680	2.852	
ACMW-06N	01/19/99	0.350		0.351	0.027	< 0.010	< 0.010	0.371	
ACMW-06S	01/19/99	0.056		0.478	0.066	0.017	0.053	0.548	
Groundwaters									
GW-03	01/12/99	0.037	<	0.100	< 0.020	< 0.010	0.703	0.813	
GW-04	01/12/99	0.054		0.107	< 0.020	< 0.010	0.783	0.900	
GW-05	01/12/99	0.036		0.203	< 0.020	< 0.010	3.300	3.513	
GW-07	01/12/99	0.098		0.261	< 0.020	< 0.010	1.130	1.401	
GW-08	01/12/99	0.048	<	0.100	< 0.020	< 0.010	3.490	3.600	
GW-11	01/12/99	0.028		0.129	< 0.020	< 0.010	0.499	0.638	
GW-14	01/12/99	0.054		0.109	< 0.020	< 0.010	0.440	0.559	
Reservoirs									
HPR	01/05/99	2.160	2.100	16.600	14.700	0.180	2.280	19.060	
Surfacewaters: Carson R									
SW-01	01/05/99	0.012	< 0.010	0.198	< 0.055	< 0.010	0.081	0.289	
SW-05	01/05/99	0.028	< 0.010	0.232	< 0.020	< 0.010	0.062	0.304	

ALPINE COUNTY MONITORING

01/27/99

Site	Date	COD mg/L	BOD mg/L	O & G mg/L	Boron mg/L	Ca mg/L	Mg mg/L	Na mg/L	K mg/L	SAR	Exch Na %	Hardness mg/L	Water Level MSL or Ft
------	------	-------------	-------------	---------------	---------------	------------	------------	------------	-----------	-----	--------------	------------------	--------------------------

Alpine Monitoring Wells

ACMW-01A	01/19/99												5480.4
ACMW-01B	01/19/99												5485.0
ACMW-02N	01/19/99												5458.4
ACMW-02S	01/19/99												5458.5
ACMW-04W	01/19/99												4897.0
ACMW-06N	01/19/99												5217.3
ACMW-06S	01/19/99												5205.7

Groundwaters

GW-03	01/12/99												
GW-04	01/12/99												
GW-05	01/12/99												
GW-07	01/12/99												
GW-08	01/12/99												
GW-11	01/12/99												
GW-14	01/12/99												

Reservoirs

HPR	01/05/99	22	2		0.26	14.4	3.5	43.8	8.8	2.68	60.7		39.5
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Surfacewaters: Carson R

SW-01	01/05/99		1	<	0.01	7.0	1.9	3.7	1.4	0.32	23.0		
SW-05	01/05/99		2	<	0.01	7.3	2.0	4.4	1.5	0.38	25.5		

**ALPINE COUNTY
BACTERIOLOGICAL MONITORING**

01/27/99

Alpine Monitoring Wells

Site	Date		Total Coliform MPN/100mL		Fecal Coliform MPN/100mL		Fecal Streptococci MPN/100mLL
ACMW-01A	01/19/99	<	1.1	<	1.1		
ACMW-01B	01/19/99	<	1.1	<	1.1		
ACMW-02N	01/19/99	<	1.1	<	1.1		
ACMW-02S	01/19/99		1.1	<	1.1		
ACMW-04W	01/19/99		5.1	<	1.1		
ACMW-06N	01/19/99	<	1.1	<	1.1		
ACMW-06S	01/19/99		2.2	<	1.1		

Groundwaters

Site	Date		Total Coliform MPN/100mL		Fecal Coliform MPN/100mL		Fecal Streptococci MPN/100mLL
GW-03	01/12/99	<	1.1	<	1.1		
GW-04	01/12/99	<	1.1	<	1.1		
GW-05	01/12/99	<	1.1	<	1.1		
GW-07	01/12/99	<	1.1	<	1.1		
GW-08	01/12/99		1.1	<	1.1		
GW-11	01/12/99	<	1.1	<	1.1		
GW-14	01/12/99	<	1.1	<	1.1		

Reservoirs

Site	Date		Total Coliform MPN/100mL		Fecal Coliform MPN/100mL		Fecal Streptococci MPN/100mLL
HPR	01/05/99		1600		2		900

Surfacewaters: Carson R

Site	Date		Total Coliform MPN/100mL		Fecal Coliform MPN/100mL		Fecal Streptococci MPN/100mLL
SW-01	01/05/99	<	3	<	3		
SW-05	01/05/99	<	3	<	3		

**ALPINE COUNTY
BLUE GREEN ALGAE**

ID#	Site	Location	Date	Colonies #	Colony # Cells	Filaments #	Filaments # Cells	Filaments #	Filament Length	Single Cells, #
990105-14	SW-01	Carson R Woodfords	01/05/99	0	0	0	0	0	0	0
990105-15	SW-05	Carson R Paynesville	01/05/99	0	0	0	0	0	0	0

PINE COUNTY SOILS

01/27/99

Site	Date	Location	Type	pH	EC mmho	%Sat	TKN mg/Kg	NO3-N mg/L	Total P mg/Kg	Exch P mg/L
S2a	09/04/98	Celio	KT	8.23	2.00	67.1	2,550	1.6		1.5
S4a	09/04/98	Gansberg	DI	7.90	1.10	32.1	1,300	3.1		11.0
S5a	09/04/98	Gansberg	HRB	6.50	0.42	31.5	1,420	6.4		22.5
S6a	09/04/98	Neddenriep	DWB	6.73	0.50	40.3	1,580	5.5		36.5
S7a	09/04/98	Bruns	JaC	6.10	0.16	43.3	1,900	172.0		7.9
S8a	09/04/98	Dressler	SOD	6.57	0.15	18.0	291	3.4		8.6
S3a	09/22/98	Hall	SMB	6.06	0.59	37.7	1,420	1.2		6.1

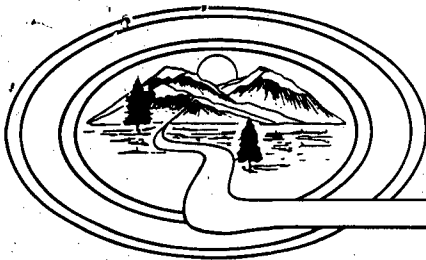
Site	Date	Cl mg/L	SO4 mg/Kg	CEC meq/100g	Cu mg/Kg	Mo mg/Kg	Ca mg/L	Mg mg/L	Na mg/L	SAR	%Na
S2a	09/04/98		93		11.0	< 1.0	62.6	46.0	274.0	6.41	7.4
S4a	09/04/98		11		27.0	< 1.0	59.4	9.6	171.0	5.43	6.2
S5a	09/04/98		6		19.0	< 1.0	40.5	10.7	29.7	1.07	0.3
S6a	09/04/98		2		32.0	< 1.0	37.9	7.6	41.3	1.60	1.1
S7a	09/04/98		3		30.0	< 1.0	17.4	3.5	9.7	0.55	-0.5
S8a	09/04/98	<	1		12.0	< 1.0	12.6	5.2	6.0	0.36	-0.7
S3a	09/22/98		13		19.0	< 1.0	41.0	17.7	38.5	1.26	0.6

PINE COUNTY SOILS

02/08/99

Site	Date	Location	Type	pH	EC mmho	%Sat	TKN mg/Kg	NO3-N mg/L	Total P mg/Kg	Exch P mg/L
S2a	12/02/98	Celio	KT	8.15	1.80	71.4	2,500	16.1	760	8.4
S3a	12/02/98	Hall	SMB	5.54	0.45	42.4	1,880	1.4	1,010	42.9
S4a	12/02/98	Gansberg	DI	6.77	2.05	37.6	1,480	17.6	620	33.7
S5a	12/02/98	Gansberg	HRB	6.06	0.31	34.6	1,200	4.1	850	12.2
S6a	12/02/98	Neddenriep	DWB	5.58	0.14	39.9	1,260	0.3	620	18.6
S7a	12/02/98	Bruns	JaC	6.11	0.16	43.4	1,910	131.0	900	6.9
S8a	12/02/98	Dressler	SOD	6.26	0.15	18.4	213	0.4	410	8.0

Site	Date	Cl mg/L	SO4 mg/Kg	CEC meq/100g	Cu mg/Kg	Mo mg/Kg	Ca mg/L	Mg mg/L	Na mg/L	SAR	%Na
S2a	12/02/98		58		13.0	< 1.0	71.2	52.6	194.0	4.25	4.7
S3a	12/02/98		20		20.0	1.6	27.4	12.5	24.1	0.96	0.1
S4a	12/02/98		17		26.0	1.4	114.0	33.1	136.0	2.88	2.8
S5a	12/02/98		4		22.0	2.4	23.9	4.8	27.7	1.35	0.7
S6a	12/02/98		12		28.0	1.6	7.2	1.5	12.2	1.08	0.3
S7a	12/02/98		294		33.0	2.1	16.7	4.0	8.6	0.49	-0.6
S8a	12/02/98		2		17.0	2.5	7.0	3.6	15.5	1.19	0.5



SOUTH TAHOE PUBLIC UTILITY DISTRICT

Sewer . 1950 . Water

A PUBLIC AGENCY

1275 Meadow Crest Drive • South Lake Tahoe, California 96150
Phone (916) 544-6474 • FAX (916) 541-0614

April 13, 1999

Harold Singer
California Regional Water Quality
Control Board - Lahontan Region
2501 Lake Tahoe Boulevard
South Lake Tahoe, CA 96150

Subject: Monitoring Report - March 1999

Dear Mr. Singer,

Enclosed is the South Tahoe Public Utility District's self-monitoring report for March, 1998. The District is reporting as required by the Wastewater Reclamation Permit (Board Order 6-95-65, WDID No. 6A095900700).

Wastewater Reclamation Permit (Board Order 6-95-65).

The effluent met all the requirements set forth in the Board Order for the month of March.

Emergency Retention Basin (ERB)

There were 3.0 MG of wastewater pumped to the ERB during the month of March. There was no wastewater remaining in the ERB on March 31, 1999.

Export Pipeline

The District's Final effluent export pipeline route was visually inspected March 23, 1999, from the treatment plant to station 507+13A, in Woodfords. No leaks nor problems were detected.

Wastewater Reclamation Permit Compliance

The District is monitoring under the revisions approved by the Regional Board (letter dated November 30, 1998). The revisions provide for: quarterly monitoring of soils; discontinue testing for Oil & Grease on surfacewaters; and discontinue surfacewater monitoring, except SW-01 and SW-05, during the months of December, January and February.

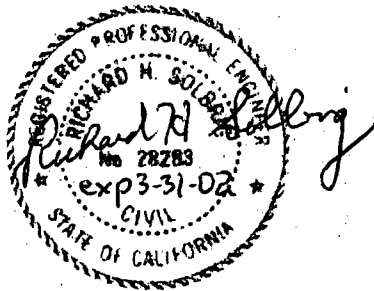
The West Fork, Carson River Water Quality Objectives and East Fork, Carson River limitations were exceeded as follows (a ✓ indicates objective exceeded):

Site	Location	TDS		Cl ⁻		TKN		NO ₃ -N		Total N		Total P		SO ₄		Boron		Exch Na %	
		Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence
SW-01	Carson River, Woodfords	55	✓	1.0	✓	0.13	✓	0.02	✓	0.15	✓	0.02		2.0	✓	0.02		20	✓
SW-06	Carson River, Stateline	70		2.5	✓	0.22		0.03	✓	0.25		0.03		2.0	✓	0.02		20	✓
SW-02	Indian Creek, Upper	100		6.0						0.30		0.03		8.0		0.25		30	✓
SW-03	Indian Creek, Mid	100	✓	6.0						0.30	✓	0.03	✓	8.0		0.25		30	
SW-04	Indian Creek, Lower	100		6.0						0.30	✓	0.03	✓	8.0		0.25		30	
SW-10	Indian Creek, Stateline	100		6.0						0.30		0.03		8.0		0.25		30	

Certification

I hereby certify that the enclosed monitoring report was prepared under my direct supervision and that I am a duly Registered Engineer under the laws of the State of California.

Sincerely,



Richard Solbrig,
Assistant Manager/Engineer

Enclosures:

1.

March Monthly Report	Pages
Wastewater Treatment plant	2
Permit Compliance Record	1
Export pipeline inspection	1
Sample site locations	2
Monitoring wells (ERB) and Heavenly Valley Creek (HVC)	1
Alpine County Surfacewaters, Groundwaters and Reservoirs	5
Alpine County soils -	0
Total number of pages:	12

- cc: Calif. Dept. of Health Services, ODW - Jess Morehouse
El Dorado Co. Dept. of Environmental Health - Virginia Huber
Nevada Division of Environmental Protection - Wendel McCurry
Alpine County Health Department - Dr. Richard Botto
Alpine County Health Department - Jim Goodloe
Alpine County Board of Supervisors
EPA - Permit and Compliance Branch, W-5 - Bill Pierce
Desert Research Group (Alpine County Consultants) - Bill Albright
STPUD Board of Directors
STPUD General Manager / District Engineer - Robert G. Baer
STPUD Manager of Operations - Ross Johnson
STPUD Laboratory Director - Terry Powers
STPUD Manager of Alpine County Operations - Hal Bird

**SOUTH TAHOE PUBLIC UTILITY DISTRICT
WASTEWATER TREATMENT PLANT MONTHLY REPORT**

04/12/99
14:59:13

MARCH 1999

Date	Day	FLOW MGD			Pond Inf	PRECIP		D.O. mg/L Fin	COD mg/L		BOD mg/L		SS mg/L		
		Inf	2-Hr Peak Inf	Eff		Pond Return	Inch		Type	Raw	Fin	Raw	Fin	Raw	Fin
03/01/99	Mon	5.98	7.8	5.50				5.97	361						
03/02/99	Tue	5.12	6.5	5.08			0.14	Snow	3.44						
03/03/99	Wed	6.58	7.0	6.41			0.16	Snow	3.70	268	34.2	125	10.4	96	
03/04/99	Thu	5.39	6.9	5.72					3.38	317					
03/05/99	Fri	5.74	7.0	5.64					4.96	354					
03/06/99	Sat	6.27	8.0	3.02		3.00			4.18	374	45.3	171	13.7	121	
03/07/99	Sun	5.95	8.4	6.67	1.50				4.37	361					
03/08/99	Mon	4.97	7.0	7.07	1.00		0.29	Snow	5.42	329					
03/09/99	Tue	4.60	6.0	4.92	0.50		0.27	Snow	6.67	310					
03/10/99	Wed	5.07	6.1	4.95					5.62	354	27.2	158	5.3	144	
03/11/99	Thu	4.93	6.3	4.87					5.86	343					
03/12/99	Fri	5.01	6.5	5.07					7.25	391					
03/13/99	Sat	5.92	8.0	5.55					5.22	381	35.0	150	6.6	130	
03/14/99	Sun	5.87	8.4	5.61					4.41	368					
03/15/99	Mon	5.38	7.8	5.47					4.80	313					
03/16/99	Tue	5.09	6.4	4.54					5.37	299					
03/17/99	Wed	5.14	6.6	5.59					4.46	314	35.2	149	5.9	117	
03/18/99	Thu	5.26	7.0	5.62					4.57	343					
03/19/99	Fri	5.55	7.6	5.32					4.33	336					
03/20/99	Sat	5.88	8.7	5.80					3.97	372	40.8	175	6.5	132	
03/21/99	Sun	5.57	9.0	5.29					4.16	391					
03/22/99	Mon	5.22	6.5	5.46					3.14	347					
03/23/99	Tue	5.14	7.0	5.00					5.34	306					
03/24/99	Wed	5.19	6.4	5.08					4.89	376	38.5	150	4.6	148	
03/25/99	Thu	5.11	7.3	5.39					3.90	278					
03/26/99	Fri	5.53	7.4	5.52					2.67	285					
03/27/99	Sat	6.05	8.4	5.43					4.50	328	31.3	139	6.8	152	
03/28/99	Sun	5.87	9.0	5.60					1.89	363					
03/29/99	Mon	5.53	7.2	5.57			0.01	Snow	3.72	329					
03/30/99	Tue	5.16	7.6	5.99			0.63	Snow	2.98	298	32.6	157	6.6	112	
03/31/99	Wed	5.10	6.6	4.95			0.02	Snow	5.82	363					
PERMIT MAX		7.7									300		45	60	
PERMIT MIN											60		30	30	
PERMIT AVE															
TOTAL		169.17	226.4	167.70	3.00	3.00	1.52		140.96	10152	320.1	1374	66.4	1152	38.0
MAXIMUM		6.58	9.0	7.07	1.50	3.00	0.63		7.25	391	45.3	175	13.7	152	5.7
MINIMUM		4.60	6.0	3.02	0.50	3.00	0.01		1.89	268	27.2	125	4.6	96	2.4
AVERAGE		5.46	7.3	5.41	1.00	3.00	0.22		4.55	338	35.6	153	7.4	128	3.8
# Tests		31	31	31	3	1	7		31	30	9	9	9	9	10

**SOUTH TAHOE PUBLIC UTILITY DISTRICT
WASTEWATER TREATMENT PLANT MONTHLY REPORT**

MARCH 1999

Date	Day	SETTLEABLE SOLIDS mL/L		MBAS mg/L		pH Units		TURBIDITY NTU		Cl2 mg/L Fin	FINAL COLIFORMS MPN/100 mL			TDS mg/L		ALKALINITY mg/L	
		Raw	Fin	Raw	Fin	Raw	Fin	Fin	Fin		Total	7day-	Median	Raw	Fin	Raw	Fin
03/01/99	Mon	8.0	< 0.1			7.40	7.32	2.90	4.49	<	2	<	2			116	116
03/02/99	Tue	8.0	< 0.1	2.10	0.092	7.43	7.26	3.35	5.84	<	2	<	2			117	113
03/03/99	Wed	7.5	< 0.1			7.30	7.32	3.60	5.12	<	2	<	2	202	204	112	116
03/04/99	Thu	7.5	< 0.1			7.56	7.42	3.80	5.48	<	2	<	2			115	110
03/05/99	Fri	8.0	< 0.1			7.55	7.40	4.40	4.85	<	2	<	2			127	116
03/06/99	Sat	10.0	< 0.1			7.42	7.68	4.50	4.31	<	2	<	2			136	124
03/07/99	Sun	10.0	< 0.1			7.41	7.22	4.60	11.40	<	2	<	2			141	120
03/08/99	Mon	8.0	< 0.1			7.42	7.24	3.40	6.29	<	2	<	2			129	114
03/09/99	Tue	8.0	< 0.1			7.42	7.54	2.10	6.02	<	2	<	2			129	119
03/10/99	Wed	9.5	< 0.1			7.32	7.52	1.70	5.57	<	2	<	2	231	215	128	124
03/11/99	Thu	8.0	< 0.1			7.60	7.54	2.00	4.31	<	2	<	2			125	124
03/12/99	Fri	9.5	< 0.1			7.67	7.54	1.80	4.13	<	2	<	2			130	124
03/13/99	Sat	9.5	< 0.1			7.43	7.56	2.00	4.94	<	2	<	2			139	132
03/14/99	Sun	10.0	< 0.1			7.37	7.30	2.40	3.95	<	2	<	2			140	134
03/15/99	Mon	9.0	< 0.1			7.33	7.28	2.20	5.57	<	2	<	2			128	126
03/16/99	Tue	8.5	< 0.1			7.51	7.52	1.75	5.75	<	2	<	2			125	118
03/17/99	Wed	9.0	< 0.1			7.27	7.24	2.00	5.66	<	2	<	2	226	206	125	120
03/18/99	Thu	8.5	< 0.1			7.41	7.34	1.90	5.93	<	2	<	2			125	118
03/19/99	Fri	9.0	< 0.1			7.37	7.60	1.70	5.66	<	2	<	2			122	117
03/20/99	Sat	10.0	< 0.1			7.42	7.55	2.20	4.40	<	2	<	2			135	126
03/21/99	Sun	10.0	< 0.1			7.28	7.22	2.30	4.76	<	2	<	2			136	132
03/22/99	Mon	9.5	< 0.1			7.32	7.37	2.20	5.39	<	2	<	2			133	126
03/23/99	Tue	9.0	< 0.1			7.28	7.48	1.90	4.58	<	2	<	2			123	122
03/24/99	Wed	10.0	< 0.1			7.28	7.43	1.90	4.76	<	2	<	2	226	230	124	124
03/25/99	Thu	8.5	< 0.1			7.33	7.40	2.10	3.89	<	2	<	2			120	126
03/26/99	Fri	9.0	< 0.1			7.29	7.34	2.70	5.15	<	2	<	2			125	122
03/27/99	Sat	11.0	< 0.1			7.39	7.58	2.50	5.83	<	2	<	2			128	126
03/28/99	Sun	11.0	< 0.1			7.28	7.41	2.20	5.05	<	2	<	2			134	126
03/29/99	Mon	9.5	< 0.1			7.34	7.40	2.40	6.41	<	2	<	2			126	120
03/30/99	Tue	12.0	< 0.1			7.36	7.41	2.20	6.80	<	2	<	2	230	206	128	122
03/31/99	Wed	10.0	< 0.1			7.38	7.32	2.60	4.95	<	2	<	2			121	120
PERMIT MAX			0.1		2.0		8.5	20			240	23					
PERMIT MIN							6.5										
PERMIT AVE					1.0			10									
TOTAL		285.0	3.1	2.10	0.092	229.14	229.75	79.30	167.24		62	62	1115	1061	3942	3777	
MAXIMUM		12.0	0.1	2.10	0.092	7.67	7.68	4.60	11.40		2	2	231	230	141	134	
MINIMUM		7.5	0	2.10	0.092	7.27	7.22	1.70	3.89		2	2	202	204	112	110	
AVERAGE		9.2	0.1	2.10	0.092	7.39	7.41	2.56	5.39		2	2	223	212	127	122	
# Tests		31	31	1	1	31	31	31	31		31	31	5	5	31	31	

SOUTH TAHOE PUBLIC UTILITY DISTRICT
MEMORANDUM

Date: March 23, 1999

To: Bob Baer, Diane Noble, Terry Powers

From: Greg Schrempp

Topic: Export Line Inspection

On March 17 and 18th 1999, Tim Rieger and I conducted our check of the District's export line from the treatment plant to where the "C" line daylight at Harvey Place at Station 564+04. Numerous wet spots were checked, however no leaks were found. A large ring and cover was discovered to have shifted over a relief valve vault at station 39+20 of the new "A" line. Ken Schroeder and Mike Adams were notified of this.

There were a large amount of orange-shirted creatures located at Harvey Place which disturbed us greatly, but as usual we were able to get over it.

SAMPLE LOCATIONS

TAHOE BASIN MONITORING WELLS

<u>Site</u>	<u>Location</u>
ERB	Emergency Retention Basin
CONTROL	North of Post Office
MW02-25, -50	Emergency Retention Basin, S side
MW03-25, -50	Emergency Retention Basin, S side
MW04-25, -50	Emergency Retention Basin, W side
MW07-25, -50	Emergency Retention Basin, N side
MW08-25, -50	Pond #1, SW corner
MW11	S.E. corner of wastewater treatment plant grounds
MW12	South of Emergency Pump Building, for buried sludge
MW13	Pond 2, along Heavenly Valley Creek, for buried sludge

HEAVENLY VALLEY CREEK

HVC-1	At Pioneer Trail
HVC-2	250 ft upstream of Pond #2
HVC-3	25 ft downstream of Johnson Blvd.
HVC-4	Effluent of drain pipe from Lower Shop area
HVC-5	Effluent of drainage pipe along Johnson Blvd, 10 feet upstream of Johnson Blvd.

ALPINE COUNTY MONITORING WELLS

<u>Site</u>	<u>Location</u>
ACMW-01AW	Below main dam at Harvey Place Reservoir
ACMW-01BE	Below auxiliary dam at Harvey Place Reservoir
ACMW-02, N&S	On dam access road at Diamond Valley Road
ACMW-03	Bruns ranch, east side of Highway 88
ACMW-04W	Gansberg ranch, west side of Highway 88
ACMW-05	Dressler ranch
ACMW-06, N&S	Celio ranch, on Diamond Valley Road

ALPINE SOILS

<u>Site</u>	<u>Ranch</u>
S2	Celio
S3	Hall
S4	Gansberg
S5	Gansberg
S6	Neddenriep
S7	Bruns
S8	Dressler

ALPINE GROUNDWATERS

<u>Site</u>	<u>Homeowner</u>
GW-01	Sagues
GW-03	Smith/Springmeyer
GW-04	Celio
GW-05	Neddenriep
GW-07	Gansberg, Jr.
GW-08	Arant
GW-11	Diamond Valley School
GW-14	Sierra Pines Store

ALPINE SURFACEWATERS

<u>Site</u>	<u>Location</u>
SW-01	Carson River, Woodfords
SW-02	Indian Creek, @ HWY 89
SW-03	Indian Creek, @ upper bridge
SW-04	Indian Creek, @ lower bridge
SW-05	Carson River, Paynesville
SW-06	Carson River, Stateline
SW-07	Fredericksberg Ditch, Stateline
SW-08	Irrigation Ditch along Carson River Road
SW-09	Carson River, Dressler Lane
SW-10	Indian Creek, @ Smith-Springmeyer Ranch

TAHOE BASIN MONITORING

04/13/99

Site	Date	ID	Location	Depth msl	Temp C	pH	EC umhos	Cl mg/L	COD mg/L	NO3-N mg/L	Comment
Buried Sludge Monitoring											
MW11	03/23/99	990323-12	Sludge Pond	6268.0	8.0	6.53	87	1.1	< 5.0	0.119	
MW12	03/23/99	990323-13	Sludge Pond	6268.0	8.3	6.30	190	2.7	< 5.0	0.155	
MW13	03/23/99	990323-14	Sludge Pond	6259.4	6.3	6.98	990	4.8	19.4	7.420	
ERB Monitoring											
CONTROL	03/23/99	990323-06	At Post Office	6283.4	8.9	6.58	172	6.7	< 5.0	2.100	
MW02-50	03/23/99	990323-07	Black Bart side of ERB	6269.2	9.7	6.49	482	44.8	< 5.0	10.200	
MW03-50	03/23/99	990323-08	Black Bart side of ERB	6269.2	10.7	6.18	442	42.3	< 5.0	6.360	
MW04-50	03/23/99	990323-09	Hank Monk side of ERB	6269.6	9.6	6.18	81	6.0	< 5.0	0.080	
MW07-50	03/23/99	990323-10	North side of ERB	6280.0	7.7	6.25	274	26.2	< 5.0	0.564	
Heavenly Valley Creek											
HVC-1	03/10/99	990310-06	Downstream of Pioneer		0.2	7.19	53	1.6	< 5.0	0.109	
HVC-2	03/10/99	990310-07	250' upstream of Pond #2		0.4	6.58	65	2.1	< 5.0	0.027	
HVC-3	03/10/99	990310-08	25' downstream of Johnson Blvd		0.4	6.65	71	2.9	< 5.0	0.033	
HVC-4	03/10/99	90310-HVC	Effluent of drain from Lower Sho								Frozen
HVC-5	03/10/99	90310-HVC	Effluent of drainage pipe along J								Unable to locate
Treatment Plant Monitoring											
MW08-25	03/23/99	990323-11	SW side of Pond #1	6249.7	8.2	6.22	972	46.5	77.1	< 0.010	

ALPINE COUNTY MONITORING

04/13/99

Site	Date	ID	Location	Temp C	pH	EC umhos	DO mg/L	Alk mg/L	TDS mg/L	SS mg/L	Turb NTU	Cl mg/L	SO4 mg/L
Alpine Monitoring Wells													
ACMW-01AW	03/16/99	990316-08	Main Dam	9.7	6.21	95		43	72			1.1	
ACMW-01BE	03/16/99	990316-09	Secondary Dam	9.4	6.24	117		55	82			0.8	
ACMW-02N	03/16/99	990316-10	Access Gate	11.8	6.38	137		61	88			3.1	
ACMW-02S	03/16/99	990316-11	Access Gate	10.4	6.29	101		46	61			1.7	
ACMW-04W	03/16/99	990316-12	Gansberg	11.9	5.86	202		53	131			12.5	
ACMW-06N	03/16/99	990316-13	Celio	10.6	6.74	686		260	421			52.3	
ACMW-06S	03/16/99	990316-14	Celio	12.3	9.44	443		333	234			75.6	
Groundwaters													
GW-03	03/09/99	990309-23	Smith/Springmeyer	10.9	7.33	309		125	233			1.5	
GW-04	03/09/99	990309-24	Celio	12.3	7.42	263		115	207			3.1	
GW-05	03/09/99	990309-25	Neddenriep	10.6	6.32	287		61	196			27.5	
GW-07	03/09/99	990309-26	Gansberg	6.5	6.26	133		55	110			2.0	
GW-08	03/09/99	990309-27	Arant	7.9	6.55	220		51	147			17.9	
GW-11	03/09/99	990309-28	Diamond Val. School	10.4	6.15	97		45	85			1.0	
GW-14	03/09/99	990309-29	Sierra Pines	5.6	6.60	111		50	98			1.1	
Reservoirs													
HPR	03/02/99	990302-13	Harvey Place Reservoir	6.8	7.51	429	8.10	101	211	8.68	8.4	45.7	19.8
ICR	03/02/99	990302-14	Indian Creek Reservoir	6.9	6.95	85	8.60	37	81	12.50	15	1.4	5.1
Surfacewaters: Carson R													
SW-01	03/02/99	990302-06	Carson R Woodfords	3.4	6.94	78	9.40	32	64	2.00	.57	3.8	2.6
SW-05	03/02/99	990302-10	Carson R Paynesville	5.4	6.87	82	9.60	37	65	2.67	.69	3.6	2.5
SW-06	03/02/99	990302-11	Carson R Stateline	6.9	7.47	87	9.50	34	65	4.69	.83	3.7	3.5
SW-08	03/02/99	990302-12	Irrigation Ditch	15.0	7.15	122	6.40	52	100	27.40	3.9	1.9	4.6
Surfacewaters: Indian Cr													
SW-02	03/02/99	990302-07	Indian Cr Upper	2.6	7.15	74	9.30	36	68	2.13	4.3	1.0	3.4
SW-03	03/02/99	990302-08	Indian Cr Mid	7.1	7.09	143	8.30	63	105	2.49	6.8	3.3	4.6
SW-04	03/02/99	990302-09	Indian Cr Lower	6.4	7.27	130	8.40	59	95	3.17	4	2.4	2.8

ALPINE COUNTY MONITORING

04/13/99

Site	Date	TotalP mg/L	PO4-P mg/L	TKN mg/L	NH3-N mg/L	NO2-N mg/L	NO3-N mg/L	Total N mg/L	MBAS mg/L
Alpine Monitoring Wells									
ACMW-01A	03/16/99	0.024		0.130	< 0.020	< 0.010	0.252	0.392	
ACMW-01B	03/16/99	0.022		0.106	< 0.020	< 0.010	0.237	0.353	
ACMW-02N	03/16/99	0.022		0.109	< 0.020	< 0.010	0.117	0.236	
ACMW-02S	03/16/99	0.020	<	0.100	< 0.020	< 0.010	< 0.010	0.120	
ACMW-04W	03/16/99	0.022		0.173	< 0.020	< 0.010	2.320	2.503	
ACMW-06N	03/16/99	0.368		0.259	0.051	< 0.010	< 0.010	0.279	
ACMW-06S	03/16/99	0.620		0.757	0.315	0.029	0.054	0.840	
Groundwaters									
GW-03	03/09/99	0.044	<	0.100	< 0.020	< 0.010	0.704	0.814	
GW-04	03/09/99	0.062	<	0.100	< 0.020	< 0.010	0.808	0.918	
GW-05	03/09/99	0.037	<	0.100	< 0.020	< 0.010	3.210	3.320	
GW-07	03/09/99	0.102	<	0.100	< 0.020	< 0.010	1.220	1.330	
GW-08	03/09/99	0.042	<	0.100	< 0.020	< 0.010	3.290	3.400	
GW-11	03/09/99	0.022	<	0.100	< 0.020	< 0.010	0.478	0.588	
GW-14	03/09/99	0.058		0.105	< 0.020	< 0.010	0.429	0.544	
Reservoirs									
HPR	03/02/99	1.970	1.850	11.400	14.700	0.101	1.480	12.981	
ICR	03/02/99	0.082	< 0.010	0.776	0.038	< 0.010	< 0.010	0.796	< 0.020
Surfacewaters: Carson R									
SW-01	03/02/99	0.018	< 0.010	0.179	< 0.020	< 0.010	0.048	0.237	
SW-05	03/02/99	0.022	< 0.010	0.162	< 0.020	< 0.010	0.045	0.217	
SW-06	03/02/99	0.022	< 0.010	0.183	< 0.020	< 0.010	0.059	0.252	
SW-08	03/02/99	0.093	0.032	0.390	0.024	< 0.010	0.419	0.819	
Surfacewaters: Indian Cr									
SW-02	03/02/99	0.024	< 0.010	0.200	< 0.020	< 0.010	0.013	0.223	
SW-03	03/02/99	0.106	0.046	0.321	0.027	< 0.010	0.068	0.399	
SW-04	03/02/99	0.062	0.018	0.278	< 0.020	< 0.010	0.078	0.366	

ALPINE COUNTY MONITORING

04/13/99

Site	Date	COD mg/L	BOD mg/L	O & G mg/L	Boron mg/L	Ca mg/L	Mg mg/L	Na mg/L	K mg/L	SAR	Exch Na %	Hardness mg/L	Water Level MSL or Ft
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Alpine Monitoring Wells

ACMW-01A	03/16/99												5482.1
ACMW-01B	03/16/99												5492.1
ACMW-02N	03/16/99												5458.8
ACMW-02S	03/16/99												5460.0
ACMW-04W	03/16/99												4898.7
ACMW-06N	03/16/99												5216.4
ACMW-06S	03/16/99												5205.1

Groundwaters

GW-03	03/09/99												
GW-04	03/09/99												
GW-05	03/09/99												
GW-07	03/09/99												
GW-08	03/09/99												
GW-11	03/09/99												
GW-14	03/09/99												

Reservoirs

HPR	03/02/99	19	2		0.19	13.9	3.1	35.4	7.9	2.23	57.2		52.0
ICR	03/02/99	13	2	<	0.01	9.0	1.8	5.5	2.0	0.44	27.0		

Surfacewaters: Carson R

SW-01	03/02/99		2	<	0.01	7.5	2.0	4.8	1.4	0.40	26.4		
SW-05	03/02/99	<	1	<	0.01	7.4	2.0	4.7	1.5	0.40	26.4		
SW-06	03/02/99		1	<	0.01	8.3	2.2	5.2	1.7	0.41	26.1		
SW-08	03/02/99	<	1		0.01	10.3	2.5	9.6	2.5	0.70	34.8		

Surfacewaters: Indian Cr

SW-02	03/02/99		1	<	0.01	6.6	1.8	5.1	1.2	0.46	30.4		
SW-03	03/02/99		1		0.02	13.6	3.4	9.6	2.0	0.60	29.3		
SW-04	03/02/99		1		0.01	12.3	3.5	7.8	1.9	0.50	26.2		

**ALPINE COUNTY
BACTERIOLOGICAL MONITORING**

04/13/99

Alpine Monitoring Wells

Site	Date		Total Coliform MPN/100mL		Fecal Coliform MPN/100mL		Fecal Streptococci MPN/100mLL
ACMW-01A	03/16/99	<	1.1	<	1.1		
ACMW-01B	03/16/99		2.2	<	1.1		
ACMW-02N	03/16/99	<	1.1	<	1.1		
ACMW-02S	03/16/99	<	1.1	<	1.1		
ACMW-04W	03/16/99	>	23	<	1.1		
ACMW-06N	03/16/99	<	1.1	<	1.1		
ACMW-06S	03/16/99	<	1.1	<	1.1		

Groundwaters

Site	Date		Total Coliform MPN/100mL		Fecal Coliform MPN/100mL		Fecal Streptococci MPN/100mLL
GW-03	03/09/99	<	1.1	<	1.1		
GW-04	03/09/99		5.1	<	1.1		
GW-05	03/09/99	<	1.1	<	1.1		
GW-07	03/09/99	<	1.1	<	1.1		
GW-08	03/09/99		1.1	<	1.1		
GW-11	03/09/99	<	1.1	<	1.1		
GW-14	03/09/99	<	1.1	<	1.1		

Reservoirs

Site	Date		Total Coliform MPN/100mL		Fecal Coliform MPN/100mL		Fecal Streptococci MPN/100mLL
HPR	03/02/99		23		2	<	2
ICR	03/02/99		14	<	2	<	2

Surfacewaters: Carson R

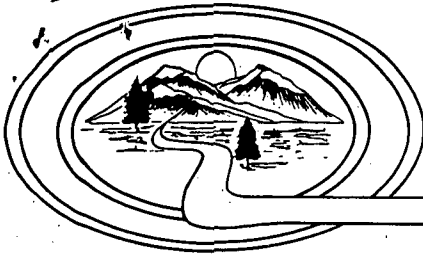
Site	Date		Total Coliform MPN/100mL		Fecal Coliform MPN/100mL		Fecal Streptococci MPN/100mLL
SW-01	03/02/99	<	30	<	30		
SW-05	03/02/99	<	30	<	30		
SW-06	03/02/99	<	30	<	30		
SW-08	03/02/99		930	<	30		

Surfacewaters: Indian Cr

Site	Date		Total Coliform MPN/100mL		Fecal Coliform MPN/100mL		Fecal Streptococci MPN/100mLL
SW-02	03/02/99		230		40		
SW-03	03/02/99		90		40		
SW-04	03/02/99	<	30	<	30		

**ALPINE COUNTY
BLUE GREEN ALGAE**

ID#	Site	Location	Date	Colonies #	Colony # Cells	Filaments #	Filaments # Cells	Filaments #	Filament Length	Single Cells, #
990302-06	SW-01	Carson R Woodfords	03/02/99							
990302-07	SW-02	Indian Cr Upper	03/02/99							
990302-08	SW-03	Indian Cr Mid	03/02/99	0	0	0	0	0	0	0
990302-09	SW-04	Indian Cr Lower	03/02/99	0	0	0	0	0	0	0
990302-10	SW-05	Carson R Paynesville	03/02/99	0	0	0	0	0	0	0
990302-11	SW-06	Carson R Stateline	03/02/99	0	0	0	0	0	0	0
990302-12	SW-08	Irrigation Ditch	03/02/99	0	0	0	0	0	0	0
990302-13	HPR	Harvey Place Reservoir	03/02/99	0	0	0	0	0	0	0
990302-14	ICR	Indian Creek Reservoir	03/02/99	0	0	0	0	0	0	0



SOUTH TAHOE PUBLIC UTILITY DISTRICT

Sewer . 1950 . Water A PUBLIC AGENCY

1275 Meadow Crest Drive • South Lake Tahoe, California 96150
Phone (916) 544-6474 • FAX (916) 541-0614

March 30, 1999

Lori Kemper
California Regional Water Quality
Control Board - Lahontan Region
2501 Lake Tahoe Boulevard
South Lake Tahoe, CA 96150

Subject: MTBE Monitoring in Alpine County

Dear Ms. Kemper,

Enclosed are the most recent monitoring results for methyl tert-butyl ether (MTBE) in Alpine County. Samples were obtained from the wastewater treatment plant final effluent, Harvey Place Reservoir, domestic wells and dedicated monitoring wells.

Reports	Pages
Wastewater Treatment Plant Final Effluent	1
Harvey Place Reservoir (HPR) and Indian Creek Reservoir (ICR)	1
Harvey Place Reservoir (HPR) comparison of profiles	1
Alpine County Domestic Wells	1
Total number of pages:	4

Please call me if you have any questions regarding these data.

Very truly yours,

Terry Powers
Laboratory Director

cc: Alpine County Health Department - Jim Goodloe
Alpine County Health Department - Dr. Richard Botto
Alpine County Clerk of the Board of Supervisors - Barbara Jones
Washoe Tribe Utility Manager - Dave Murphy
Desert Research Group (Alpine County Consultants) - Bill Albright
Clint Celio, Alpine County Resident
Nevada Division of Environmental Protection - Tom Porta, Bureau Chief
STPUD Manager of Alpine County Operations - Hal Bird

Program: Wastewater Plant

Site	Date	MTBE ug/L
Final Effluent	02/03/99	19.0
Final Effluent	02/08/99	1.7
Final Effluent	02/16/99	2.2
Final Effluent	02/22/99	4.2
Final Effluent	03/08/99	1.5
Final Effluent	03/18/99	2.4

Note: 0.0 means not detected at 0.5 ug/L and scan reviewed for any detection of MTBE. Values < 0.5 ug/L are estimated.

Program: Reservoirs

Site	Date	MTBE ug/L
ICR-1; Surface	03/17/99	0.0
ICR-2; Surface	03/17/99	0.0
ICR-3; Surface	03/17/99	0.0
ICR-4; Surface	03/17/99	0.0
ICR-5; Surface	03/17/99	0.0
Field Blank	03/17/99	0.0
Exportline Terminus	03/18/99	2.3
HPR Influent	03/18/99	2.1
HPR-1; Top	03/18/99	0.4
HPR-1; Mid	03/18/99	0.3
HPR-1; Bottom	03/18/99	0.3
HPR-2; Top	03/18/99	0.4
HPR-2; Mid	03/18/99	0.3
HPR-2; Bottom	03/18/99	0.3
HPR-3; Top	03/18/99	0.4
HPR-3; Mid	03/18/99	0.3
HPR-3; Bottom	03/18/99	0.4
Field Blank	03/18/99	0.0
Trip Blank	03/18/99	0.0

Note: 0.0 means not detected at 0.5 ug/L and scan reviewed for any detection of MTBE. Values < 0.5 ug/L are estimated.

MTBE IN WASTEWATER
Results report as ug/L

Site	12/17/98	03/18/99
Final Effluent	1.7	2.4
Export Pipeline Terminus	1.2	2.3
HPR Influent	1.1	2.1
HPR-1; Top	0.8	0.4
HPR-1; Mid	0.7	0.3
HPR-1; Bottom	0.6	0.3
HPR-2; Top	ND	0.4
HPR-2; Mid	0.8	0.3
HPR-2; Bottom	0.7	0.3
HPR-3; Top	0.9	0.4
HPR-3; Mid	0.8	0.3
HPR-3; Bottom	0.8	0.4
Field Blank	ND	ND
ICR-1; Surface		ND
ICR-2; Surface		ND
ICR-3; Surface		ND
ICR-4; Surface		ND
ICR-5; Surface		ND
ICR; 15' from shore	ND	
Field Blank		ND

ND means not detected at 0.5 ug/L and scan reviewed for any detection of MTBE.
Values < 0.5ug/L are estimated.

Program: **Alpine County Drinking Water Wells**

Site	Date	MTBE ug/L
Sorensen's Resort	03/09/99	0.0
Hope Valley Resort	03/09/99	0.0
Woodfords Inn	03/09/99	0.0
Woodfords Mutual Water Co	03/09/99	0.0
Alpine Co Social Services	03/09/99	0.0

Note: 0.0 means not detected at 0.5 ug/L and scan reviewed for any detection of MTBE. Values < 0.5 ug/L are estimated.

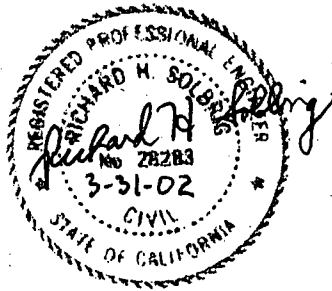
Site	Location	TDS		Cl ⁻		TKN		NO ₃ -N		Total N		Total P		SO ₄		Boron		Exch Na %	
		Limit	Exceedance	Limit	Exceedance	Limit	Exceedance	Limit	Exceedance	Limit	Exceedance	Limit	Exceedance	Limit	Exceedance	Limit	Exceedance	Limit	Exceedance
SW-01	Carson River, Woodfords	55		1.0		0.13	✓	0.02	✓	0.15	✓	0.02	✓	2.0	✓	0.02	✓	20	
SW-06	Carson River, Stateline	70		2.5		0.22	✓	0.03		0.25	✓	0.03	✓	2.0	✓	0.02	✓	20	✓
SW-02	Indian Creek, Upper	100		6.0						0.30		0.03	✓	8.0		0.25		30	
SW-03	Indian Creek, Mid	100		6.0						0.30		0.03	✓	8.0		0.25		30	
SW-04	Indian Creek, Lower	100		6.0						0.30		0.03	✓	8.0		0.25		30	
SW-10	Indian Creek, Stateline	100		6.0						0.30	✓	0.03	✓	8.0		0.25		30	

Blue Green Algae results will be sent as soon as the tests are completed.

Certification

I hereby certify that the enclosed monitoring report was prepared under my direct supervision and that I am a duly Registered Engineer under the laws of the State of California.

Sincerely,



Richard Solbrig,
Assistant Manager/Engineer

Enclosures:

1.

May Monthly Report	Pages
Wastewater Treatment plant	2
Permit Compliance Record	1
Export pipeline inspection	1
Sample site locations	2
Monitoring wells (ERB) and Heavenly Valley Creek (HVC) - Tahoe Basin	1
Alpine County Surfacewaters, Groundwaters, and HPR	4
Alpine County Soils	0
Total number of pages:	11

- cc: Calif. Dept. of Health Services, ODW - Jess Morehouse
El Dorado Co. Dept. of Environmental Health - Virginia Huber
Nevada Division of Environmental Protection - Wendel McCurry
Alpine County Health Department - Dr. Richard Botto
Alpine County Health Department - Jim Goodloe
Alpine County Board of Supervisors
Desert Research Group (Alpine County Consultants) - Bill Albright
STPUD Board of Directors
STPUD General Manager / District Engineer - Robert G. Baer
STPUD Manager of Operations - Ross Johnson
STPUD Operations Chief Plant Operator - Jeff Lee
STPUD Laboratory Director - Terry Powers
STPUD Manager of Alpine County Operations - Hal Bird

**SOUTH TAHOE PUBLIC UTILITY DISTRICT
WASTEWATER TREATMENT PLANT MONTHLY REPORT**

05/08/00
12:06:54

MAY 2000

Date	Day	FLOW MGD			Pond Inf	PRECIP Inch	Type	D.O. mg/L Fin	COD mg/L		BOD mg/L		SS mg/L	
		2-Hr Peak Inf	Pond Return	Eff					Raw	Fin	Raw	Fin	Raw	Fin
05/01/00	Mon	4.46	5.6	4.18				6.21	481					
05/02/00	Tue	4.46	6.2	4.37				6.65	356					
05/03/00	Wed	4.30	5.4	3.99				6.81	394	49.9	117	9.6	146	7.8
05/04/00	Thu	4.30	5.3	4.01				6.04	315					
05/05/00	Fri	4.41	6.8	4.08				6.84	345					
05/06/00	Sat	4.96	6.2	5.06		0.23	Rain	7.06	340	40.0	127	9.2	124	7.0
05/07/00	Sun	4.98	6.7	4.84		0.37	Rain	6.38	347					
05/08/00	Mon	4.76	7.6	4.63		0.08	Rain	6.81	298					
05/09/00	Tue	4.36	5.5	4.05				6.11	326					
05/10/00	Wed	4.14	5.4	4.44		0.26	Snow	6.98	362	36.0	178	8.6	137	4.8
05/11/00	Thu	4.46	5.7	4.16				6.78	354					
05/12/00	Fri	4.29	5.4	4.32				6.45	331					
05/13/00	Sat	4.49	6.5	4.02				7.00	359	31.6	169	5.2	120	1.9
05/14/00	Sun	4.61	6.3	4.49				6.64	378					
05/15/00	Mon	4.53	6.3	4.14				6.72	322					
05/16/00	Tue	4.25	6.0	4.32		0.04	Rain	6.87	401					
05/17/00	Wed	4.38	6.1	4.13				7.07	320	35.2	143	5.3	121	1.8
05/18/00	Thu	4.54	5.8	4.41				6.33	310					
05/19/00	Fri	4.41	5.7	4.31				7.08	329					
05/20/00	Sat	4.72	7.8	4.38				7.31	347	34.0	140	4.6	121	1.8
05/21/00	Sun	4.73	6.8	4.20				6.47	385					
05/22/00	Mon	4.47	5.8	4.28				6.82	352					
05/23/00	Tue	4.42	6.4	3.10		0.31	Rain	6.05	419					
05/24/00	Wed	4.50	6.8	5.08				7.12	344	49.8	114	9.1	126	2.8
05/25/00	Thu	4.49	6.1	4.74				6.31	254					
05/26/00	Fri	4.73	6.2	4.47				6.57	364					
05/27/00	Sat	5.46	7.4	5.07				6.55	362	37.0	157	9.8	121	3.0
05/28/00	Sun	5.68	8.2	5.18				6.49	426					
05/29/00	Mon	5.10	8.0	4.81				6.01	414					
05/30/00	Tue	4.65	6.8	4.05				7.02	326	44.6	172	9.2	121	2.2
05/31/00	Wed	4.40	6.2	3.74				6.14	393					
PERMIT MAX		7.7								300		45		60
PERMIT MIN														
PERMIT AVE										60		30		30
TOTAL		142.44	197.0	135.05		1.29		205.69	11054	358.1	1317	70.7	1137	33.1
MAXIMUM		5.68	8.2	5.18		0.37		7.31	481	49.9	178	9.8	146	7.8
MINIMUM		4.14	5.3	3.10		0.04		6.01	254	31.6	114	4.6	120	1.8
AVERAGE		4.59	6.4	4.36		0.22		6.64	357	39.8	146	7.9	126	3.7
# Tests		31	31	31	0	0	6	31	31	9	9	9	9	9

**SOUTH TAHOE PUBLIC UTILITY DISTRICT
WASTEWATER TREATMENT PLANT MONTHLY REPORT**

MAY 2000

Date	Day	SETTLEABLE SOLIDS mL/L		MBAS mg/L		pH Units		TURBIDITY NTU		Cl2	FINAL COLIFORMS MPN/100 mL			TDS mg/L		ALKALINITY mg/L		
		Raw	Fin	Raw	Fin	Raw	Fin	Fin	Fin	Fin	Total	7day-	Median	Raw	Fin	Raw	Fin	
05/01/00	Mon	9.0	<	0.1			7.34	7.37	4.80	5.90	<	2	<	2			126	116
05/02/00	Tue	9.5	<	0.1			7.35	7.40	4.20	7.32	<	2	<	2			135	115
05/03/00	Wed	10.5	<	0.1			7.46	7.41	3.80	4.69	<	2	<	2	254	227	131	115
05/04/00	Thu	8.5	<	0.1			7.38	7.28	4.20	4.80	<	2	<	2			118	116
05/05/00	Fri	9.0	<	0.1			7.41	7.27	4.10	4.48	<	2	<	2			136	118
05/06/00	Sat	8.5	<	0.1			7.35	7.44	3.90	3.49	<	2	<	2			138	122
05/07/00	Sun	10.0	<	0.1			7.33	7.36	3.40	5.24	<	2	<	2			135	119
05/08/00	Mon	8.5	<	0.1			7.51	7.40	3.10	4.48	<	2	<	2			125	112
05/09/00	Tue	9.0	<	0.1	2.80	0.082	7.34	7.35	2.80	5.57	<	2	<	2			124	106
05/10/00	Wed	9.5	<	0.1			7.36	7.47	3.00	5.57	<	2	<	2	227	210	125	111
05/11/00	Thu	10.5	<	0.1			7.47	7.50	2.20	5.57	<	2	<	2			123	114
05/12/00	Fri	8.5	<	0.1			7.45	7.38	1.50	3.93	<	2	<	2			137	118
05/13/00	Sat	9.0	<	0.1			7.36	7.63	1.30	4.48	<	2	<	2			136	123
05/14/00	Sun	10.0	<	0.1			7.40	7.32	1.30	4.80	<	4	<	2			139	122
05/15/00	Mon	8.5	<	0.1			7.39	7.34	1.40	5.46	<	2	<	2			136	122
05/16/00	Tue	12.0	<	0.1			7.35	7.36	1.30	6.33	<	2	<	2			151	121
05/17/00	Wed	10.0	<	0.1			7.41	7.52	1.30	5.24	<	2	<	2	247	224	131	118
05/18/00	Thu	8.5	<	0.1			7.51	7.29	1.30	5.13	<	2	<	2			130	116
05/19/00	Fri	10.0	<	0.1			7.39	7.14	1.10	3.60	<	2	<	2			141	120
05/20/00	Sat	11.0	<	0.1			7.44	7.52	1.40	4.80	<	2	<	2			148	130
05/21/00	Sun	10.0	<	0.1			7.37	7.32	1.50	5.90	<	2	<	2			147	132
05/22/00	Mon	8.5	<	0.1			7.47	7.60	1.60	7.64	<	2	<	2			144	123
05/23/00	Tue	11.0	<	0.1			7.58	7.52	1.70	5.48	<	2	<	2			146	123
05/24/00	Wed	9.0	<	0.1			7.58	7.41	2.50	4.59	<	2	<	2	239	222	145	124
05/25/00	Thu	7.5	<	0.1			7.53	7.36	2.20	4.48	<	2	<	2			136	121
05/26/00	Fri	10.5	<	0.1			7.45	7.44	2.30	3.28	<	2	<	2			143	124
05/27/00	Sat	11.0	<	0.1			7.46	7.54	2.40	5.46	<	2	<	2			153	131
05/28/00	Sun	13.0	<	0.1			7.52	7.42	2.50	4.26	<	8	<	2			159	134
05/29/00	Mon	12.0	<	0.1			7.37	7.39	2.90	5.79	<	2	<	2			159	138
05/30/00	Tue	8.5	<	0.1			7.48	7.30	2.50	5.24	<	2	<	2	242	236	149	136
05/31/00	Wed	14.0	<	0.1			7.52	7.46	3.90	5.90	<	2	<	2			144	126
PERMIT MAX				0.1				8.5	20					240			23	
PERMIT MIN								6.5										
PERMIT AVE							1.0		10									
TOTAL		305.0		3.1	2.80	0.082	230.33	229.51	77.40	158.90		70		62	1209	1119	4290	3766
MAXIMUM		14.0		0.1	2.80	0.082	7.58	7.63	4.80	7.64		8		2	254	236	159	138
MINIMUM		7.5		0	2.80	0.082	7.33	7.14	1.10	3.28		2		2	227	210	118	106
AVERAGE		9.8		0.1	2.80	0.082	7.43	7.40	2.50	5.13		2		2	242	224	138	121
# Tests		31		31	1	1	31	31	31	31		31		31	5	5	31	31

SOUTH TAHOE
PUBLIC UTILITY DISTRICT
MEMORANDUM



Date: May 23, 2000
To: Bob Baer, Diane Noble
From: David Johnson
Topic: Export Line Check

On May 23, 2000, Greg Schrempp, and I conducted our check of the District's export line from the treatment plant to station 564+06 near the Harvey Place reservoir. No damage to the pipe was found.

CC Terry Powers

SAMPLE LOCATIONS

TAHOE BASIN MONITORING WELLS

<u>Site</u>	<u>Location</u>
ERB	Emergency Retention Basin
CONTROL	North of Post Office
MW02-25, -50	Emergency Retention Basin, S side
MW03-25, -50	Emergency Retention Basin, S side
MW04-25, -50	Emergency Retention Basin, W side
MW07-25, -50	Emergency Retention Basin, N side
MW08-25, -50	Pond #1, SW corner
MW11	S.E. corner of wastewater treatment plant grounds
MW12	South of Emergency Pump Building, for buried sludge
MW13	Pond 2, along Heavenly Valley Creek, for buried sludge

HEAVENLY VALLEY CREEK

HVC-1	At Pioneer Trail
HVC-2	250 ft upstream of Pond #2
HVC-3	25 ft downstream of Johnson Blvd.
HVC-4	Effluent of drain pipe from Lower Shop area
HVC-5	Effluent of drainage pipe along Johnson Blvd, 10 feet upstream of Johnson Blvd.

ALPINE COUNTY MONITORING WELLS

<u>Site</u>	<u>Location</u>
ACMW-01AW	Below main dam at Harvey Place Reservoir
ACMW-01BE	Below auxiliary dam at Harvey Place Reservoir
ACMW-02, N&S	On dam access road at Diamond Valley Road
ACMW-03	Bruns ranch, east side of Highway 88
ACMW-04W	Gansberg ranch, west side of Highway 88
ACMW-05	Dressler ranch
ACMW-06, N&S	Celio ranch, on Diamond Valley Road

ALPINE SOILS

<u>Site</u>	<u>Ranch</u>
S2	Celio
S3	Hall
S4	Gansberg
S5	Gansberg
S6	Neddenriep
S7	Bruns
S8	Dressler

ALPINE GROUNDWATERS

<u>Site</u>	<u>Homeowner</u>
GW-01	Sagues
GW-03	Smith/Springmeyer
GW-04	Celio
GW-05	Neddenriep
GW-07	Gansberg, Jr.
GW-08	Arant
GW-11	Diamond Valley School
GW-14	Sierra Pines Store

ALPINE SURFACEWATERS

<u>Site</u>	<u>Location</u>
SW-01	Carson River, Woodfords
SW-02	Indian Creek, @ HWY 89
SW-03	Indian Creek, @ upper bridge
SW-04	Indian Creek, @ lower bridge
SW-05	Carson River, Paynesville
SW-06	Carson River, Stateline
SW-07	Fredericksberg Ditch, Stateline
SW-08	Irrigation Ditch along Carson River Road
SW-09	Carson River, Dressler Lane
SW-10	Indian Creek, @ Smith-Springmeyer Ranch

TAHOE BASIN MONITORING

06/09/00

Site	Date	ID	Location	Depth msl	Temp C	pH	EC umhos	Cl mg/L	COD mg/L	NO3-N mg/L	Comment
Buried Sludge Monitoring											
MW11	05/23/00	20000523-13	Sludge Pond	6268.1	8.4	6.85	83	0.9	< 5.0	0.088	
MW12	05/23/00	20000523-14	Sludge Pond	6266.4	8.0	6.41	149	1.8	< 5.0	0.090	
MW13	05/23/00	20000523-15	Sludge Pond	6257.9	6.1	6.83	756	2.8	12.4	2.670	
ERB Monitoring											
CONTROL	05/23/00	20000523-06	At Post Office	6283.2	9.1	7.10	188	7.5	< 5.0	2.500	
MW01.5	05/23/00	20000523-07	SW corner of ERB	6268.9	9.6	7.31	162	3.1	5.6	0.641	
MW02-50	05/23/00	20000523-08	Black Bart side of ERB	6268.7	10.4	6.91	408	38.4	9.0	8.850	
MW03-50	05/23/00	20000523-09	Black Bart side of ERB	6268.7	10.7	6.66	368	31.9	5.3	3.580	
MW04-50	05/23/00	20000523-10	Hank Monk side of ERB	6269.0	9.1	6.94	75	5.1	< 5.0	0.063	
MW07-50	05/23/00	20000523-11	North side of ERB	6279.6	8.8	6.77	262	25.7	< 5.0	0.588	
Heavenly Valley Creek											
HVC-1	05/17/00	20000517-06	Downstream of Pioneer		3.6	7.06	38	0.8	< 5.0	0.063	
HVC-2	05/17/00	20000517-07	250' upstream of Pond #2		3.7	7.37	39	0.8	< 5.0	< 0.010	
HVC-3	05/17/00	20000517-08	25' downstream of Johnson Blvd		4.0	6.97	40	1.1	< 5.0	< 0.010	
HVC-4	05/17/00	20000517-09	Effluent of drain from Lower Shop		6.6	7.15	105	0.1	< 5.0	0.070	
HVC-5	05/17/00	20000517-HVC5	Effluent of drainage pipe along Jo								Dry
Treatment Plant Monitoring											
MW08-25	05/23/00	20000523-12	SW side of Pond #1	6247.6	9.4	6.53	1017	50.7	86.0	< 0.010	

ALPINE COUNTY MONITORING

06/09/00

Site	Date	ID	Location	Temp C	pH	EC umhos	DO mg/L	Alk mg/L	TDS mg/L	SS mg/L	Turb NTU	Cl mg/L	SO4 mg/L
Alpine Monitoring Wells													
ACMW-01AW	05/16/00	20000516-13	Main Dam	8.3	6.56	111		58	82		2	4.0	2.3
ACMW-01BE	05/16/00	20000516-14	Secondary Dam	8.9	6.54	99		48	76		6.8	0.9	3.0
ACMW-02N	05/16/00	20000516-15	Access Gate	10.9	6.59	126		59	86		.69	2.4	2.8
ACMW-02S	05/16/00	20000516-16	Access Gate	10.0	6.56	88		41	67		.89	1.6	2.1
ACMW-03	05/16/00	20000516-17	HWY 88	10.0	6.61	141		38	101		3	9.8	17.5
ACMW-04W	05/16/00	20000516-18	Gansberg	10.8	6.42	191		53	132		1	13.3	9.8
ACMW-06N	05/16/00	20000516-19	Celio	10.2	6.78	690		253	419		13	55.5	22.7
ACMW-06S	05/16/00	20000516-20	Celio	10.5	6.86	776		259	470		1.1	78.1	32.5

Groundwaters

GW-01	05/02/00	20000502-06	Cohen	11.6	6.88	151		70	105		22	4.9	
GW-03	05/02/00	20000502-07	Smith/Springmeyer	15.8	7.48	307		127	226		.09	1.6	
GW-04	05/02/00	20000502-08	Celio	15.4	7.50	261		117	195		.23	3.1	
GW-05	05/02/00	20000502-09	Neddenriep	12.1	7.41	275		62	171		.13	24.0	
GW-07	05/02/00	20000502-10	Gansberg	12.6	6.88	127		55	98		.19	1.3	
GW-08	05/02/00	20000502-11	Arant	12.3	6.78	268		52	171		2.6	30.6	
GW-11	05/02/00	20000502-12	Diamond Val. School	16.0	6.58	98		48	81		.13	0.9	
GW-14	05/02/00	20000502-13	Sierra Pines	12.1	6.83	116		51	96		.15	1.1	

Reservoirs

HPR	05/09/00	20000509-16	Harvey Place Reservoir	14.2	8.36	437	8.20	103	201	21.60	5.4	50.5	17.6
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Surfacewaters: Carson R

SW-01	05/09/00	20000509-07	Carson R Woodfords	4.0	7.18	42	9.90	20	38	19.80	4.35	0.9	2.2
SW-05	05/09/00	20000509-11	Carson R Paynesville	6.1	7.22	45	11.20	21	39	18.40	4.2	0.8	2.3
SW-06	05/09/00	20000509-12	Carson R Stateline	6.5	7.01	47	9.40	22	42	23.80	5	1.0	2.1
SW-08	05/09/00	20000509-13	Irrigation Ditch	9.4	7.15	93	8.10	45	73	1.54	1.3	0.9	1.9
SW-09	05/09/00	20000509-14	Carson R Dressler Ln	6.6	6.88	49	8.80	23	43	20.90	5.1	1.1	2.1

Surfacewaters: Indian Cr

SW-02	05/09/00	20000509-08	Indian Cr Upper	12.7	7.72	126	7.10	59	87	1.66	2.3	1.1	2.5
SW-03	05/09/00	20000509-09	Indian Cr Mid	8.2	6.77	49	8.90	23	48	45.10	6.1	1.1	2.6
SW-04	05/09/00	20000509-10	Indian Cr Lower	9.2	7.15	65	7.70	32	57	6.36	5.1	1.0	3.7
SW-10	05/09/00	20000509-15	Indian Cr at Bruns	9.7	6.71	72	10.20	35	57	5.56	4.3	1.1	2.7
SW-02	05/25/00	20000525-09	Indian Cr Upper	14.6	7.97	99						0.9	< 0.5

ALPINE COUNTY MONITORING

06/09/00

Site	Date	TotalP mg/L	PO4-P mg/L	TKN mg/L	NH3-N mg/L	NO2-N mg/L	NO3-N mg/L	Total N mg/L	MBAS mg/L				
Alpine Monitoring Wells													
ACMW-01AW	05/16/00	0.024	<	0.100	<	0.020	<	0.010	0.704	0.814			
ACMW-01BE	05/16/00	0.032	<	0.100	<	0.020	<	0.010	0.151	0.261			
ACMW-02N	05/16/00	0.015	<	0.100	<	0.020	<	0.010	0.071	0.181			
ACMW-02S	05/16/00	0.015	<	0.100	<	0.020	<	0.010	0.146	0.256			
ACMW-03	05/16/00	0.206	<	0.207	<	0.020	<	0.010	1.060	1.277			
ACMW-04W	05/16/00	0.013	<	0.100	<	0.020	<	0.010	2.550	2.660			
ACMW-06N	05/16/00	0.263	<	0.191	<	0.064	<	0.010	<	0.211			
ACMW-06S	05/16/00	0.042	<	0.100	<	0.021	<	0.010	0.023	0.133			
Groundwaters													
GW-01	05/02/00	0.144		0.372	<	0.025	<	0.010	0.030	0.412			
GW-03	05/02/00	0.036		0.137	<	0.020	<	0.010	0.741	0.888			
GW-04	05/02/00	0.064		0.132	<	0.020	<	0.010	0.856	0.998			
GW-05	05/02/00	0.035		0.217	<	0.020	<	0.010	3.740	3.967			
GW-07	05/02/00	0.102		0.185	<	0.020	<	0.010	1.080	1.275			
GW-08	05/02/00	0.098		0.553	<	0.020	<	0.010	5.940	6.503			
GW-11	05/02/00	0.024	<	0.100	<	0.020	<	0.010	0.407	0.517			
GW-14	05/02/00	0.054		0.159	<	0.020	<	0.010	0.465	0.634			
Reservoirs													
HPR	05/09/00	2.400	2.280	15.000	13.800	0.158	0.849	16.007					
Surfacewaters: Carson R													
SW-01	05/09/00	0.054	<	0.010	0.219	<	0.025	<	0.010	0.016	0.245		
SW-05	05/09/00	0.040	<	0.010	0.155	<	0.020	<	0.010	0.012	0.177		
SW-06	05/09/00	0.058	<	0.010	0.258	<	0.020	<	0.010	0.010	0.278		
SW-08	05/09/00	0.014	<	0.010	0.178	<	0.020	<	0.010	0.021	0.209		
SW-09	05/09/00	0.058	<	0.010	0.256	<	0.020	<	0.010	0.022	0.288		
Surfacewaters: Indian Cr													
SW-02	05/09/00	0.033	<	0.010	0.209	<	0.020	<	0.010	<	0.010	0.229	
SW-03	05/09/00	0.050	<	0.010	<	0.100	<	0.020	<	0.010	<	0.010	0.120
SW-04	05/09/00	0.048		0.012	0.167	<	0.020	<	0.010	<	0.010	0.187	
SW-10	05/09/00	0.063		0.022	0.569	<	0.020	<	0.010	<	0.010	0.591	
SW-02	05/25/00	0.082		0.010		<	0.010	<	0.010	<	0.010	0.020	

ALPINE COUNTY BACTERIOLOGICAL MONITORING

06/09/00

Alpine Monitoring Wells

Site	Date		Total Coliform MPN/100mL		Fecal Coliform MPN/100mL		Fecal Streptococci MPN/100mLL
ACMW-01AW	05/16/00	<	1.1	<	1.1		
ACMW-01BE	05/16/00	<	1.1	<	1.1		
ACMW-02N	05/16/00	<	1.1	<	1.1		
ACMW-02S	05/16/00	<	1.1	<	1.1		
ACMW-03	05/16/00	>	23		1.1		
ACMW-04W	05/16/00	<	1.1	<	1.1		
ACMW-06N	05/16/00	<	1.1	<	1.1		
ACMW-06S	05/16/00	<	1.1	<	1.1		

Groundwaters

Site	Date		Total Coliform MPN/100mL		Fecal Coliform MPN/100mL		Fecal Streptococci MPN/100mLL
GW-01	05/02/00	<	1.1	<	1.1		
GW-03	05/02/00	<	1.1	<	1.1		
GW-04	05/02/00	<	1.1	<	1.1		
GW-05	05/02/00	<	1.1	<	1.1		
GW-07	05/02/00	<	1.1	<	1.1		
GW-08	05/02/00	<	1.1	<	1.1		
GW-11	05/02/00	<	1.1	<	1.1		
GW-14	05/02/00	<	1.1	<	1.1		

Reservoirs

Site	Date		Total Coliform MPN/100mL		Fecal Coliform MPN/100mL		Fecal Streptococci MPN/100mLL
HPR	05/09/00		500		13		500

Surfacewaters: Carson R

Site	Date		Total Coliform MPN/100mL		Fecal Coliform MPN/100mL		Fecal Streptococci MPN/100mLL
SW-01	05/09/00	<	30	<	30	<	30
SW-05	05/09/00		430		90		30
SW-06	05/09/00		40		40		90
SW-08	05/09/00	<	90	<	30		90
SW-09	05/09/00		430		40	<	30

Surfacewaters: Indian Cr

Site	Date		Total Coliform MPN/100mL		Fecal Coliform MPN/100mL		Fecal Streptococci MPN/100mLL
SW-02	05/09/00		430		30		90
SW-03	05/09/00	<	30	<	30		40
SW-04	05/09/00		40	<	30		70
SW-10	05/09/00		430		90		70
SW-02	05/25/00						

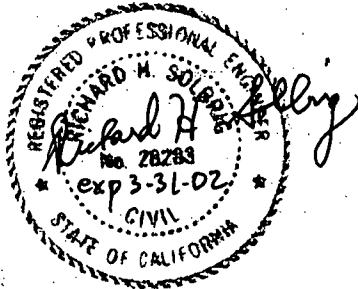
Site	Location	TDS		Cl ⁻		TKN		NO ₃ -N		Total N		Total P		SO ₄		Boron		Exch Na %	
		Limit	Exceedance	Limit	Exceedance	Limit	Exceedance	Limit	Exceedance	Limit	Exceedance	Limit	Exceedance	Limit	Exceedance	Limit	Exceedance	Limit	Exceedance
SW-01	Carson River, Woodfords	55		1.0	✓	0.13	✓	0.02	✓	0.15	✓	0.02	✓	2.0	✓	0.02		20	✓
SW-06	Carson River, Stateline	70		2.5		0.22	✓	0.03		0.25	✓	0.03	✓	2.0	✓	0.02		20	✓
SW-02	Indian Creek, Upper	100		6.0						0.30		0.03		8.0		0.25		30	
SW-03	Indian Creek, Mid	100		6.0						0.30	✓	0.03	✓	8.0		0.25		30	
SW-04	Indian Creek, Lower	100		6.0						0.30	✓	0.03	✓	8.0		0.25		30	
SW-10	Indian Creek, Stateline	100		6.0						0.30		0.03		8.0		0.25		30	

March's soil results are included in this report.

Certification

I hereby certify that the enclosed monitoring report was prepared under my direct supervision and that I am a duly Registered Engineer under the laws of the State of California.

Sincerely,



Richard Solbrig,
Assistant Manager/Engineer

Enclosures:

1.

April Monthly Report	Pages
Wastewater Treatment plant	2
Permit Compliance Record	1
Export pipeline inspection	0
Sample site locations	2
Monitoring wells (ERB) and Heavenly Valley Creek (HVC) - Tahoe Basin	1
Alpine County Surfacewaters, Groundwaters, and HPR	4
Alpine County Soils, March	1
Total number of pages:	11

cc: Calif. Dept. of Health Services, ODW - Jess Morehouse
 El Dorado Co. Dept. of Environmental Health - Virginia Huber
 Nevada Division of Environmental Protection - Wendel McCurry
 Alpine County Health Department - Dr. Richard Botto
 Alpine County Health Department - Jim Goodloe
 Alpine County Board of Supervisors
 Desert Research Group (Alpine County Consultants) - Bill Albright
 STPUD Board of Directors
 STPUD General Manager / District Engineer - Robert G. Baer
 STPUD Manager of Operations - Ross Johnson
 STPUD Operations Chief Plant Operator - Jeff Lee
 STPUD Laboratory Director - Terry Powers
 STPUD Manager of Alpine County Operations - Hal Bird

SOUTH TAHOE PUBLIC UTILITY DISTRICT
WASTEWATER TREATMENT PLANT MONTHLY REPORT

05/10/00
09:51:18

APRIL 2000

Date	Day	FLOW MGD			Pond Inf	PRECIP Inch	Type	D.O. mg/L Fin	COD mg/L Raw	60 Fin	BOD mg/L Raw	30 Fin	SS ³⁰ mg/L	
		2-Hr Peak Inf	2-Hr Peak Inf	Eff									Pond Return	Raw
04/01/00	Sat	5.29	7.5	5.96			7.00	432	52.4	181	10.6	127	2.4	
04/02/00	Sun	5.23	7.6	5.36			6.79	373						
04/03/00	Mon	4.78	6.4	4.71			7.03	343						
04/04/00	Tue	4.50	6.8	4.16			7.43	326						
04/05/00	Wed	4.53	6.2	4.49			6.71	418	47.4	142	7.9	143	2.0	
04/06/00	Thu	4.52	6.1	4.41			6.91	373						
04/07/00	Fri	4.66	6.8	4.44			6.85	400						
04/08/00	Sat	5.16	7.5	4.73			6.47	377	48.7	172	9.4	122	3.0	
04/09/00	Sun	5.02	7.5	4.94			5.74	379						
04/10/00	Mon	4.44	6.1	4.14			6.27	347						
04/11/00	Tue	4.47	6.3	4.23			6.82	349						
04/12/00	Wed	4.49	6.8	4.46		0.40	Rain	6.49	380	51.6	166	8.0	135	4.9
04/13/00	Thu	4.75	6.5	4.89		0.20	Rain	6.11	345					
04/14/00	Fri	4.63	6.4	4.68			5.67	396						
04/15/00	Sat	5.07	7.2	4.97			6.30	350	57.0	169	14.5	108	7.9	
04/16/00	Sun	5.10	7.4	4.66			6.31	366						
04/17/00	Mon	4.70	6.3	4.56			6.60	382						
04/18/00	Tue	4.61	6.5	4.43			6.74	373						
04/19/00	Wed	4.74	6.5	4.66			7.13	458	52.3	176	10.0	143	4.9	
04/20/00	Thu	5.03	6.5	4.71			6.91	359						
04/21/00	Fri	4.62	7.2	4.60			6.32	407						
04/22/00	Sat	4.87	7.3	4.30			7.15	397	51.4	191	10.1	128	6.8	
04/23/00	Sun	4.64	7.2	4.64			6.34	400						
04/24/00	Mon	4.41	6.0	4.44		0.11	Rain	6.15	373					
04/25/00	Tue	4.42	6.2	3.75			6.99	363						
04/26/00	Wed	4.43	8.0	4.47			6.78	413	51.2	139	9.5	155	7.7	
04/27/00	Thu	4.62	5.9	4.48			6.10	356						
04/28/00	Fri	4.44	6.0	4.17			6.81	331						
04/29/00	Sat	4.94	7.0	4.66			5.98	371	48.8	152	13.3	125	8.9	
04/30/00	Sun	4.73	6.9	4.44			6.60	375						
PERMIT-MAX		7.7							300		45		60	
PERMIT MIN														
PERMIT AVE														
TOTAL		141.84	202.6	137.54		0.71	197.50	11312	460.8	1488	93.4	1186	48.4	
MAXIMUM		5.29	8.0	5.96		0.40	7.43	458	57.0	191	14.5	155	8.9	
MINIMUM		4.41	5.9	3.75		0.11	5.67	326	47.4	139	7.9	108	2.0	
AVERAGE		4.73	6.8	4.58		0.24	6.58	377		165		132		
# Tests		30	30	30	0	0	3	30	30	9	9	9	9	9

**SOUTH TAHOE PUBLIC UTILITY DISTRICT
WASTEWATER TREATMENT PLANT MONTHLY REPORT**

05/10/00
09:56:52

APRIL 2000

Date	Day	SETTLEABLE SOLIDS mL/L		MBAS mg/L		pH Units		TURBIDITY NTU		Cl2 mg/L	FINAL COLIFORMS MPN/100 mL			TDS mg/L		ALKALINITY mg/L	
		Raw	Fin	Raw	Fin	Raw	Fin	Fin	Fin		Total	7day-	Median	Raw	Fin	Raw	Fin
04/01/00	Sat	11.5	< 0.1			7.50	7.70	2.50	3.30	<	2	<	2			136	126
04/02/00	Sun	10.0	< 0.1			7.38	7.72	2.50	3.79	<	2	<	2			140	126
04/03/00	Mon	9.0	< 0.1			7.36			3.79	<	2	<	2			136	
04/04/00	Tue	10.0	< 0.1			7.38	7.70	2.30	4.86	<	2	<	2			130	121
04/05/00	Wed	12.0	< 0.1			7.32	7.72	1.90	4.08	<	2	<	2	240	230	132	122
04/06/00	Thu	9.0	< 0.1			7.35	7.66	2.10	4.18	<	2	<	2			127	120
04/07/00	Fri	9.0	< 0.1			7.46	7.40	2.30	3.69	<	2	<	2			132	122
04/08/00	Sat	10.0	< 0.1			7.42	7.62	2.80	4.08	<	2	<	2			135	124
04/09/00	Sun	10.0	< 0.1			7.49	7.43	2.90	3.21	<	2	<	2			138	128
04/10/00	Mon	9.0	< 0.1			7.54	7.51	3.00	5.63	<	2	<	2			125	119
04/11/00	Tue	9.0	< 0.1	2.12	0.077	7.54	7.38	2.90	3.89	<	2	<	2			128	121
04/12/00	Wed	10.5	< 0.1			7.44	7.32	3.85	4.86	<	2	<	2	251	226	126	118
04/13/00	Thu	9.0	< 0.1			7.52	7.50	4.20	4.08	<	2	<	2			120	116
04/14/00	Fri	9.5	< 0.1			7.39	7.32	4.90	3.98	<	2	<	2			122	114
04/15/00	Sat	9.5	< 0.1			7.51	7.53	5.10	3.21	<	2	<	2			132	122
04/16/00	Sun	11.0	< 0.1			7.51	7.31	4.90	6.41	<	2	<	2			138	125
04/17/00	Mon	10.0	< 0.1			7.54	7.38	3.75	5.44	<	2	<	2			134	120
04/18/00	Tue	9.0	< 0.1			7.60	7.37	3.30	4.37	<	2	<	2			139	125
04/19/00	Wed	10.5	< 0.1			7.45	7.52	3.30	4.56	<	2	<	2	267	228	134	126
04/20/00	Thu	11.0	< 0.1			7.58	7.46	4.00	3.40	<	2	<	2			133	127
04/21/00	Fri	11.0	< 0.1			7.34	7.44	4.20	3.30	<	2	<	2			139	129
04/22/00	Sat	10.0	< 0.1			7.41	7.61	4.40	3.11	<	2	<	2			123	130
04/23/00	Sun	11.0	< 0.1			7.43	7.46	4.80	5.46	<	2	<	2			131	122
04/24/00	Mon	10.0	< 0.1			7.36	7.36	5.30	8.73	<	2	<	2			130	118
04/25/00	Tue	9.0	< 0.1			7.34	7.50	4.40	6.11	<	2	<	2			132	119
04/26/00	Wed	12.0	< 0.1			7.29	7.47	4.50	5.68	<	2	<	2	237	225	132	122
04/27/00	Thu	9.5	< 0.1			7.54	7.54	4.60	5.79	<	2	<	2			124	120
04/28/00	Fri	10.0	< 0.1			7.66	7.60	4.30	3.93	<	2	<	2			127	119
04/29/00	Sat	10.0	< 0.1			7.42	7.68	4.80	3.71	<	2	<	2			132	125
04/30/00	Sun	8.0	< 0.1			7.31	7.33	5.50	6.22	<	2	<	2			133	121
PERMIT MAX			0.1		2.0		8.5	20									
PERMIT MIN							6.5										
PERMIT AVE																	
TOTAL		299.0	3.0	2.12	0.077	223.38	217.54	109.30	136.85		60		60	995	909	3940	3547
MAXIMUM		12.0	0.1	2.12	0.077	7.66	7.72	5.50	8.73		2	<	2	267	230	140	130
MINIMUM		8.0	0	2.12	0.077	7.29	7.31	1.90	3.11	<	2	<	2	237	225	120	114
AVERAGE		10.0	0.1	2.12		7.45	7.50		4.56	<				249	227	131	122
# Tests		30	30	1	1	30	29	29	30		30		30	4	4	30	29

SAMPLE LOCATIONS

TAHOE BASIN MONITORING WELLS

<u>Site</u>	<u>Location</u>
ERB	Emergency Retention Basin
CONTROL	North of Post Office
MW02-25, -50	Emergency Retention Basin, S side
MW03-25, -50	Emergency Retention Basin, S side
MW04-25, -50	Emergency Retention Basin, W side
MW07-25, -50	Emergency Retention Basin, N side
MW08-25, -50	Pond #1, SW corner
MW11	S.E. corner of wastewater treatment plant grounds
MW12	South of Emergency Pump Building, for buried sludge
MW13	Pond 2, along Heavenly Valley Creek, for buried sludge

HEAVENLY VALLEY CREEK

HVC-1	At Pioneer Trail
HVC-2	250 ft upstream of Pond #2
HVC-3	25 ft downstream of Johnson Blvd.
HVC-4	Effluent of drain pipe from Lower Shop area
HVC-5	Effluent of drainage pipe along Johnson Blvd, 10 feet upstream of Johnson Blvd.

ALPINE COUNTY MONITORING WELLS

<u>Site</u>	<u>Location</u>
ACMW-01AW	Below main dam at Harvey Place Reservoir
ACMW-01BE	Below auxiliary dam at Harvey Place Reservoir
ACMW-02, N&S	On dam access road at Diamond Valley Road
ACMW-03	Bruns ranch, east side of Highway 88
ACMW-04W	Gansberg ranch, west side of Highway 88
ACMW-05	Dressler ranch
ACMW-06, N&S	Celio ranch, on Diamond Valley Road

ALPINE SOILS

<u>Site</u>	<u>Ranch</u>
S2	Celio
S3	Hall
S4	Gansberg
S5	Gansberg
S6	Neddenriep
S7	Bruns
S8	Dressler

ALPINE GROUNDWATERS

<u>Site</u>	<u>Homeowner</u>
GW-01	Sagues
GW-03	Smith/Springmeyer
GW-04	Celio
GW-05	Neddenriep
GW-07	Gansberg, Jr.
GW-08	Arant
GW-11	Diamond Valley School
GW-14	Sierra Pines Store

ALPINE SURFACEWATERS

<u>Site</u>	<u>Location</u>
SW-01	Carson River, Woodfords
SW-02	Indian Creek, @ HWY 89
SW-03	Indian Creek, @ upper bridge
SW-04	Indian Creek, @ lower bridge
SW-05	Carson River, Paynesville
SW-06	Carson River, Stateline
SW-07	Fredericksberg Ditch, Stateline
SW-08	Irrigation Ditch along Carson River Road
SW-09	Carson River, Dressler Lane
SW-10	Indian Creek, @ Smith-Springmeyer Ranch

TAHOE BASIN MONITORING

05/09/00

Site	Date	ID	Location	Depth msl	Temp C	pH	EC umhos	Cl mg/L	COD mg/L	NO3-N mg/L	Comment
Buried Sludge Monitoring											
MW11	04/25/00	20000425-13	Sludge Pond	6268.2	8.3	6.81	81	0.7	7.3	0.307	
MW12	04/25/00	20000425-14	Sludge Pond	6266.6	7.6	6.13	156	1.9	5.0	0.168	
MW13	04/25/00	20000425-15	Sludge Pond	6258.2	4.6	7.57	764	2.5	18.6	4.000	
ERB Monitoring											
CONTROL	04/25/00	20000425-06	At Post Office	6283.2	9.0	7.13	172	7.4	< 5.0	2.330	
MW01-5	04/25/00	20000425-07	SW corner of ERB	6269.1	8.6	7.14	169	3.3	< 5.0	0.625	
MW02-50	04/25/00	20000425-08	Black Bart side of ERB	6268.8	10.0	6.73	413	30.8	< 5.0	8.300	
MW03-50	04/25/00	20000425-09	Black Bart side of ERB	6268.8	10.0	6.42	369	32.2	< 5.0	3.010	
MW04-50	04/25/00	20000425-10	Hank Monk side of ERB	6269.2	8.2	6.64	76	5.5	< 5.0	0.086	
MW07-50	04/25/00	20000425-11	North side of ERB	6279.7	7.2	6.44	262	25.2	< 5.0	0.552	
Heavenly Valley Creek											
HVC-1	04/12/00	20000412-06	Downstream of Pioneer		3.7	7.07	39	1.0	< 5.0	0.080	
HVC-1	04/13/00	20000413-07	Downstream of Pioneer		4.0	6.65	38	0.8	< 5.0	0.028	Storm Event
HVC-2	04/12/00	20000412-07	250' upstream of Pond #2		2.9	6.77	40	1.3	< 5.0	0.026	
HVC-2	04/13/00	20000413-08	250' upstream of Pond #2		3.6	6.62	41	1.3	< 5.0	0.011	Storm Event
HVC-3	04/12/00	20000412-08	25' downstream of Johnson Blvd		2.8	6.84	42	1.1	< 5.0	0.020	
HVC-3	04/13/00	20000413-09	25' downstream of Johnson Blvd		3.7	6.59	44	1.5	< 5.0	0.019	Storm Event
HVC-4	04/12/00	20000412-09	Effluent of drain from Lower Shop		5.6	6.82	102	0.8	< 5.0	0.087	
HVC-4	04/13/00	20000413-10	Effluent of drain from Lower Shop		5.2	6.72	100	0.7	< 5.0	0.046	Storm Event
HVC-5	04/12/00	20000412-HVC5	Effluent of drainage pipe along Jo								Dry
HVC-5	04/13/00	20000413-11	Effluent of drainage pipe along Jo		6.5	6.49	35	28.7	29.2	0.304	Storm Event
Treatment Plant Monitoring											
MW08-25	04/25/00	20000425-12	SW side of Pond #1	6247.9	9.0	6.50	1007	48.8	78.0	< 0.010	

ALPINE COUNTY MONITORING

05/11/00

Site	Date	ID	Location	Temp C	pH	EC umhos	DO mg/L	Aik mg/L	TDS mg/L	SS mg/L	Turb. NTU	Cl mg/L	SO4 mg/L
Alpine Monitoring Wells													
ACMW-01AW	04/18/00	20000418-15	Main Dam	8.2	6.69	100		41	79			3.5	
ACMW-01BE	04/18/00	20000418-16	Secondary Dam	9.0	6.50	99		48	77			0.9	
ACMW-02N	04/18/00	20000418-17	Access Gate	11.2	6.65	126		60	90			2.3	
ACMW-02S	04/18/00	20000418-18	Access Gate	9.6	6.29	91		43	72			1.7	
ACMW-04W	04/18/00	20000418-19	Gansberg	10.9	6.07	192		55	137			12.5	
ACMW-06N	04/18/00	20000418-20	Celio	9.9	6.80	688		260	432			54.9	
ACMW-06S	04/18/00	20000418-21	Celio	10.2	6.78	718		244	445			74.6	
Groundwaters													
GW-03	04/12/00	20000411-22	Smith/Springmeyer	14.5	7.60	307		128	236			1.5	
GW-04	04/12/00	20000411-23	Celio	14.6	7.49	262		116	199			3.2	
GW-05	04/12/00	20000411-24	Neddenriep	11.5	6.41	272		62	180			25.0	
GW-07	04/12/00	20000411-25	Gansberg	11.0	6.36	130		55	98			1.5	
GW-08	04/12/00	20000411-26	Arant	12.2	6.47	256		53	162			25.7	
GW-11	04/12/00	20000411-27	Diamond Val. School	14.9	5.94	101		49	84			0.9	
GW-14	04/12/00	20000411-28	Sierra Pines	10.5	6.30	110		51	97			1.2	
Reservoirs													
HPR	04/04/00	20000404-15	Harvey Place Reservoir	12.8	7.68	460	7.90	112	210	28.90	4.6	47.5	20.8
Surfacewaters: Carson R													
SW-01	04/04/00	20000404-07	Carson R Woodfords	2.7	7.44	54	11.00	23	47	19.20	4.1	1.5	3.0
SW-05	04/04/00	20000404-11	Carson R Paynesville	5.0	7.45	55	12.60	25	46	18.70	4.4	1.5	3.2
SW-06	04/04/00	20000404-12	Carson R Stateline	6.4	7.49	58	10.70	25	50	19.40	4.5	1.6	3.1
SW-07	04/04/00	20000404-13	Fredericksburg Ditch	12.6	7.27	121	7.60	44	114	109.00	65	6.2	10.1
SW-08	04/04/00	20000404-14	Irrigation Ditch	13.1	7.14	73	13.70	32	62	9.76	1.6	1.7	4.0
SW-01	04/13/00	20000413-12	Carson R Woodfords	6.2	7.01	41				61.10	7.3		
Surfacewaters: Indian Cr													
SW-02	04/04/00	20000404-08	Indian Cr Upper	7.0	7.56	88	7.80	45	72	0.66	1.8	0.7	3.1
SW-03	04/04/00	20000404-09	Indian Cr Mid	5.6	7.51	61	10.00	27	60	37.30	24	1.8	4.7
SW-04	04/04/00	20000404-10	Indian Cr Lower	6.6	7.58	68	11.00	31	61	34.60	22	1.6	4.2

ALPINE COUNTY MONITORING

05/11/00

Site	Date	TotalP mg/L	PO4-P mg/L	TKN mg/L	NH3-N mg/L	NO2-N mg/L	NO3-N mg/L	Total N mg/L	MBAS mg/L
Alpine Monitoring Wells									
ACMW-01AW	04/18/00				< 0.020	< 0.010	0.736	0.746	
ACMW-01BE	04/18/00				< 0.020	< 0.010	0.194	0.204	
ACMW-02N	04/18/00				< 0.020	< 0.010	0.082	0.092	
ACMW-02S	04/18/00				< 0.020	< 0.010	0.054	0.064	
ACMW-04W	04/18/00				< 0.020	< 0.010	2.610	2.620	
ACMW-06N	04/18/00				0.051	< 0.010	< 0.010	0.020	
ACMW-06S	04/18/00				0.028	0.040	0.027	0.067	
Groundwaters									
GW-03	04/12/00				< 0.020	< 0.010	0.743	0.753	
GW-04	04/12/00				< 0.020	< 0.010	0.842	0.852	
GW-05	04/12/00				< 0.020	< 0.010	4.410	4.420	
GW-07	04/12/00				< 0.020	< 0.010	1.150	1.160	
GW-08	04/12/00				< 0.020	< 0.010	5.760	5.770	
GW-11	04/12/00				0.027	< 0.010	0.401	0.411	
GW-14	04/12/00				< 0.020	< 0.010	0.473	0.483	
Reservoirs									
HPR	04/04/00	2.650	2.290	20.300	17.700	0.110	0.925	21.335	
Surfacewaters: Carson R									
SW-01	04/04/00	0.056	< 0.010	0.322	< 0.020	< 0.010	0.025	0.357	
SW-05	04/04/00	0.064	< 0.010	0.285	< 0.020	< 0.010	0.028	0.323	
SW-06	04/04/00	0.064	< 0.010	0.342	< 0.020	< 0.010	0.024	0.376	
SW-07	04/04/00	0.840	0.254	2.510	0.211	0.014	0.160	2.684	
SW-08	04/04/00	0.061	0.020	0.366	< 0.020	< 0.010	0.017	0.393	
SW-01	04/13/00	0.138						0.000	
Surfacewaters: Indian Cr									
SW-02	04/04/00	0.016	< 0.010	0.222	< 0.020	< 0.010	< 0.010	0.242	
SW-03	04/04/00	0.130	0.012	0.401	< 0.020	< 0.010	0.019	0.430	
SW-04	04/04/00	0.130	0.014	0.337	0.030	< 0.010	0.020	0.367	

ALPINE COUNTY MONITORING

05/11/00

Site	Date	COD mg/L	BOD mg/L	O & G mg/L	Boron mg/L	Ca mg/L	Mg mg/L	Na mg/L	K mg/L	SAR	Exch Na %	Hardness mg/L	Water Level MSL or Ft
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Alpine Monitoring Wells

ACMW-01AW	04/18/00												5482.8
ACMW-01BE	04/18/00												5495.2
ACMW-02N	04/18/00												5460.1
ACMW-02S	04/18/00												5463.0
ACMW-04W	04/18/00												4901.8
ACMW-06N	04/18/00												5215.7
ACMW-06S	04/18/00												5204.4

Groundwaters

GW-03	04/12/00												
GW-04	04/12/00												
GW-05	04/12/00												
GW-07	04/12/00												
GW-08	04/12/00												
GW-11	04/12/00												
GW-14	04/12/00												

Reservoirs

HPR	04/04/00	37	6		0.20	15.5	3.3	42.0	8.3	2.53	59.2		54.5
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Surfacewaters: Carson R

SW-01	04/04/00		1		0.01	5.7	1.6	2.6	1.0	0.25	20.3		
SW-05	04/04/00		1		0.01	5.9	1.6	2.8	1.2	0.27	21.2		
SW-06	04/04/00		2		0.02	6.5	1.8	2.9	1.3	0.26	20.4		
SW-07	04/04/00		8		0.06	9.7	5.6	10.8	11.3	0.68	27.6		
SW-08	04/04/00		1		0.01	6.8	1.9	4.1	2.3	0.35	24.2		
SW-01	04/13/00												

Surfacewaters: Indian Cr

SW-02	04/04/00		1		0.01	9.0	2.2	6.1	1.2	0.47	28.6		
SW-03	04/04/00		1		0.01	6.3	1.9	3.4	1.4	0.31	22.8		
SW-04	04/04/00		1		0.03	6.9	2.1	3.7	1.5	0.32	22.7		

ALPINE COUNTY
BACTERIOLOGICAL MONITORING

05/11/00

Alpine Monitoring Wells

Site	Date	Total Coliform MPN/100mL	Fecal Coliform MPN/100mL	Fecal Streptococci MPN/100mLL
ACMW-01AW	04/18/00	< 1.1	< 1.1	
ACMW-01BE	04/18/00	< 1.1	< 1.1	
ACMW-02N	04/18/00	< 1.1	< 1.1	
ACMW-02S	04/18/00	16.1	< 1.1	
ACMW-04W	04/18/00	2.2	< 1.1	
ACMW-06N	04/18/00	< 1.1	< 1.1	
ACMW-06S	04/18/00	< 1.1	< 1.1	

Groundwaters

Site	Date	Total Coliform MPN/100mL	Fecal Coliform MPN/100mL	Fecal Streptococci MPN/100mLL
GW-03	04/12/00	< 1.1	< 1.1	
GW-04	04/12/00	< 1.1	< 1.1	
GW-05	04/12/00	< 1.1	< 1.1	
GW-07	04/12/00	< 1.1	< 1.1	
GW-08	04/12/00	< 1.1	< 1.1	
GW-11	04/12/00	< 1.1	< 1.1	
GW-14	04/12/00	< 1.1	< 1.1	

Reservoirs

Site	Date	Total Coliform MPN/100mL	Fecal Coliform MPN/100mL	Fecal Streptococci MPN/100mLL
HPR	04/04/00	170	8	130

Surfacewaters: Carson R

Site	Date	Total Coliform MPN/100mL	Fecal Coliform MPN/100mL	Fecal Streptococci MPN/100mLL
SW-01	04/04/00	< 30	< 30	
SW-05	04/04/00	90	< 30	
SW-06	04/04/00	750	30	
SW-07	04/04/00	> 24000	> 24000	
SW-08	04/04/00	750	430	
SW-01	04/13/00			

Surfacewaters: Indian Cr

Site	Date	Total Coliform MPN/100mL	Fecal Coliform MPN/100mL	Fecal Streptococci MPN/100mLL
SW-02	04/04/00	40	< 30	
SW-03	04/04/00	230	90	
SW-04	04/04/00	30	< 30	

ALPINE COUNTY SOILS

05/10/00

Site	Date	Location	Type	pH	EC mmho	%Sat	TKN mg/Kg	NO3-N mg/L	Total P mg/Kg	Exch P mg/L
S2a	03/03/00	Celio	KT	8.31	1.94	72.7	2,520	0.0	800	5.2
S3a	03/03/00	Hall	SMB	6.24	0.47	40.2	1,710	0.3	1,130	14.5
S4a	03/03/00	Gansberg	DI	6.70	0.57	37.1	1,790	16.3	560	13.3
S5a	03/03/00	Gansberg	HRB	6.16	0.31	31.4	1,240	6.0	880	9.8
S6a	03/03/00	Neddenriep	DWB	6.91	0.30	45.1	1,260	6.8	780	25.8
S7a	03/03/00	Bruns	JaC	6.17	0.17	37.8	1,640	1.6	870	7.9
S8a	03/03/00	Dressler	SOD	6.84	0.40	19.2	84	0.4	430	10.2

Site	Date	Cl mg/L	SO4 mg/Kg	CEC meq/100g	Cu mg/Kg	Mo mg/Kg	Ca mg/L	Mg mg/L	Na mg/L	SAR	% Na	
S2a	03/03/00		66	32.7	29.0	<	1.0	64.3	48.0	261.0	6.00	6.9
S3a	03/03/00		10	24.3	41.0	<	2.0	26.5	9.3	55.8	2.37	2.1
S4a	03/03/00		7	19.5	50.0	<	1.0	42.8	9.2	68.6	2.48	2.3
S5a	03/03/00		5	15.7	40.0	<	1.0	20.4	3.9	32.0	1.70	1.2
S6a	03/03/00		4	17.7	55.0	<	1.0	33.2	15.2	26.6	0.96	< 1.0
S7a	03/03/00		4		49.0	<	1.0	17.5	3.5	11.2	0.64	< 1.0
S8a	03/03/00		6	14.8	27.0	<	1.0	16.8	3.6	34.5	1.99	1.6

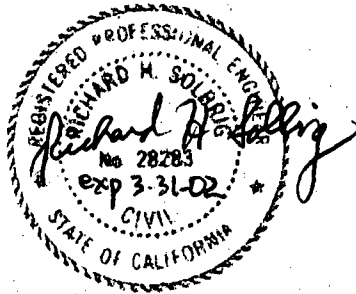
Site	Location	TDS		Cl ⁻		TKN		NO ₃ -N		Total N		Total P		SO ₄		Boron		Exch Na %	
		Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence
SW-01	Carson River, Woodfords	55	✓	1.0	✓	0.13	✓	0.02		0.15	✓	0.02	✓	2.0	✓	0.02		20	✓
SW-06	Carson River, Stateline	70	✓	2.5	✓	0.22		0.03	✓	0.25		0.03		2.0	✓	0.02		20	✓
SW-02	Indian Creek, Upper	100		6.0						0.30		0.03	✓	8.0		0.25		30	✓
SW-03	Indian Creek, Mid	100		6.0						0.30	✓	0.03	✓	8.0		0.25		30	
SW-04	Indian Creek, Lower	100		6.0						0.30	✓	0.03	✓	8.0		0.25		30	
SW-10	Indian Creek, Stateline	100		6.0						0.30		0.03		8.0		0.25		30	

December's soils results are included in this report.

Certification

I hereby certify that the enclosed monitoring report was prepared under my direct supervision and that I am a duly Registered Engineer under the laws of the State of California.

Sincerely,



Richard Solbrig,
Assistant Manager/Engineer

Enclosures:

1.

March Monthly Report	Pages
Wastewater Treatment plant	2
Permit Compliance Record	1
Export pipeline inspection	1
Sample site locations	2
Monitoring wells (ERB) and Heavenly Valley Creek (HVC) - Tahoe Basin	1
Alpine County Surfacewaters, Groundwaters, ICR and HPR	4
Alpine County Soils, December	1
Total number of pages:	12

cc: Calif. Dept. of Health Services, ODW - Jess Morehouse
 El Dorado Co. Dept. of Environmental Health - Virginia Huber
 Nevada Division of Environmental Protection - Wendel McCurry
 Alpine County Health Department - Dr. Richard Botto
 Alpine County Health Department - Jim Goodloe
 Alpine County Board of Supervisors
 Desert Research Group (Alpine County Consultants) - Bill Albright
 STPUD Board of Directors
 STPUD General Manager / District Engineer - Robert G. Baer
 STPUD Manager of Operations - Ross Johnson
 STPUD Operations Chief Plant Operator - Jeff Lee
 STPUD Laboratory Director - Terry Powers
 STPUD Manager of Alpine County Operations - Hal Bird

**SOUTH TAHOE PUBLIC UTILITY DISTRICT
WASTEWATER TREATMENT PLANT MONTHLY REPORT**

04/07/00
11:21:49

MARCH 2000

Date	Day	FLOW MGD			Pond Inf	PRECIP.		D.O. mg/L Fin	COD mg/L		BOD mg/L		SS mg/L	
		Inf	2-Hr Peak Inf	Eff		Pond Return	Inch		Type	Raw	Fin	Raw	Fin	Raw
03/01/00	Wed	4.94	6.9	4.74				7.44	336					
03/02/00	Thu	4.85	6.1	4.66		0.30	Snow	6.82	343					
03/03/00	Fri	5.26	7.0	5.18				6.60	370					
03/04/00	Sat	6.33	8.2	5.85				6.90	380	40.0	174	8.7	125	2.5
03/05/00	Sun	5.37	8.0	5.10		0.09	Snow	6.66	416					
03/06/00	Mon	4.96	7.8	4.64		0.01	Snow	6.71	412					
03/07/00	Tue	4.83	7.4	4.92		0.08	Snow	7.09	377					
03/08/00	Wed	4.54	6.8	4.33		0.03	Snow	6.74	397	38.6	159	4.7	116	1.6
03/09/00	Thu	4.73	6.0	4.69				6.72	382					
03/10/00	Fri	4.97	6.3	4.58				7.21	308					
03/11/00	Sat	6.13	7.8	6.06				6.14	293	47.8			147	2.9
03/12/00	Sun	5.37	7.9	5.07				5.95	412					
03/13/00	Mon	5.33	6.8	5.46				6.59	349					
03/14/00	Tue	5.16	7.8	5.21				6.97	359					
03/15/00	Wed	5.25	8.9	4.73				6.41	346	47.6	142	7.8	127	3.1
03/16/00	Thu	5.31	7.2	5.12				6.74	317					
03/17/00	Fri	5.44	7.3	5.43				6.20						
03/18/00	Sat	6.39	8.6	5.55				6.92	390	49.0	188	10.6	131	3.4
03/19/00	Sun	6.23	8.5	6.04				6.65	414					
03/20/00	Mon	5.01	7.3	4.91				6.86	396					
03/21/00	Tue	5.01	6.6	4.96				6.48	379					
03/22/00	Wed	4.78	6.5	4.61				6.56	364	52.4			78	2.4
03/23/00	Thu	5.21	6.9	5.11				6.43	324					
03/24/00	Fri	5.36	7.3	5.15				6.71	338					
03/25/00	Sat	6.09	8.6	5.62				6.08	352	50.2	168	13.0	118	3.7
03/26/00	Sun	5.67	8.5	5.22				6.68	426					
03/27/00	Mon	5.18	7.3	4.96				6.55	331					
03/28/00	Tue	4.90	6.8	2.37		2.13		6.64		43.4		9.8		2.8
03/29/00	Wed	4.83	6.3	4.31	0.50	0.60		7.06	409					
03/30/00	Thu	4.75	6.7	4.74	0.53			6.35	357					
03/31/00	Fri	5.02	7.0	5.88	1.70			6.27	379					
PERMIT MAX		7.7								300		45		60
PERMIT MIN														
PERMIT AVE										60		30		30
TOTAL		163.20	227.1	155.20	2.73	2.73	0.51	206.13	10656	369.0	831	54.6	842	22.3
MAXIMUM		6.39	8.9	6.06	1.70	2.13	0.30	7.44	426	52.4	188	13.0	147	3.7
MINIMUM		4.54	6.0	2.37	0.50	0.60	0.01	5.95	293	38.6	142	4.7	78	1.6
AVERAGE		5.26	7.3	5.01	0.91	1.37	0.10	6.65	367	46.1	166	9.1	120	2.8
# Tests		31	31	31	3	2	5	31	29				7	

**SOUTH TAHOE PUBLIC UTILITY DISTRICT
WASTEWATER TREATMENT PLANT MONTHLY REPORT**

04/07/00
11:02:58

MARCH 2000

Date	Day	SETTLEABLE SOLIDS mL/L		MBAS mg/L		pH Units		TURBIDITY NTU		Cl2 mg/L	FINAL COLIFORMS MPN/100 mL			TDS mg/L		ALKALINITY mg/L	
		Raw	Fin	Raw	Fin	Raw	Fin	Fin	Fin		Total	7day-	Median	Raw	Fin	Raw	Fin
03/01/00	Wed	12.0	< 0.1			7.60	7.58	3.10								130	118
03/02/00	Thu	8.0	< 0.1			7.85	7.58	2.40	5.15	< 2	< 2					135	121
03/03/00	Fri	8.5	< 0.1			7.77	7.54	2.00	3.40	< 2	< 2					139	126
03/04/00	Sat	7.5	< 0.1			7.48	7.70	2.20	3.50	< 2	< 2					147	135
03/05/00	Sun	10.5	< 0.1			7.63	7.48	2.20	3.40	< 2	< 2					152	135
03/06/00	Mon	9.5	< 0.1			7.52	7.48	2.00	5.05	< 2	< 2					138	124
03/07/00	Tue	10.0	< 0.1			7.59	7.52	1.90	4.86	< 2	< 2					141	124
03/08/00	Wed	10.0	< 0.1			7.77	7.58	1.70	4.18	< 2	< 2	251	221			134	127
03/09/00	Thu	9.5	< 0.1			7.67	7.54	1.90	4.08	< 2	< 2					137	125
03/10/00	Fri	9.5	< 0.1			7.59	7.36	1.90	3.89	< 2	< 2					140	128
03/11/00	Sat	9.0	< 0.1			7.37	7.57	2.50	3.11	< 2	< 2					145	131
03/12/00	Sun	10.0	< 0.1			7.44	7.44	2.90	3.79	< 2	< 2					148	132
03/13/00	Mon	10.0	< 0.1			7.47	7.31	2.90	4.95	< 2	< 2					131	124
03/14/00	Tue	8.0	< 0.1			7.28	7.36	2.90	4.18	< 2	< 2					133	126
03/15/00	Wed	8.0	< 0.1			7.25	7.52	2.60	3.59	< 2	< 2	240	214			133	122
03/16/00	Thu	10.0	< 0.1			7.52	7.39	2.00	4.27							133	122
03/17/00	Fri		< 0.1				7.32	2.10	3.50	< 2	< 2						124
03/18/00	Sat	3.5	< 0.1			7.44	7.63	2.90	3.50	< 2	< 2					137	130
03/19/00	Sun	9.5	< 0.1			7.47	7.45	3.10	3.88	< 2	< 2					139	130
03/20/00	Mon	8.5	< 0.1			7.65	7.49	3.20	4.66	< 2	< 2					132	122
03/21/00	Tue	9.0	< 0.1			7.42	7.48	3.30	4.37	< 2	< 2					134	122
03/22/00	Wed	10.0	< 0.1			7.42	7.43	3.10	4.18	< 2	< 2	245	216			123	117
03/23/00	Thu	8.5	< 0.1			7.50	7.42	3.00	3.40	< 2	< 2					124	120
03/24/00	Fri	8.5	< 0.1	3.24	0.116	7.43	7.37	3.00	3.79	< 2	< 2					129	122
03/25/00	Sat	10.5	< 0.1			7.35	7.66	3.50	2.91	< 2	< 2					137	130
03/26/00	Sun	10.0	< 0.1			7.38	7.50	3.50	5.73	< 2	< 2					138	129
03/27/00	Mon	9.5	< 0.1			7.66	7.71	2.90	4.76	< 2	< 2					126	120
03/28/00	Tue		< 0.1				7.87	2.40	4.08	< 2	< 2	201	216			117	117
03/29/00	Wed	10.0	< 0.1			7.45	7.54	2.70	4.76	< 2	< 2					126	118
03/30/00	Thu	8.0	< 0.1			7.63	7.54	2.50	4.37	< 2	< 2					132	120
03/31/00	Fri	9.0	< 0.1			7.62	7.50	2.40	3.73	< 2	< 2					127	118
PERMIT MAX			0.1		2.0		8.5	20									
PERMIT MIN							6.5	10									
PERMIT AVE					1.0												
TOTAL		264.5	3.1	3.24	0.116	218.22	232.86	80.70	123.02	58	58	937	867	3920	3859		
MAXIMUM		12.0	0.1	3.24	0.116	7.85	7.87	3.50	5.73			251	221	152	135		
MINIMUM		3.5	0	3.24	0.116	7.25	7.31	1.70	2.91	2	2	201	214	123	117		
AVERAGE		9.1	0.1	3.24	0.116	7.52	7.51		4.10	2	2	234	217	135	124		
# Tests		29	31	1	1	29	31	31	30	29	29	4	4	29	31		

SOUTH TAHOE
PUBLIC UTILITY DISTRICT
MEMORANDUM



Date: March 8, 2000
To: Bob Baer, Diane Noble
From: Tim Rieger
Topic: Export Line Check

On March 8, 2000, Greg Schrempp and I conducted our check of the District's export line from the treatment plant to station 564+06 near the Harvey Place reservoir. Several wet spots were checked. However, nothing positive was found. No damage to the pipe was found.

CC Terry Powers

SAMPLE LOCATIONS

TAHOE BASIN MONITORING WELLS

<u>Site</u>	<u>Location</u>
ERB	Emergency Retention Basin
CONTROL	North of Post Office
MW02-25, -50	Emergency Retention Basin, S side
MW03-25, -50	Emergency Retention Basin, S side
MW04-25, -50	Emergency Retention Basin, W side
MW07-25, -50	Emergency Retention Basin, N side
MW08-25, -50	Pond #1, SW corner
MW11	S.E. corner of wastewater treatment plant grounds
MW12	South of Emergency Pump Building, for buried sludge
MW13	Pond 2, along Heavenly Valley Creek, for buried sludge

HEAVENLY VALLEY CREEK

HVC-1	At Pioneer Trail
HVC-2	250 ft upstream of Pond #2
HVC-3	25 ft downstream of Johnson Blvd.
HVC-4	Effluent of drain pipe from Lower Shop area
HVC-5	Effluent of drainage pipe along Johnson Blvd, 10 feet upstream of Johnson Blvd.

ALPINE COUNTY MONITORING WELLS

<u>Site</u>	<u>Location</u>
ACMW-01AW	Below main dam at Harvey Place Reservoir
ACMW-01BE	Below auxiliary dam at Harvey Place Reservoir
ACMW-02, N&S	On dam access road at Diamond Valley Road
ACMW-03	Bruns ranch, east side of Highway 88
ACMW-04W	Gansberg ranch, west side of Highway 88
ACMW-05	Dressler ranch
ACMW-06, N&S	Celio ranch, on Diamond Valley Road

ALPINE SOILS

<u>Site</u>	<u>Ranch</u>
S2	Celio
S3	Hall
S4	Gansberg
S5	Gansberg
S6	Neddenriep
S7	Bruns
S8	Dressler

ALPINE GROUNDWATERS

<u>Site</u>	<u>Homeowner</u>
GW-01	Sagues
GW-03	Smith/Springmeyer
GW-04	Celio
GW-05	Neddenriep
GW-07	Gansberg, Jr.
GW-08	Arant
GW-11	Diamond Valley School
GW-14	Sierra Pines Store

ALPINE SURFACEWATERS

<u>Site</u>	<u>Location</u>
SW-01	Carson River, Woodfords
SW-02	Indian Creek, @ HWY 89
SW-03	Indian Creek, @ upper bridge
SW-04	Indian Creek, @ lower bridge
SW-05	Carson River, Paynesville
SW-06	Carson River, Stateline
SW-07	Fredericksberg Ditch, Stateline
SW-08	Irrigation Ditch along Carson River Road
SW-09	Carson River, Dressler Lane
SW-10	Indian Creek, @ Smith-Springmeyer Ranch

TAHOE BASIN MONITORING

04/09/00

Site	Date	ID	Location	Depth msl	Temp C	pH	EC umhos	Cl mg/L	COD mg/L	NO3-N mg/L	Comment
Buried Sludge Monitoring											
MW11	03/21/00	20000321-13	Sludge Pond	6268.4	7.2	6.50	78	1.1	< 5.0	0.098	
MW12	03/21/00	20000321-14	Sludge Pond	6267.0	8.6	6.11	146	1.9	8.7	0.132	
MW13	03/21/00	20000321-15	Sludge Pond	6258.8	3.8	6.88	701	2.1	12.8	3.730	
ERB Monitoring											
CONTROL	03/21/00	20000321-06	At Post Office	6283.4	9.3	6.71	172	7.2	< 5.0	2.400	
MW01.5	03/21/00	20000321-07	SW corner of ERB	6269.1	9.1	6.84	168	3.3	< 5.0	0.678	
MW02-50	03/21/00	20000321-08	Black Bart side of ERB	6268.9	9.8	6.15	372	32.8	< 5.0	3.160	
MW03-50	03/21/00	20000321-09	Black Bart side of ERB	6269.0	9.8	6.15	372	32.8	< 5.0	3.160	
MW04-50	03/21/00	20000321-10	Hank Monk side of ERB	6268.9	8.0	6.00	76	5.3	< 5.0	0.091	
MW07-50	03/21/00	20000321-11	North side of ERB	6279.7	6.5	6.24	265	25.4	< 5.0	0.602	
Heavenly Valley Creek											
HVC-1	03/07/00	20000307-15	Downstream of Pioneer		2.1	7.49	59	1.1	< 5.0	0.160	
HVC-2	03/07/00	20000307-16	250' upstream of Pond #2		3.9	7.18	59	1.9	< 5.0	0.053	
HVC-3	03/07/00	20000307-17	25' downstream of Johnson Blvd		1.1	7.13	69	2.2	< 5.0	0.057	
HVC-4	03/07/00	20000307-18	Effluent of drain from Lower Shop		2.0	6.99	105	1.4	< 5.0	0.061	
HVC-5	03/21/00	20000307-HVC5	Effluent of drainage pipe along Jo								No flow
Treatment Plant Monitoring											
MW08-25	03/21/00	20000321-12	SW side of Pond #1	6248.8	8.7	6.25	994	46.1	94.2	< 0.010	

ALPINE COUNTY MONITORING

04/09/00

Site	Date	ID	Location	Temp C	pH	EC umhos	DO mg/L	Alk mg/L	TDS mg/L	SS mg/L	Turb NTU	Cl mg/L	SO4 mg/L
Alpine Monitoring Wells													
ACMW-01AW	03/14/00	20000314-09	Main Dam	9.1	7.44	76		33	63			1.5	
ACMW-01BE	03/14/00	20000314-10	Secondary Dam	10.1	7.77	100		49	78			0.9	
ACMW-02N	03/14/00	20000314-11	Access Gate	12.8	6.91	132		61	89			2.7	
ACMW-02S	03/14/00	20000314-12	Access Gate	11.6	7.15	97		45	71			1.7	
ACMW-04W	03/14/00	20000314-13	Gansberg	12.3	6.71	198		55	137			13.1	
ACMW-06N	03/14/00	20000314-14	Celio	12.0	6.68	694		262	419			54.8	
ACMW-06S	03/14/00	20000314-15	Celio	12.0	6.68	751		254	449			76.1	
Groundwaters													
GW-03	03/07/00	20000307-07	Smith/Springmeyer	7.8	7.99	309		128	224			1.6	
GW-04	03/07/00	20000307-08	Celio	12.8	7.79	269		117	194			3.1	
GW-05	03/07/00	20000307-09	Neddenriep	9.2	6.88	274		61	171			25.5	
GW-07	03/07/00	20000307-10	Gansberg	7.0	7.25	131		55	100			1.9	
GW-08	03/07/00	20000307-11	Arant	8.6	7.33	257		53	160			26.9	
GW-11	03/07/00	20000307-12	Diamond Val. School	8.9	8.73	114		47	79			0.9	
GW-14	03/07/00	20000307-13	Sierra Pines	6.3	6.89	109		51	92			1.2	
Reservoirs													
HPR	03/15/00	20000315-12	Harvey Place Reservoir	11.1	8.01	414	7.50	114	210	3.76	3.1	47.2	23.6
Surfacewaters: Carson R													
SW-01	03/01/00	20000301-14	Carson R Woodfords	0.7	7.74	88	11.10	37	67	0.82	.42	2.8	2.7
SW-05	03/01/00	20000301-18	Carson R Paynesville	2.5	7.25	93	12.50	40	77	2.16	.68	2.5	3.1
SW-06	03/01/00	20000301-19	Carson R Stateline	3.4	7.40	96	12.80	41	76	2.22	.73	2.9	4.5
SW-08	03/01/00	20000301-20	Irrigation Ditch	12.5	7.25	123	10.20	55	107	13.90	2.6	2.2	6.0
Surfacewaters: Indian Cr													
SW-02	03/01/00	20000301-15	Indian Cr Upper	1.8	7.39	79	11.40	38	72	3.54	3.7	1.5	3.6
SW-03	03/01/00	20000301-16	Indian Cr Mid	3.7	7.50	101	10.20	44	89	6.82	9.4	1.4	6.2
SW-04	03/01/00	20000301-17	Indian Cr Lower	3.4	7.27	109	11.10	49	88	9.10	7.9	1.7	5.7

ALPINE COUNTY MONITORING

04/09/00

Site	Date	TotalP mg/L	PO4-P mg/L	TKN mg/L	NH3-N mg/L	NO2-N mg/L	NO3-N mg/L	Total N mg/L	MBAS mg/L
Alpine Monitoring Wells									
ACMW-01AW	03/14/00	0.029		< 0.100	0.022	< 0.010	0.280	0.390	
ACMW-01BE	03/14/00	0.024		< 0.100	< 0.020	< 0.010	0.253	0.363	
ACMW-02N	03/14/00	0.017		< 0.100	< 0.020	< 0.010	0.106	0.216	
ACMW-02S	03/14/00	0.015		< 0.100	< 0.020	< 0.010	< 0.010	0.120	
ACMW-04W	03/14/00	0.020		0.118	< 0.020	< 0.010	3.140	3.268	
ACMW-06N	03/14/00	0.312		0.287	0.064	< 0.010	< 0.010	0.307	
ACMW-06S	03/14/00	0.050		0.179	0.048	0.012	0.026	0.217	
Groundwaters									
GW-03	03/07/00	0.050		0.180	< 0.020	< 0.010	0.706	0.896	
GW-04	03/07/00	0.072		< 0.100	< 0.020	< 0.010	0.806	0.916	
GW-05	03/07/00	0.048		< 0.100	< 0.020	< 0.010	3.780	3.890	
GW-07	03/07/00	0.112		< 0.100	< 0.020	< 0.010	1.320	1.430	
GW-08	03/07/00	0.118		0.135	< 0.020	< 0.010	5.160	5.305	
GW-11	03/07/00	0.032		< 0.100	< 0.020	< 0.010	0.382	0.492	
GW-14	03/07/00	0.052		0.114	< 0.020	< 0.010	0.437	0.561	
Reservoirs									
HPR	03/15/00	2.210	2.260	19.500	16.500	0.116	1.030	20.646	
Surfacewaters: Carson R									
SW-01	03/01/00	0.120	< 0.010	0.145	0.020	< 0.010	0.014	0.169	
SW-05	03/01/00	0.048	< 0.010	< 0.100	< 0.020	< 0.010	0.021	0.138	
SW-06	03/01/00	0.022	< 0.010	< 0.100	< 0.020	< 0.010	0.055	0.165	
SW-08	03/01/00	0.080	0.025	0.209	< 0.020	< 0.010	0.362	0.581	
Surfacewaters: Indian Cr									
SW-02	03/01/00	0.042	< 0.010	0.163	< 0.020	< 0.010	< 0.010	0.183	
SW-03	03/01/00	0.080	0.012	0.608	0.021	< 0.010	0.149	0.767	
SW-04	03/01/00	0.076	0.014	0.692	0.022	< 0.010	0.134	0.836	

ALPINE COUNTY MONITORING

04/09/00

Site	Date	COD mg/L	BOD mg/L	O & G mg/L	Boron mg/L	Ca mg/L	Mg mg/L	Na mg/L	K mg/L	SAR	Exch Na %	Hardness mg/L	Water Level MSL or Ft
Alpine Monitoring Wells													
ACMW-01AW	03/14/00												5482.0
ACMW-01BE	03/14/00												5491.2
ACMW-02N	03/14/00												5458.9
ACMW-02S	03/14/00												5460.2
ACMW-04W	03/14/00												4896.2
ACMW-06N	03/14/00												5216.2
ACMW-06S	03/14/00												5204.8

Groundwaters

GW-03	03/07/00												
GW-04	03/07/00												
GW-05	03/07/00												
GW-07	03/07/00												
GW-08	03/07/00												
GW-11	03/07/00												
GW-14	03/07/00												

Reservoirs

HPR	03/15/00	23	6		0.20	13.3	3.1	40.8	8.5	2.61	60.9		51.0
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Surfacewaters: Carson R

SW-01	03/01/00		2	<	0.01	7.9	2.2	4.8	1.5	0.38	25.0		
SW-05	03/01/00		1	<	0.01	8.2	2.3	5.4	1.8	0.42	26.5		
SW-06	03/01/00		2	<	0.01	8.3	2.5	5.6	1.9	0.44	26.7		
SW-08	03/01/00		1	<	0.01	9.6	2.6	11.0	2.5	0.81	38.8		

Surfacewaters: Indian Cr

SW-02	03/01/00		2	<	0.01	6.6	2.1	5.6	1.1	0.49	31.5		
SW-03	03/01/00		3	<	0.01	9.7	2.1	6.0	1.9	0.46	27.0		
SW-04	03/01/00		2	<	0.01	9.9	2.6	6.4	2.1	0.47	26.8		

**ALPINE COUNTY
BACTERIOLOGICAL MONITORING**

04/09/00

Alpine Monitoring Wells

Site	Date	Total Coliform MPN/100mL	Fecal Coliform MPN/100mL	Fecal Streptococci MPN/100mLL
ACMW-01AW	03/14/00	< 1.1	< 1.1	
ACMW-01BE	03/14/00	< 1.1	< 1.1	
ACMW-02N	03/14/00	< 1.1	< 1.1	
ACMW-02S	03/14/00	< 1.1	< 1.1	
ACMW-04W	03/14/00	< 1.1	< 1.1	
ACMW-06N	03/14/00	< 1.1	< 1.1	
ACMW-06S	03/14/00	< 1.1	< 1.1	

Groundwaters

Site	Date	Total Coliform MPN/100mL	Fecal Coliform MPN/100mL	Fecal Streptococci MPN/100mLL
GW-03	03/07/00	< 1.1	< 1.1	
GW-04	03/07/00	< 1.1	< 1.1	
GW-05	03/07/00	< 1.1	< 1.1	
GW-07	03/07/00	< 1.1	< 1.1	
GW-08	03/07/00	< 1.1	< 1.1	
GW-11	03/07/00	< 1.1	< 1.1	
GW-14	03/07/00	< 1.1	< 1.1	

Reservoirs

Site	Date	Total Coliform MPN/100mL	Fecal Coliform MPN/100mL	Fecal Streptococci MPN/100mLL
HPR	03/15/00	2	< 2	< 2

Surfacewaters: Carson R.

Site	Date	Total Coliform MPN/100mL	Fecal Coliform MPN/100mL	Fecal Streptococci MPN/100mLL
SW-01	03/01/00	90	< 30	
SW-05	03/01/00	40	< 30	
SW-06	03/01/00	40	< 30	
SW-08	03/01/00	2400	< 30	

Surfacewaters: Indian Cr

Site	Date	Total Coliform MPN/100mL	Fecal Coliform MPN/100mL	Fecal Streptococci MPN/100mLL
SW-02	03/01/00	90	< 30	
SW-03	03/01/00	90	< 30	
SW-04	03/01/00	90	< 30	

ALPINE COUNTY SOILS

04/07/00

Site	Date	Location	Type	pH	EC mmho	%Sat	TKN mg/Kg	NO3-N mg/L	Total P mg/Kg	Exch P mg/L
S2a	2/03/1999	Celio	KT	8.18	1.45	72.5	2,790	1.5	960	3.9
S3a	2/03/1999	Hall	SMB	5.56	0.18	35.5	1,360	3.9	1,060	21.6
S4a	2/03/1999	Gansberg	DI	6.81	1.03	41.1	1,730	4.7	610	13.9
S5a	2/03/1999	Gansberg	HRB	6.04	0.57	28.2	998	9.9	830	13.6
S6a	2/03/1999	Neddenriep	DWB	6.40	0.33	35.6	1,150	2.0	680	14.1
S7a	2/03/1999	Bruns	JaC	6.13	0.15	42.2	1,900	31.9	880	6.7
S8a	2/03/1999	Dressler	SOD	6.31	0.14	18.6	305	1.3	400	6.5

Site	Date	Cl mg/L	SO4 mg/Kg	CEC meq/100g	Cu mg/Kg	Mo mg/Kg	Ca mg/L	Mg mg/L	Na mg/L	SAR	% Na
S2a	2/03/1999		49	34.8	12.0	< 1.0	53.1	28.7	180.0	4.94	5.6
S3a	2/03/1999		4	17.9	16.0	< 1.0	12.0	2.7	10.5	0.71	< 1.0
S4a	2/03/1999		9	20.4	33.0	1.0	52.0	12.7	108.0	3.48	3.6
S5a	2/03/1999		3	10.1	25.0	2.0	41.0	8.7	39.4	1.46	< 1.0
S6a	2/03/1999		4	11.3	31.0	< 1.0	13.9	2.6	37.3	2.41	2.2
S7a	2/03/1999		4	15.7	35.0	< 1.0	13.4	2.3	11.5	0.76	< 1.0
S8a	2/03/1999		3	8.0	15.0	1.0	8.2	3.4	7.8	0.58	< 1.0

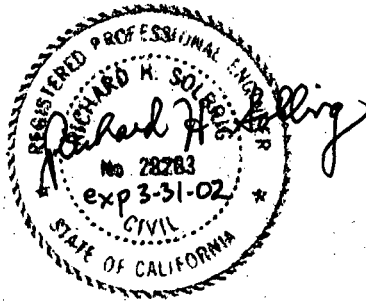
Site	Location	TDS		Cl		TKN		NO ₃ -N		Total N		Total P		SO ₄		Boron		Exch Na %	
		Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence
SW-01	Carson River, Woodfords	55	✓	1.0	✓	0.13	✓	0.02	✓	0.15	✓	0.02	✓	2.0	✓	0.02		20	✓
SW-06	Carson River, Statelyne	70		2.5		0.22		0.03		0.25		0.03		2.0		0.02		20	
SW-02	Indian Creek, Upper	100		6.0						0.30		0.03		8.0		0.25		30	
SW-03	Indian Creek, Mid	100		6.0						0.30		0.03		8.0		0.25		30	
SW-04	Indian Creek, Lower	100		6.0						0.30		0.03		8.0		0.25		30	
SW-10	Indian Creek, Statelyne	100		6.0						0.30		0.03		8.0		0.25		30	

December's soils results are not included. They will be sent to you as soon as they are completed. An updated report for January's Wastewater treatment plant report, with COD results, is included.

Certification

I hereby certify that the enclosed monitoring report was prepared under my direct supervision and that I am a duly Registered Engineer under the laws of the State of California.

Sincerely,



Richard Solbrig,
Assistant Manager/Engineer

Enclosures:

1.

February Monthly Report	Pages
Wastewater Treatment plant	2
Permit Compliance Record	1
Export pipeline inspection	
Sample site locations	2
Monitoring wells (ERB) and Heavenly Valley Creek (HVC) - Tahoe Basin	1
Alpine County Surfacewaters, Groundwaters, ICR and HPR	4
Revised January Treatment Plant Report - Includes COD results	1
Total number of pages:	11

- cc: Calif. Dept. of Health Services, ODW - Jess Morehouse
El Dorado Co. Dept. of Environmental Health - Virginia Huber
Nevada Division of Environmental Protection - Wendel McCurry
Alpine County Health Department - Dr. Richard Botto
Alpine County Health Department - Jim Goodloe
Alpine County Board of Supervisors
Desert Research Group (Alpine County Consultants) - Bill Albright
STPUD Board of Directors
STPUD General Manager / District Engineer - Robert G. Baer
STPUD Manager of Operations - Ross Johnson
STPUD Operations Chief Plant Operator - Jeff Lee
STPUD Laboratory Director - Terry Powers
STPUD Manager of Alpine County Operations - Hal Bird

**SOUTH TAHOE PUBLIC UTILITY DISTRICT
WASTEWATER TREATMENT PLANT MONTHLY REPORT**

03/06/00

08:14:18

FEBRUARY 2000

Date	Day	2-Hr Peak		FLOW MGD			PRECIP		D.O.	COD	BOD		SS		
		Inf	Inf	Eff	Pond Return	Pond Inf	Inch	Type	mg/L Fin	mg/L Raw	mg/L Fin	mg/L Raw	mg/L Fin	mg/L Raw	
02/01/00	Tue	4.39	6.0	4.26					7.16	299					
02/02/00	Wed	4.31	5.6	3.70					6.68	330					
02/03/00	Thu	4.40	6.0	4.70			0.10	Snow	6.10	592	41.9	210	5.9	198	2.7
02/04/00	Fri	4.60	6.2	4.44					7.34	400					
02/05/00	Sat	5.23	7.6	1.08		4.15			6.44	386					
02/06/00	Sun	5.12	7.9	4.27	1.00	1.85				423					
02/07/00	Mon	4.47	5.8	5.42	1.45				6.74	407					
02/08/00	Tue	4.55	6.0	5.46	1.50				7.07	379					
02/09/00	Wed	4.49	5.8	5.16	1.00		0.06	Snow	7.13	426					
02/10/00	Thu	4.84	5.7	5.52	0.75		0.10	Snow	6.81	538	40.4	242	8.0	222	3.0
02/11/00	Fri	5.01	6.4	4.67	0.30		0.07	Snow	6.63	396					
02/12/00	Sat	5.74	7.6	5.05			0.01	Snow	6.95	407	44.0	197	9.7	139	4.2
02/13/00	Sun	7.74	9.0	5.53			1.23	Rn/Snow	6.93	359					
02/14/00	Mon	6.80	9.8	7.25	0.30	1.00	0.37	Rain	6.28	319					
02/15/00	Tue	5.46	6.9	6.19	-0.70				7.43	257					
02/16/00	Wed	5.29	7.0	5.77			0.02	Snow	7.13	396	32.4	148	4.4	152	2.2
02/17/00	Thu	5.15	6.5	5.17			0.01	Snow	7.36	331					
02/18/00	Fri	5.40	7.2	5.33					7.46	347					
02/19/00	Sat	6.51	8.5	6.06					8.72	446	34.0	193	4.8	195	2.1
02/20/00	Sun	6.42	8.5	5.93			0.04	Snow	8.18	435					
02/21/00	Mon	5.91	8.6	5.92					7.39	405					
02/22/00	Tue	4.88	6.4	4.64			0.12	Snow	7.19	373					
02/23/00	Wed	5.00	7.0	4.74			0.19	Snow	7.65	400	43.1	157	9.3	138	3.7
02/24/00	Thu	5.10	6.8	4.72					7.64	416					
02/25/00	Fri	5.48	7.0	5.19			0.02	Snow	7.19	414					
02/26/00	Sat	6.05	8.1	5.54			0.36	Snow	7.11	420	62.8			124	5.4
02/27/00	Sun	5.95	8.0	5.89			0.65	Snow	7.07	377					
02/28/00	Mon	5.27	6.8	5.18					7.44	356	55.6	189	14.2	116	4.7
02/29/00	Tue	4.98	6.4	5.01			0.07	Snow	6.92	338					
PERMIT MAX		7.7									300		45		60
PERMIT MIN															
PERMIT AVE											60		30		30
TOTAL		154.54	205.1	147.79	7.00	7.00	3.42		200.14	11372	354.2	1336	56.2	1284	28.0
MAXIMUM		7.74	9.8	7.25	1.50	4.15	1.23		8.72	592	62.8	242	14.2	222	5.4
MINIMUM		4.31	5.6	1.08	0.30	1.00	0.01		6.10	257	32.4	148	4.4	116	2.1
AVERAGE		5.33	7.1	5.10	0.88	2.33	0.21		7.15	392	44.3	191	8.0	161	3.5
# Tests		29	29	29	8	3	16		28	29	8	7	7	8	8

**SOUTH TAHOE PUBLIC UTILITY DISTRICT
WASTEWATER TREATMENT PLANT MONTHLY REPORT**

03/06/00

08:14:18

FEBRUARY 2000

Date	Day	SETTLEABLE SOLIDS mL/L		MBAS mg/L		pH Units		TURBIDITY NTU		Cl2	FINAL COLIFORMS MPN/100 mL			TDS mg/L		ALKALINITY mg/L	
		Raw	Fin	Raw	Fin	Raw	Fin	Fin	Fin	mg/L	Total	7day-	Median	Raw	Fin	Raw	Fin
02/01/00	Tue	7.0	< 0.1			7.28	7.61	2.70	4.47		2	<	2			139	128
02/02/00	Wed	9.0	< 0.1			7.45	7.60	2.20	4.66	<	2	<	2			144	126
02/03/00	Thu	18.0	< 0.1			7.37	7.65	2.50	3.88	<	2	<	2	266	220	142	126
02/04/00	Fri	10.0	< 0.1			7.54	7.54	3.30	3.50	<	2	<	2			147	124
02/05/00	Sat	10.1				7.55			5.92	<	2	<	2			158	
02/06/00	Sun	11.0	< 0.1			7.42	7.59	4.00								161	145
02/07/00	Mon	10.5	< 0.1			7.37	7.46	3.60	4.95	<	2	<	2			143	131
02/08/00	Tue	9.0	< 0.1			7.37	7.67	2.80	6.02	<	2	<	2			140	126
02/09/00	Wed	10.5	< 0.1			7.48	7.60	3.20	5.05	<	2	<	2			136	124
02/10/00	Thu	19.0	< 0.1			7.29	7.60	2.90	5.05	<	2	<	2	212	216	139	124
02/11/00	Fri	11.0	< 0.1			7.37	7.70	3.30	4.66	<	2	<	2			140	128
02/12/00	Sat	10.5	< 0.1			7.37	7.66	3.40	4.18	<	2	<	2			152	134
02/13/00	Sun	9.0	< 0.1			7.33	7.51	4.40	3.69	<	2	<	2			126	138
02/14/00	Mon	8.0	< 0.1			7.50	7.26	4.30	4.47	<	2	<	2			104	92
02/15/00	Tue	8.5	< 0.1			7.31	7.48	2.40	5.73	<	2	<	2			117	82
02/16/00	Wed	10.0	< 0.1			7.61	7.38	1.60	5.83	<	2	<	2	233	189	120	102
02/17/00	Thu	7.0	< 0.1			7.64	7.54	1.50	5.25	<	2	<	2			130	110
02/18/00	Fri	9.5	< 0.1	4.10	0.070	7.67	7.58	1.50	4.18		2	<	2			139	120
02/19/00	Sat	11.5	< 0.1			7.74	7.67	1.80	3.11	<	2	<	2			152	133
02/20/00	Sun	10.0	< 0.1			7.73	7.62	1.80	3.30	<	2	<	2			158	140
02/21/00	Mon	10.5	< 0.1			7.64	7.54	2.00	4.76	<	2	<	2			145	140
02/22/00	Tue	10.0	< 0.1			7.66	7.54	2.80	4.86	<	2	<	2			137	130
02/23/00	Wed	11.5	< 0.1			7.80	7.51	3.40	5.83	<	2	<	2	243	216	135	126
02/24/00	Thu	9.0	< 0.1			7.76	7.63	3.80	4.27	<	2	<	2			135	127
02/25/00	Fri	9.0	< 0.1			7.72	7.48	3.50	3.59	<	2	<	2			140	128
02/26/00	Sat	10.0	< 0.1			7.55	7.64	3.90	3.98	<	2	<	2			150	134
02/27/00	Sun	10.0	< 0.1			7.70	7.56	4.50	4.27	<	2	<	2			146	135
02/28/00	Mon	10.0	< 0.1			7.63	7.65	3.80	6.41	<	2	<	2	238	218	139	122
02/29/00	Tue	8.5	< 0.1			7.69	7.49	3.00	4.86		2	<	2			132	118
PERMIT MAX			0.1		2.0		8.5	20			240		23				
PERMIT MIN							6.5										
PERMIT AVE					1.0			10									
TOTAL		297.6	2.8	4.10	0.070	218.54	211.76	83.90	130.73		56		56	1192	1059	4046	3492
MAXIMUM		19.0	0.1	4.10	0.070	7.80	7.70	4.50	6.41		2		2	266	220	161	145
MINIMUM		7.0	0	4.10	0.070	7.28	7.26	1.50	3.11		2		2	212	189	104	82
AVERAGE		10.3	0.1	4.10	0.070	7.54	7.56	3.00	4.67		2		2	238	212	140	125
# Tests		29	28	1	1	29	28	28	28		28		28	5	5	29	28

SAMPLE LOCATIONS

TAHOE BASIN MONITORING WELLS

<u>Site</u>	<u>Location</u>
ERB	Emergency Retention Basin
CONTROL	North of Post Office
MW02-25, -50	Emergency Retention Basin, S side
MW03-25, -50	Emergency Retention Basin, S side
MW04-25, -50	Emergency Retention Basin, W side
MW07-25, -50	Emergency Retention Basin, N side
MW08-25, -50	Pond #1, SW corner
MW11	S.E. corner of wastewater treatment plant grounds
MW12	South of Emergency Pump Building, for buried sludge
MW13	Pond 2, along Heavenly Valley Creek, for buried sludge

HEAVENLY VALLEY CREEK

HVC-1	At Pioneer Trail
HVC-2	250 ft upstream of Pond #2
HVC-3	25 ft downstream of Johnson Blvd.
HVC-4	Effluent of drain pipe from Lower Shop area
HVC-5	Effluent of drainage pipe along Johnson Blvd, 10 feet upstream of Johnson Blvd.

ALPINE COUNTY MONITORING WELLS

<u>Site</u>	<u>Location</u>
ACMW-01AW	Below main dam at Harvey Place Reservoir
ACMW-01BE	Below auxiliary dam at Harvey Place Reservoir
ACMW-02, N&S	On dam access road at Diamond Valley Road
ACMW-03	Bruns ranch, east side of Highway 88
ACMW-04W	Gansberg ranch, west side of Highway 88
ACMW-05	Dressler ranch
ACMW-06, N&S	Celio ranch, on Diamond Valley Road

ALPINE SOILS

<u>Site</u>	<u>Ranch</u>
S2	Celio
S3	Hall
S4	Gansberg
S5	Gansberg
S6	Neddenriep
S7	Bruns
S8	Dressler

ALPINE GROUNDWATERS

<u>Site</u>	<u>Homeowner</u>
GW-01	Sagues
GW-03	Smith/Springmeyer
GW-04	Celio
GW-05	Neddenriep
GW-07	Gansberg, Jr.
GW-08	Arant
GW-11	Diamond Valley School
GW-14	Sierra Pines Store

ALPINE SURFACEWATERS

<u>Site</u>	<u>Location</u>
SW-01	Carson River, Woodfords
SW-02	Indian Creek, @ HWY 89
SW-03	Indian Creek, @ upper bridge
SW-04	Indian Creek, @ lower bridge
SW-05	Carson River, Paynesville
SW-06	Carson River, Stateline
SW-07	Fredericksberg Ditch, Stateline
SW-08	Irrigation Ditch along Carson River Road
SW-09	Carson River, Dressler Lane
SW-10	Indian Creek, @ Smith-Springmeyer Ranch

TAHOE BASIN MONITORING

03/08/00

Site	Date	ID	Location	Depth msl	Temp C	pH	EC umhos	Cl mg/L	COD mg/L	NO3-N mg/L	Comment
Buried Sludge Monitoring											
MW11	02/22/00	20000222-17	Sludge Pond	6268.3	7.7	7.02	80				
MW12	02/22/00	20000222-18	Sludge Pond	6266.7	8.5	7.08	157				
MW13	02/22/00	20000222-19	Sludge Pond	6258.4	4.3	6.80	545				
ERB Monitoring											
CONTROL	02/22/00	20000222-10	At Post Office	6284.0	8.4	6.63	176				
MW01.5	02/22/00	20000222-11	SW corner of ERB	6269.1	8.3	6.91	172				
MW02-50	02/22/00	20000222-12	Black Bart side of ERB	6268.9	9.3	6.94	429				
MW03-50	02/22/00	20000222-13	Black Bart side of ERB	6269.0	9.5	6.76	373				
MW04-50	02/22/00	20000222-14	Hank Monk side of ERB	6268.8	7.5	6.96	80				
MW07-50	02/22/00	20000222-15	North side of ERB	6279.8	7.0	7.06	266				
Heavenly Valley Creek											
HVC-1	02/09/00	20000209-06	Downstream of Pioneer		2.5	7.42	51	0.8	< 5.0	0.095	
HVC-2	02/09/00	20000209-07	250' upstream of Pond #2		1.6	7.68	57	1.5	< 5.0	0.069	
HVC-2	02/13/00	20000213-06	250' upstream of Pond #2		1.3	6.70	44	2.5	27.4	0.034	Rain and Snow
HVC-3	02/09/00	20000209-08	25' downstream of Johnson Blvd		1.5	7.37	60	1.9	< 5.0	0.066	
HVC-3	02/13/00	20000213-07	25' downstream of Johnson Blvd		1.3	6.80	43	2.7	26.4	0.066	Rain and Snow
HVC-4	02/09/00	20000209-09	Effluent of drain from Lower Shop		2.2	7.65	102	0.8	< 5.0	0.048	
HVC-4	02/13/00	20000213-08	Effluent of drain from Lower Shop		1.8	6.72	43	0.6	18.6	0.028	Rain and Snow
HVC-5	02/09/00	20000209-HVC5	Effluent of drainage pipe along Jo								No flow
HVC-5	02/13/00	20000213-09	Effluent of drainage pipe along Jo		2.3	6.84	27	2.0	13.1	0.168	Rain and Snow
Treatment Plant Monitoring											
MW08-25	02/22/00	20000222-16	SW side of Pond #1	6248.8	8.3	6.16	1026				

monthly monitoring req'd
by WDRS. where is
data?

ALPINE COUNTY MONITORING

02/26/00

Site	Date	ID	Location	Temp C	pH	EC umhos	DO mg/L	Alk mg/L	TDS mg/L	SS mg/L	Turb NTU	Cl mg/L	SO4 mg/L
Alpine Monitoring Wells													
ACMW-01AW	02/15/00	20000215-07	Main Dam	9.4	6.36	76		35	69			1.0	
ACMW-01BE	02/15/00	20000215-08	Secondary Dam	9.6	6.70	100		49	66			0.8	
ACMW-02N	02/15/00	20000215-09	Access Gate	12.6	6.70	135		60	91			2.4	
ACMW-02S	02/15/00	20000215-10	Access Gate	11.7	6.72	96		45	69			1.5	
ACMW-04W	02/15/00	20000215-11	Gansberg	11.5	5.95	198		54	135			13.3	
ACMW-06N	02/15/00	20000215-12	Celio	10.6	6.30	689		257	425			53.6	
ACMW-06S	02/15/00	20000215-13	Celio	11.3	9.25	529		160	316			79.1	
Groundwaters													
GW-03	02/08/00	20000208-06	Smith/Springmeyer	9.5	7.18	312		130	230			1.4	
GW-04	02/08/00	20000208-07	Celio	13.7	7.12	278		119	199			3.0	
GW-05	02/08/00	20000208-08	Neddenriep	10.3	6.52	283		62	182			25.7	
GW-07	02/08/00	20000208-09	Gansberg	7.6	6.55	136		57	103			2.1	
GW-08	02/08/00	20000208-10	Arant	9.5	6.55	260		53	160			26.6	
GW-11	02/08/00	20000208-11	Diamond Val. School	8.3	7.15	106		50	81			1.0	
GW-14	02/08/00	20000208-12	Sierra Pines	8.8	7.07	121		53	91			1.1	
Reservoirs													
HPR	02/01/00	20000201-16	Harvey Place Reservoir	7.5	7.30	475	6.60	118	221	0.74	2.6	49.7	19.4
Surfacewaters: Carson R													
SW-01	02/01/00	20000201-14	Carson R Woodfords	1.7	6.93	80	11.00	35	62	0.82	.42	2.2	2.5
SW-05	02/01/00	20000201-15	Carson R Paynesville	2.4	6.87	86	11.20	38	68	1.27	.6	2.3	2.9

ALPINE COUNTY MONITORING

02/26/00

Site	Date	Total P mg/L	PO4-P mg/L	TKN mg/L	NH3-N mg/L	NO2-N mg/L	NO3-N mg/L	Total N mg/L	MBAS mg/L
Alpine Monitoring Wells									
ACMW-01AW	02/15/00				< 0.020	< 0.010	0.056	0.066	
ACMW-01BE	02/15/00				< 0.020	< 0.010	0.233	0.243	
ACMW-02N	02/15/00				0.020	< 0.010	0.111	0.121	
ACMW-02S	02/15/00				< 0.020	< 0.010	< 0.010	0.020	
ACMW-04W	02/15/00				< 0.020	< 0.010	2.910	2.920	
ACMW-06N	02/15/00				0.048	< 0.010	< 0.010	0.020	
ACMW-06S	02/15/00				0.217	0.064	0.036	0.100	
Groundwaters									
GW-03	02/08/00				< 0.020	< 0.010	0.728	0.738	
GW-04	02/08/00				< 0.020	< 0.010	0.826	0.836	
GW-05	02/08/00				< 0.020	< 0.010	3.860	3.870	
GW-07	02/08/00				< 0.020	< 0.010	1.540	1.550	
GW-08	02/08/00				< 0.020	< 0.010	5.300	5.310	
GW-11	02/08/00				< 0.020	< 0.010	0.395	0.405	
GW-14	02/08/00				< 0.020	< 0.010	0.455	0.465	
Reservoirs									
HPR	02/01/00	3.020	2.420	20.600	18.000	0.231	1.240	22.071	
Surfacewaters: Carson R									
SW-01	02/01/00	0.033	0.013	0.243	< 0.020	< 0.010	0.022	0.275	
SW-05	02/01/00	0.030	0.013	0.109	< 0.020	< 0.010	0.044	0.163	

ALPINE COUNTY MONITORING

02/26/00

Site	Date	COD mg/L	BOD mg/L	O & G mg/L	Boron mg/L	Ca mg/L	Mg mg/L	Na mg/L	K mg/L	SAR	Exch Na %	Hardness mg/L	Water Level MSL or Ft
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Alpine Monitoring Wells

ACMW-01AW	02/15/00												5483.2
ACMW-01BE	02/15/00												5488.7
ACMW-02N	02/15/00												5459.7
ACMW-02S	02/15/00												5462.2
ACMW-04W	02/15/00												4895.9
ACMW-06N	02/15/00												5217.4
ACMW-06S	02/15/00												5205.6

Groundwaters

GW-03	02/08/00												
GW-04	02/08/00												
GW-05	02/08/00												
GW-07	02/08/00												
GW-08	02/08/00												
GW-11	02/08/00												
GW-14	02/08/00												

Reservoirs

HPR	02/01/00	24	3		0.17	15.0	3.3	44.1	8.7	2.68	60.6		45.0
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Surfacewaters: Carson R

SW-01	02/01/00		1			7.6	2.1	4.4	1.7	0.37		24.5	
SW-05	02/01/00		1			8.1	2.2	5.1	1.8	0.41		25.8	

**ALPINE COUNTY
BACTERIOLOGICAL MONITORING**

Alpine Monitoring Wells

Site	Date	Total Coliform MPN/100mL	Fecal Coliform MPN/100mL	Fecal Streptococci MPN/100mLL
ACMW-01AW	02/15/00	< 1.1	< 1.1	
ACMW-01BE	02/15/00	< 1.1	< 1.1	
ACMW-02N	02/15/00	< 1.1	< 1.1	
ACMW-02S	02/15/00	< 1.1	< 1.1	
ACMW-04W	02/15/00	< 1.1	< 1.1	
ACMW-06N	02/15/00	< 1.1	< 1.1	
ACMW-06S	02/15/00	< 1.1	< 1.1	

Groundwaters

Site	Date	Total Coliform MPN/100mL	Fecal Coliform MPN/100mL	Fecal Streptococci MPN/100mLL
GW-03	02/08/00	< 1.1	< 1.1	
GW-04	02/08/00	< 1.1	< 1.1	
GW-05	02/08/00	< 1.1	< 1.1	
GW-07	02/08/00	< 1.1	< 1.1	
GW-08	02/08/00	< 1.1	< 1.1	
GW-11	02/08/00	< 1.1	< 1.1	
GW-14	02/08/00	< 1.1	< 1.1	

Reservoirs

Site	Date	Total Coliform MPN/100mL	Fecal Coliform MPN/100mL	Fecal Streptococci MPN/100mLL
HPR	02/01/00	23	< 2	4

Surfacewaters: Carson R

Site	Date	Total Coliform MPN/100mL	Fecal Coliform MPN/100mL	Fecal Streptococci MPN/100mLL
SW-01	02/01/00	< 30	< 30	
SW-05	02/01/00	< 30	< 30	

**SOUTH TAHOE PUBLIC UTILITY DISTRICT
WASTEWATER TREATMENT PLANT MONTHLY REPORT**

02/14/00

13:03:51

JANUARY 2000

Date	Day	FLOW MGD			Pond Inf	PRECIP Inch	Type	D.O. mg/L Fin	COD mg/L		BOD mg/L		SS mg/L	
		Inf	2-Hr Peak Inf	Eff					Pond Return	Raw	Fin	Raw	Fin	Raw
01/01/00	Sat	5.46	9.1	5.68		0.05	Snow	3.48	554	45.0	245	8.8	203	3.5
01/02/00	Sun	5.10	7.6	4.82				5.23	453					
01/03/00	Mon	4.26	6.1	4.70				5.73	410	42.9	182	6.0	141	2.7
01/04/00	Tue	4.07	5.5	3.87				7.93	386					
01/05/00	Wed	3.98	5.6	4.40				5.93	416					
01/06/00	Thu	3.95	5.6	3.60				6.68	488					
01/07/00	Fri	4.09	6.2	4.10				8.56	451					
01/08/00	Sat	4.37	6.6	4.51				5.87	396	42.2	172	6.5	162	2.3
01/09/00	Sun	4.32	6.2	4.55				7.04	435					
01/10/00	Mon	3.98	5.4	4.04				6.27	396					
01/11/00	Tue	3.93	5.8	4.10		0.63	Snow	6.76	363					
01/12/00	Wed	4.22	6.2	3.85				6.62	524	37.3	191	6.0	197	2.5
01/13/00	Thu	3.85	5.5	3.63				6.82	382					
01/14/00	Fri	4.60	6.0	4.71				6.50	402					
01/15/00	Sat	5.86	8.4	5.68		0.47	Ra/Sn	7.57	435	41.4	201	8.3	155	3.0
01/16/00	Sun	5.13	7.7	4.85		0.49	Ra/Sn	6.85	511					
01/17/00	Mon	4.99	6.5	5.11		0.06	Ra/Sn	6.16	401	38.5	169	9.2	137	3.4
01/18/00	Tue	5.22	7.8	5.30		0.42	Ra/Sn	8.16	315					
01/19/00	Wed	4.73	6.6	5.11		0.09	Ra/Sn	6.23	296					
01/20/00	Thu	4.66	5.8	5.05				6.99	262					
01/21/00	Fri	4.45	5.6	4.06		0.11	Ra/Sn	7.52	326					
01/22/00	Sat	5.00	6.8	4.75				7.41	432	38.6	188	6.7	149	2.8
01/23/00	Sun	5.60	7.6	5.62		0.71	Rain	7.24	416					
01/24/00	Mon	7.60		6.00		1.84	Rain	6.56	230					
01/25/00	Tue	5.88	6.8	5.88		0.35	Snow	7.26	352					
01/26/00	Wed	4.62	6.2	4.70				7.45		33.0		4.8		1.7
01/27/00	Thu	4.55	6.0	4.67				7.68						
01/28/00	Fri	4.81	6.4	5.14				7.13						
01/29/00	Sat	5.58	7.2	5.04				7.83		47.8		12.4		3.7
01/30/00	Sun	5.15	8.0	5.09		0.37	Snow	6.55						
01/31/00	Mon	4.54	5.9	4.42				7.49						
PERMIT MAX		7.7								300		45		60
PERMIT MIN														
PERMIT AVE										60		30		30
TOTAL		148.55	196.7	147.03		5.59		211.50	10032	366.7	1348	68.7	1144	25.5
MAXIMUM		7.60	9.1	6.00		1.84		8.56	554	47.8	245	12.4	203	3.7
MINIMUM		3.85	5.4	3.60		0.05		3.48	230	33.0	169	4.8	137	1.7
AVERAGE		4.79	6.6	4.74		0.47		6.82	401	40.7	193	7.6	163	2.8
# Tests		31	30	31	0	0	12	31	25	9	7	9	7	9

Wastewater Reclamation Permit Compliance

The District is monitoring under the revisions approved by the Regional Board (letter dated November 30, 1998). The revisions provide for: quarterly monitoring of soils; discontinue testing for Oil & Grease on surfacewaters; and discontinue surfacewater monitoring, except SW-01 and SW-05, during the months of December, January and February.

The West Fork, Carson River Water Quality Objectives and East Fork, Carson River limitations were exceeded as follows (a ✓ indicates objective exceeded):

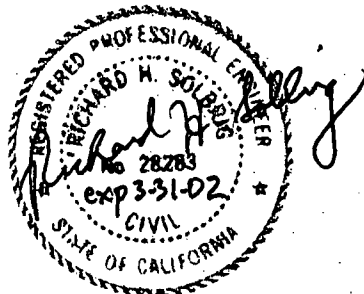
Site	Location	TDS		Cl ⁻		TKN		NO ₃ -N		Total N		Total P		SO ₄		Boron		Exch Na %	
		Limit	Exceedance	Limit	Exceedance	Limit	Exceedance	Limit	Exceedance	Limit	Exceedance	Limit	Exceedance	Limit	Exceedance	Limit	Exceedance	Limit	Exceedance
SW-01	Carson River, Woodfords	55	✓	1.0		0.13	✓	0.02	✓	0.15	✓	0.02		2.0	✓	0.02		20	✓
SW-06	Carson River, Stateline	70	✓	2.5		0.22	✓	0.03		0.25	✓	0.03		2.0	✓	0.02		20	✓
SW-02	Indian Creek, Upper	100		6.0						0.30		0.03		8.0		0.25		30	
SW-03	Indian Creek, Mid	100		6.0						0.30		0.03		8.0		0.25		30	
SW-04	Indian Creek, Lower	100		6.0						0.30		0.03		8.0		0.25		30	
SW-10	Indian Creek, Stateline	100		6.0						0.30		0.03		8.0		0.25		30	

December's soils results are not yet available. They will be sent to you as soon as they are completed. Our spectrophotometer is down and we have not been able to run any COD's. We expect to have the unit repaired mid-February. We will send you an updated report when we get the data.

Certification

I hereby certify that the enclosed monitoring report was prepared under my direct supervision and that I am a duly Registered Engineer under the laws of the State of California.

Sincerely,



Richard Solbrig,
Assistant Manager/Engineer

Enclosures:

1.

January Monthly Report	Pages
Wastewater Treatment plant	2
Permit Compliance Record	1
Export pipeline inspection	1
Sample site locations	2
Monitoring wells (ERB) and Heavenly Valley Creek (HVC) - Tahoe Basin	1
Alpine County Surfacewaters, Groundwaters, ICR and HPR	4
Total number of pages:	11

- cc: Calif. Dept. of Health Services, ODW - Jess Morehouse
 El Dorado Co. Dept. of Environmental Health - Virginia Huber
 Nevada Division of Environmental Protection - Wendel McCurry
 Alpine County Health Department - Dr. Richard Botto
 Alpine County Health Department - Jim Goodloe
 Alpine County Board of Supervisors
 Desert Research Group (Alpine County Consultants) - Bill Albright
 STPUD Board of Directors
 STPUD General Manager / District Engineer - Robert G. Baer
 STPUD Manager of Operations - Ross Johnson
 STPUD Operations Chief Plant Operator - Jeff Lee
 STPUD Laboratory Director - Terry Powers
 STPUD Manager of Alpine County Operations - Hal Bird

SOUTH TAHOE PUBLIC UTILITY DISTRICT
WASTEWATER TREATMENT PLANT MONTHLY REPORT

02/04/00
13:55:10

JANUARY 2000

Date	Day	FLOW MGD			Pond Inf	PRECIP Inch	Type	D.O. mg/L Fin	COD mg/L		BOD mg/L		SS mg/L	
		2-Hr Peak Inf	2-Hr Peak Inf	Eff					Pond Return	Raw	Fin	Raw	Fin	Raw
01/01/00	Sat	5.46	9.1	5.68		0.05	Snow	3.48	554	45.0	245	8.8	203	3.5
01/02/00	Sun	5.10	7.6	4.82				5.23	453					
01/03/00	Mon	4.26	6.1	4.70				5.73	410	42.9	182	6.0	141	2.7
01/04/00	Tue	4.07	5.5	3.87				7.93	386					
01/05/00	Wed	3.98	5.6	4.40				5.93	416					
01/06/00	Thu	3.95	5.6	3.60				6.68	488					
01/07/00	Fri	4.09	6.2	4.10				8.56	451					
01/08/00	Sat	4.37	6.6	4.51				5.87	396	42.2	172	6.5	162	2.3
01/09/00	Sun	4.32	6.2	4.55				7.04	435					
01/10/00	Mon	3.98	5.4	4.04				6.27	396					
01/11/00	Tue	3.93	5.8	4.10		0.63	Snow	6.76	363					
01/12/00	Wed	4.22	6.2	3.85				6.62	524	37.3	191	6.0	197	2.5
01/13/00	Thu	3.85	5.5	3.63				6.82	382					
01/14/00	Fri	4.60	6.0	4.71				6.50	402					
01/15/00	Sat	5.86	8.4	5.68		0.47	Ra/Sn	7.57	435	41.4	201	8.3	155	3.0
01/16/00	Sun	5.13	7.7	4.85		0.49	Ra/Sn	6.85	511					
01/17/00	Mon	4.99	6.5	5.11		0.06	Ra/Sn	6.16	401	38.5	169	9.2	137	3.4
01/18/00	Tue	5.22	7.8	5.30		0.42	Ra/Sn	8.16	315					
01/19/00	Wed	4.73	6.6	5.11		0.09	Ra/Sn	6.23	296					
01/20/00	Thu	4.66	5.8	5.05				6.99	262					
01/21/00	Fri	4.45	5.6	4.06		0.11	Ra/Sn	7.52	326					
01/22/00	Sat	5.00	6.8	4.75				7.41	432	38.6	188	6.7	149	2.8
01/23/00	Sun	5.60	7.6	5.62		0.71	Rain	7.24						
01/24/00	Mon	7.60		6.00		1.84	Rain	6.56						
01/25/00	Tue	5.88	6.8	5.88		0.35	Snow	7.26						
01/26/00	Wed	4.62	6.2	4.70				7.45				4.8		1.7
01/27/00	Thu	4.55	6.0	4.67				7.68						
01/28/00	Fri	4.81	6.4	5.14				7.13						
01/29/00	Sat	5.58	7.2	5.04				7.83				12.4		3.7
01/30/00	Sun	5.15	8.0	5.09				6.55						
01/31/00	Mon	4.54	5.9	4.42				7.49						
PERMIT MAX		7.7								300		45		60
PERMIT MIN														
PERMIT AVE														
TOTAL		148.55	196.7	147.03		5.22		211.50	9034	285.9	1348	68.7	1144	25.5
MAXIMUM		7.60	9.1	6.00		1.84		8.56	554	45.0	245	12.4	203	3.7
MINIMUM		3.85	5.4	3.60		0.05		3.48	262	37.3	169	4.8	137	1.7
AVERAGE		4.79	6.6	4.74		0.47		6.82	411	40.8	193	7.6	163	2.5
# Tests		31	30	31	0	0	11	31	22	7	7	9	7	9

**SOUTH TAHOE PUBLIC UTILITY DISTRICT
WASTEWATER TREATMENT PLANT MONTHLY REPORT**

02/04/00
11:20:04

JANUARY 2000

Date	Day	SETTLABLE SOLIDS mL/L		MBAS mg/L		pH Units		TURBIDITY NTU	Cl2 mg/L	FINAL COLIFORMS MPN/100 mL			TDS mg/L		ALKALINITY mg/L		
		Raw	Fin	Raw	Fin	Raw	Fin	Fin	Fin	Total	7day-	Median	Raw	Fin	Raw	Fin	
01/01/00	Sat	14.0	< 0.1			7.30	7.62	3.10	6.90	2	<	2			173	149	
01/02/00	Sun	11.5				7.40			5.44	2	<	2	256	234	168		
01/03/00	Mon	10.0	< 0.1			7.41	7.63	2.20	4.18	<	2	<	2		159	150	
01/04/00	Tue	12.0	< 0.1			7.46	7.55	3.05	3.88	<	2	<	2		154	150	
01/05/00	Wed	11.0	< 0.1	4.25	0.087	7.36	7.52	2.80	3.98	<	2	<	2		151	142	
01/06/00	Thu	10.0	< 0.1			7.36	7.56	2.60	3.79	<	2	<	2		147	140	
01/07/00	Fri	10.0	< 0.1			7.45	7.60	2.60	4.47	<	2	<	2		157	140	
01/08/00	Sat	11.0	< 0.1			7.38	7.66	2.70	4.95	<	2	<	2		159	144	
01/09/00	Sun	11.0	< 0.1			7.43	7.53	3.50	4.76	<	2	<	2		157	144	
01/10/00	Mon	10.5	< 0.1			7.39	7.52	2.80	3.50	<	2	<	2		150	141	
01/11/00	Tue	10.0	< 0.1			7.53	7.76	2.90	4.18	<	2	<	2		151	138	
01/12/00	Wed	15.0				7.39	7.82	2.60	3.88	<	2	<	2	230	222	146	134
01/13/00	Thu	10.5	< 0.1			7.56	7.60	2.50	3.79	<	2	<	2		147	133	
01/14/00	Fri	11.0	< 0.1			7.61	7.46	2.50	4.86	<	2	<	2		155	134	
01/15/00	Sat	14.0	< 0.1			7.55	7.69	3.00	4.08	<	2	<	2		152	137	
01/16/00	Sun	13.0	< 0.1			7.37	7.34	3.35	4.27	<	2	<	2		162	142	
01/17/00	Mon	10.0	< 0.1			7.46	7.62	3.40	4.86	<	2	<	2	243	226	155	140
01/18/00	Tue	8.5	< 0.1			7.51	7.55	2.60	3.98	<	2	<	2		120	116	
01/19/00	Wed	10.5	< 0.1			7.53	7.52	2.80	4.95	<	2	<	2		130	115	
01/20/00	Thu	9.0	< 0.1			7.45	7.56	2.00	3.98	<	2	<	2		134	119	
01/21/00	Fri	11.5	< 0.1			7.45	7.46	1.90	4.37	<	2	<	2		149	125	
01/22/00	Sat	14.0	< 0.1			7.52	7.66	2.30	4.08	<	2	<	2		159	142	
01/23/00	Sun	11.0	< 0.1			7.52	7.42	2.90	4.86	<	2	<	2		168	142	
01/24/00	Mon	5.0	< 0.1			7.35	7.34	3.60	3.69	<	2	<	2		91	108	
01/25/00	Tue	9.0	< 0.1			7.44	7.28	2.30	4.86	<	2	<	2		120	83	
01/26/00	Wed		< 0.1				7.74	1.60	5.92	<	2	<	2	189		106	
01/27/00	Thu		< 0.1				7.42	1.30	3.98	<	2	<	2			120	
01/28/00	Fri		< 0.1				7.36	2.30	5.15	<	2	<	2			130	
01/29/00	Sat		< 0.1				7.64	3.90	3.01	<	2	<	2			142	
01/30/00	Sun		< 0.1				7.48	4.30	4.08	<	2	<	2			144	
01/31/00	Mon		< 0.1				7.46	3.25	5.25	<	2	<	2			130	
PERMIT MAX			0.1		2.0												
PERMIT MIN																	
PERMIT AVE					1.0			10									
TOTAL		273.0	2.9	4.25	0.087	186.18	226.37	82.65	137.93			62	729	871	3714	3980	
MAXIMUM		15.0	0.1	4.25	0.087	7.61	7.82	4.30	6.90		2	2	256	234	173	150	
MINIMUM		5.0	0	4.25	0.087	7.30	7.28	1.30	3.01		2	2	230	189	91	83	
AVERAGE		10.9	0.1	4.25	0.087	7.45			4.45				243	218	149	133	
# Tests		25	29	1	1	25	30	30	31	31	31	3	4	25	30		

SOUTH TAHOE PUBLIC UTILITY DISTRICT
MEMORANDUM

Date: January 26, 2000

To: Bob Baer, Diane Noble, Terry Powers

From: Greg Schrempp

Topic: Export Line Inspection

On January 26, Tim Rieger and I conducted our check of the District's export line from the treatment plant to where the "C" line daylights at Harvey Place at Station 564+04. Several wet spots were checked, however no leaks were found.

SAMPLE LOCATIONS

TAHOE BASIN MONITORING WELLS

<u>Site</u>	<u>Location</u>
ERB	Emergency Retention Basin
CONTROL	North of Post Office
MW02-25, -50	Emergency Retention Basin, S side
MW03-25, -50	Emergency Retention Basin, S side
MW04-25, -50	Emergency Retention Basin, W side
MW07-25, -50	Emergency Retention Basin, N side
MW08-25, -50	Pond #1, SW corner
MW11	S.E. corner of wastewater treatment plant grounds
MW12	South of Emergency Pump Building, for buried sludge
MW13	Pond 2, along Heavenly Valley Creek, for buried sludge

HEAVENLY VALLEY CREEK

HVC-1	At Pioneer Trail
HVC-2	250 ft upstream of Pond #2
HVC-3	25 ft downstream of Johnson Blvd.
HVC-4	Effluent of drain pipe from Lower Shop area
HVC-5	Effluent of drainage pipe along Johnson Blvd, 10 feet upstream of Johnson Blvd.

ALPINE COUNTY MONITORING WELLS

<u>Site</u>	<u>Location</u>
ACMW-01AW	Below main dam at Harvey Place Reservoir
ACMW-01BE	Below auxiliary dam at Harvey Place Reservoir
ACMW-02, N&S	On dam access road at Diamond Valley Road
ACMW-03	Bruns ranch, east side of Highway 88
ACMW-04W	Gansberg ranch, west side of Highway 88
ACMW-05	Dressler ranch
ACMW-06, N&S	Celio ranch, on Diamond Valley Road

ALPINE SOILS

<u>Site</u>	<u>Ranch</u>
S2	Celio
S3	Hall
S4	Gansberg
S5	Gansberg
S6	Neddenriep
S7	Bruns
S8	Dressler

ALPINE GROUNDWATERS

<u>Site</u>	<u>Homeowner</u>
GW-01	Sagues
GW-03	Smith/Springmeyer
GW-04	Celio
GW-05	Neddenriep
GW-07	Gansberg, Jr.
GW-08	Arant
GW-11	Diamond Valley School
GW-14	Sierra Pines Store

ALPINE SURFACEWATERS

<u>Site</u>	<u>Location</u>
SW-01	Carson River, Woodfords
SW-02	Indian Creek, @ HWY 89
SW-03	Indian Creek, @ upper bridge
SW-04	Indian Creek, @ lower bridge
SW-05	Carson River, Paynesville
SW-06	Carson River, Stateline
SW-07	Fredericksberg Ditch, Stateline
SW-08	Irrigation Ditch along Carson River Road
SW-09	Carson River, Dressler Lane
SW-10	Indian Creek, @ Smith-Springmeyer Ranch

TAHOE BASIN MONITORING

02/04/00

Site	Date	ID	Location	Depth msl	Temp C	pH	EC umhos	Cl mg/L	COD mg/L	NO3-N mg/L	Comment
Buried Sludge Monitoring											
MW11	01/25/00	20000125-15	Sludge Pond	6268.4	8.1	7.59	78	1.3		0.082	
MW12	01/25/00	20000125-16	Sludge Pond	6266.1	8.2	7.03	147	2.2		0.128	
MW13	01/25/00	20000125-17	Sludge Pond	6258.6	3.4	6.96	261	1.0		0.356	
ERB Monitoring											
CONTROL	01/25/00	20000125-08	At Post Office	6283.7	8.3	6.97	174	7.5		2.570	
MW01-5	01/25/00	20000125-09	SW corner of ERB	6269.0	8.3	6.94	173	3.0		0.755	
MW02-50	01/25/00	20000125-10	Black Bart side of ERB	6268.0	9.2	6.8	428	40.8		0.030	
MW03-50	01/25/00	20000125-11	Black Bart side of ERB	6268.8	9.4	6.61	370	33.3		3.220	
MW04-50	01/25/00	20000125-12	Hank Monk side of ERB	6262.3	7.5	6.86	73	4.9		0.094	
MW07-50	01/25/00	20000125-13	North side of ERB	6279.8	6.9	6.28	259	27.2		0.613	
Heavenly Valley Creek											
HVC-1	01/12/00	20000112-06	Downstream of Pioneer		0.8	7.36	49	1.0	< 5.0	0.082	
HVC-2	01/12/00	20000112-07	250' upstream of Pond #2		0.1	7.00	52	1.5	< 5.0	0.093	
HVC-3	01/12/00	20000112-08	25' downstream of Johnson Blvd		0.0	7.20	58	1.8	< 5.0	0.080	
HVC-4	01/12/00	20000112-09	Effluent of drain from Lower Shop		0.7	6.91	91	1.3	101.0	0.054	
HVC-5	01/12/00	000112-HVC	Effluent of drainage pipe along Jo								
Treatment Plant Monitoring											
MW08-25	01/25/00	20000125-14	SW side of Pond #1	6249.3	9.0	6.18	997	53.3		< 0.010	

ALPINE COUNTY MONITORING

02/04/00

Site	Date	ID	Location	Temp C	pH	EC umhos	DO mg/L	Alk mg/L	TDS mg/L	SS mg/L	Turb NTU	Cl mg/L	SO4 mg/L
Alpine Monitoring Wells													
ACMW-01AW	01/19/00	20000119-19	Main Dam	10.1	7.18	91		42	73			1.0	
ACMW-01BE	01/19/00	20000119-20	Secondary Dam	9.5	7.16	103		49	86			1.0	
ACMW-02N	01/19/00	20000119-21	Access Gate	12.4	6.51	143		62	96			3.9	
ACMW-02S	01/19/00	20000119-22	Access Gate	12.0	6.73	94		43	70			2.2	
ACMW-04W	01/19/00	20000119-23	Gansberg	11.5	6.37	200		54	137			13.0	
ACMW-06N	01/19/00	20000119-24	Celio	10.8	6.85	697		260	423			53.9	
ACMW-06S	01/19/00	20000119-25	Celio	11.5	6.92	751		263	474			78.4	
Groundwaters													
GW-03	01/11/00	20000111-16	Smith/Springmeyer	7.1	6.81	305		131	224			1.5	
GW-04	01/11/00	20000111-17	Celio	11.5	7.06	260		118	196			3.0	
GW-05	01/11/00	20000111-18	Neddenriep	9.5	6.91	275		61	180			25.5	
GW-07	01/11/00	20000111-19	Gansberg	7.2	6.75	135		55	104			2.1	
GW-08	01/11/00	20000111-20	Arant	8.1	6.73	255		52	161			26.6	
GW-11	01/11/00	20000111-21	Diamond Val. School	7.2	6.46	100		48	82			0.9	
GW-14	01/11/00	20000111-22	Sierra Pines	7.2	7.71	109		51	95			1.1	
Reservoirs													
HPR	01/05/00	20000105-09	Harvey Place Reservoir	2.4	7.27	512	8.40	124	230	1.16	1.5	51.7	16.8
Surfacewaters: Carson R													
SW-01	01/05/00	20000105-07	Carson R Woodfords	0.9	7.78	80	10.80	37	61	0.98	.36	1.0	3.1
SW-05	01/05/00	20000105-08	Carson R Paynesville	0.2	7.21	95	12.20	42	73	2.22	.58	1.3	3.8

ALPINE COUNTY MONITORING

02/04/00

Site	Date	TotalP mg/L	PO4-P mg/L	TKN mg/L	NH3-N mg/L	NO2-N mg/L	NO3-N mg/L	Total N mg/L	MBAS mg/L
Alpine Monitoring Wells									
ACMW-01AW	01/19/00	0.034	<	0.100	0.020	<	0.010	0.098	0.208
ACMW-01BE	01/19/00	0.078	<	0.100	0.021	<	0.010	0.238	0.348
ACMW-02N	01/19/00	0.028	<	0.100	<	0.020	<	0.010	0.285
ACMW-02S	01/19/00	0.025	<	0.100	<	0.020	<	0.010	0.120
ACMW-04W	01/19/00	0.024	<	0.100	<	0.020	<	0.010	3.040
ACMW-06N	01/19/00	0.365		0.254	0.055	<	0.010	<	0.010
ACMW-06S	01/19/00	0.046		0.211	0.031	<	0.010	<	0.017
Groundwaters									
GW-03	01/11/00	0.050	<	0.100	<	0.020		0.741	0.841
GW-04	01/11/00	0.078	<	0.100	<	0.020		0.853	0.953
GW-05	01/11/00	0.038		0.197	<	0.020		3.810	4.007
GW-07	01/11/00	0.100		0.210	<	0.020		1.640	1.850
GW-08	01/11/00	0.130		0.157	<	0.020		5.340	5.497
GW-11	01/11/00	0.022		0.182	<	0.020		0.410	0.592
GW-14	01/11/00	0.062		0.113	<	0.020		0.472	0.585
Reservoirs									
HPR	01/05/00	2.700	2.500	20.200	19.800	0.312	1.160	21.672	0.080
Surfacewaters: Carson R									
SW-01	01/05/00	0.022	<	0.010	0.168	<	0.040	<	0.010
SW-05	01/05/00	0.022	<	0.010	0.303	<	0.040	<	0.010
								0.028	0.206
								0.125	0.438

ALPINE COUNTY MONITORING

02/04/00

Site	Date	COD mg/L	BOD mg/L	O & G mg/L	Boron mg/L	Ca mg/L	Mg mg/L	Na mg/L	K mg/L	SAR	Exch Na %	Hardness mg/L	Water Level MSL or Ft
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Alpine Monitoring Wells

ACMW-01AW	01/19/00												5482.8
ACMW-01BE	01/19/00												5489.9
ACMW-02N	01/19/00												5458.5
ACMW-02S	01/19/00												5459.2
ACMW-04W	01/19/00												4896.4
ACMW-06N	01/19/00												5217.1
ACMW-06S	01/19/00												5205.2

Groundwaters

GW-03	01/11/00												
GW-04	01/11/00												
GW-05	01/11/00												
GW-07	01/11/00												
GW-08	01/11/00												
GW-11	01/11/00												
GW-14	01/11/00												

Reservoirs

HPR	01/05/00	22	3		0.22	17.4	3.7	45.9	9.5	2.60	58.5		39.0
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Surfacewaters: Carson R

SW-01	01/05/00		1			8.3	2.1	4.4	1.7	0.35		23.3	
SW-05	01/05/00		2			9.2	2.5	4.4	1.9	0.33		21.3	

**ALPINE COUNTY
BACTERIOLOGICAL MONITORING**

02/04/00

Alpine Monitoring Wells

Site	Date	Total Coliform MPN/100mL	<	Fecal Coliform MPN/100mL	<	Fecal Streptococci MPN/100mLL
ACMW-01AW	01/19/00	2.2	<	1.1	<	1.1
ACMW-01BE	01/19/00	<	<	1.1	<	1.1
ACMW-02N	01/19/00	<	<	1.1	<	1.1
ACMW-02S	01/19/00	<	<	1.1	<	1.1
ACMW-04W	01/19/00	<	<	1.1	<	1.1
ACMW-06N	01/19/00	3.6	<	1.1	<	1.1
ACMW-06S	01/19/00	<	<	1.1	<	1.1

Groundwaters

Site	Date	Total Coliform MPN/100mL	<	Fecal Coliform MPN/100mL	<	Fecal Streptococci MPN/100mLL
GW-03	01/11/00	<	<	1.1	<	1.1
GW-04	01/11/00	<	<	1.1	<	1.1
GW-05	01/11/00	<	<	1.1	<	1.1
GW-07	01/11/00	<	<	1.1	<	1.1
GW-08	01/11/00	<	<	1.1	<	1.1
GW-11	01/11/00	<	<	1.1	<	1.1
GW-14	01/11/00	<	<	1.1	<	1.1

Reservoirs

Site	Date	Total Coliform MPN/100mL	<	Fecal Coliform MPN/100mL	<	Fecal Streptococci MPN/100mLL
HPR	01/05/00	2	<	2	<	2

Surfacewaters: Carson R

Site	Date	Total Coliform MPN/100mL	<	Fecal Coliform MPN/100mL	<	Fecal Streptococci MPN/100mLL
SW-01	01/05/00	<	<	30	<	30
SW-05	01/05/00	40	<	30	<	30

Wastewater Reclamation Permit Compliance

The District is monitoring under the revisions approved by the Regional Board (letter dated November 30, 1998). The revisions provide for: quarterly monitoring of soils; discontinue testing for Oil & Grease on surfacewaters; and discontinue surfacewater monitoring, except SW-01 and SW-05, during the months of December, January and February.

The West Fork, Carson River Water Quality Objectives and East Fork, Carson River limitations were exceeded as follows (a ✓ indicates objective exceeded):

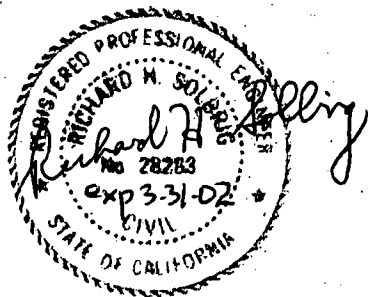
Site	Location	TDS		Cl ⁻		TKN		NO ₃ -N		Total N		Total P		SO ₄		Boron		Exch Na %	
		Limit	Exceedance	Limit	Exceedance	Limit	Exceedance	Limit	Exceedance	Limit	Exceedance	Limit	Exceedance	Limit	Exceedance	Limit	Exceedance	Limit	Exceedance
SW-01	Carson River, Woodfords	55		1.0	✓	0.13		0.02		0.15		0.02		2.0	✓	0.02		20	✓
SW-06	Carson River, Stateline	70		2.5		0.22		0.03		0.25		0.03		2.0		0.02		20	
SW-02	Indian Creek, Upper	100		6.0						0.30		0.03		8.0		0.25		30	
SW-03	Indian Creek, Mid	100		6.0						0.30		0.03		8.0		0.25		30	
SW-04	Indian Creek, Lower	100		6.0						0.30		0.03		8.0		0.25		30	
SW-10	Indian Creek, Stateline	100		6.0						0.30		0.03		8.0		0.25		30	

December's soils results are not yet available. They will be sent to you as soon as they are completed.

Certification

I hereby certify that the enclosed monitoring report was prepared under my direct supervision and that I am a duly Registered Engineer under the laws of the State of California.

Sincerely,



Richard Solbrig,
Assistant Manager/Engineer

Enclosures:

1.

December Monthly Report	Pages
Wastewater Treatment plant	2
Permit Compliance Record	1
Export pipeline inspection	1
Sample site locations	2
Monitoring wells (ERB) and Heavenly Valley Creek (HVC) - Tahoe Basin	1
Alpine County Surfacewaters, Groundwaters, ICR and HPR	4
Total number of pages:	11

- cc: Calif. Dept. of Health Services, ODW - Jess Morehouse
 El Dorado Co. Dept. of Environmental Health - Virginia Huber
 Nevada Division of Environmental Protection - Wendel McCurry
 Alpine County Health Department - Dr. Richard Botto
 Alpine County Health Department - Jim Goodloe
 Alpine County Board of Supervisors
 Desert Research Group (Alpine County Consultants) - Bill Albright
 STPUD Board of Directors
 STPUD General Manager / District Engineer - Robert G. Baer
 STPUD Manager of Operations - Ross Johnson
 STPUD Operations Chief Plant Operator - Jeff Lee
 STPUD Laboratory Director - Terry Powers
 STPUD Manager of Alpine County Operations - Hal Bird

**SOUTH TAHOE PUBLIC UTILITY DISTRICT
WASTEWATER TREATMENT PLANT MONTHLY REPORT**

01/05/00
09:28:33

DECEMBER 1999

Date	Day	2-Hr Peak		FLOW MGD			PRECIP		D.O.	COD		BOD		SS	
		Inf	Inf	Eff	Pond Return	Pond Inf	Inch	Type	mg/L Fin	Raw	Fin	Raw	Fin	Raw	Fin
12/01/99	Wed	3.55	5.4	4.21					4.28	423					
12/02/99	Thu	3.58	5.6	3.60					4.48	407					
12/03/99	Fri	4.26	5.4	3.78					4.14	446					
12/04/99	Sat	3.37	6.1	4.06					3.61	428	32.5	170	8.0	136	3.5
12/05/99	Sun	3.90	6.4	3.99					3.64	412					
12/06/99	Mon	3.68	5.3	3.92					3.53	377					
12/07/99	Tue	3.59	5.4	3.92			0.04	Snow	4.03	356					
12/08/99	Wed	3.65	5.8	3.58					4.47	474	38.6	170	7.9	184	3.6
12/09/99	Thu	3.59	5.4	3.80			0.05	Snow	4.26	373					
12/10/99	Fri	3.70	5.6	4.29					4.03	384					
12/11/99	Sat	4.10	6.0	3.83					5.51	383	40.0	156	7.4	131	3.7
12/12/99	Sun	3.97	6.0	4.32			0.03	Snow	3.75	421					
12/13/99	Mon	3.61	5.0	3.77			0.03	Snow	4.46	442					
12/14/99	Tue	3.55	7.6	3.81					4.88	375					
12/15/99	Wed	3.72	5.8	3.62					4.69	486	44.0	179	8.6	173	3.1
12/16/99	Thu	3.67	5.8	4.22					4.01	405					
12/17/99	Fri	3.58	5.4	3.19					7.18	391					
12/18/99	Sat	4.15	6.2	4.55					7.29	350	32.7	165	6.5	134	3.7
12/19/99	Sun	4.27	6.2	4.54					3.76	393					
12/20/99	Mon	4.27	5.8	4.27					3.90	407					
12/21/99	Tue	4.27	6.2	4.38					4.66	391					
12/22/99	Wed	4.26	6.4	4.48					4.07	414	40.0	170	8.2	152	3.8
12/23/99	Thu	4.27	6.3	4.28					4.88	419					
12/24/99	Fri	4.52	7.0	4.68					5.74	488					
12/25/99	Sat	4.65	7.0	4.52					6.65	500	42.4	207	9.0	149	3.7
12/26/99	Sun	4.81	7.8	4.88					6.35	497					
12/27/99	Mon	4.86	7.1	4.85					3.89	492					
12/28/99	Tue	4.76	7.6	4.85					3.86	407					
12/29/99	Wed	5.04	7.6	5.10					4.83	470	54.4	252	12.8	163	3.9
12/30/99	Thu	5.31	7.4	5.14					3.82	446					
12/31/99	Fri	6.15	9.0	5.41					5.25	499					
PERMIT MAX		7.7									300		45		60
PERMIT MIN															
PERMIT AVE											60		30		30
TOTAL		128.66	195.6	131.84			0.15		143.90	13156	324.6	1469	68.4	1222	28.9
MAXIMUM		6.15	9.0	5.41			0.05		7.29	500	54.4	252	12.8	184	3.9
MINIMUM		3.37	5.0	3.19			0.03		3.53	350	32.5	156	6.5	131	3.1
AVERAGE		4.15	6.3	4.25			0.04		4.64	424	40.6	184	8.5	153	3.6
# Tests		31	31	31	0	0	4		31	31	8	8	8	8	8

**SOUTH TAHOE PUBLIC UTILITY DISTRICT
WASTEWATER TREATMENT PLANT MONTHLY REPORT**

01/05/00

09:29:33

DECEMBER 1999

Date	Day	SETTLABLE SOLIDS mL/L		MBAS mg/L		pH Units		TURBIDITY	C12	FINAL COLIFORMS MPN/100 mL			TDS mg/L		ALKALINITY mg/L		
		Raw	Fin	Raw	Fin	Raw	Fin	Fin	mg/L	Total	7day-	Median	Raw	Fin	Raw	Fin	
12/01/99	Wed	11.5	< 0.1	3.32	0.055	7.47	7.49	2.00	3.89	2	<	2			155	136	
12/02/99	Thu	10.5	< 0.1			7.67	7.54	2.40	4.27	<	2	<	2		150	135	
12/03/99	Fri	11.0	< 0.1			7.69	7.54	2.40	4.08	2	<	2			153	136	
12/04/99	Sat	10.5	< 0.1			7.49	7.74	2.40	3.89	4	<	2			157	136	
12/05/99	Sun	11.0	< 0.1			7.46	7.44	2.50	3.21	<	2	<	2		156	136	
12/06/99	Mon	12.0	< 0.1			7.43	7.40	2.60	5.25	<	2	<	2		150	130	
12/07/99	Tue	10.5	< 0.1			7.67	7.68	2.50	4.86	<	2	<	2		148	133	
12/08/99	Wed	14.0	< 0.1			7.51	7.51	2.90	4.08	2	<	2	243	222	152	132	
12/09/99	Thu	11.5	< 0.1			7.58	7.50	2.60	4.18	<	2	<	2		146	128	
12/10/99	Fri	10.0	< 0.1			7.48	7.45	2.30	4.47	<	2	<	2		152	130	
12/11/99	Sat	11.0	< 0.1			7.45	7.64	2.60	4.18	<	2	<	2		153	133	
12/12/99	Sun	10.0	< 0.1			7.48	7.42	2.40	2.82	2	<	2			158	134	
12/13/99	Mon	9.5	< 0.1			7.44	7.38	2.40	3.01	<	2	<	2		148	132	
12/14/99	Tue	11.0	< 0.1			7.59	7.61	2.40	4.47	<	2	<	2		150	133	
12/15/99	Wed	11.0	< 0.1			7.47	7.62	2.40	4.27	<	2	<	2	244	226	152	129
12/16/99	Thu	11.0	< 0.1			7.39	7.43	2.50	4.08	<	2	<	2		150	129	
12/17/99	Fri	13.0	< 0.1			7.42	7.60	2.40	4.86	<	2	<	2		152	131	
12/18/99	Sat	12.5	< 0.1			7.45	7.62	2.50	3.88	<	2	<	2		157	138	
12/19/99	Sun	12.0	< 0.1			7.45	7.47	3.50	3.40	<	2	<	2		163	141	
12/20/99	Mon	13.5	< 0.1			7.60	7.54	2.50	3.88	<	2	<	2		156	139	
12/21/99	Tue	11.0	< 0.1			7.46	7.48	2.90	4.37	7	<	2			159	140	
12/22/99	Wed	12.0	< 0.1			7.27	7.74	2.60	4.18	<	2	<	2	276	243	158	140
12/23/99	Thu	12.0	< 0.1			7.62	7.58	2.80	3.42	<	2	<	2		161	142	
12/24/99	Fri	12.0	< 0.1			7.54	7.51	3.00	4.66	2	<	2			162	142	
12/25/99	Sat	13.5	< 0.1			7.39	7.61	3.00	4.08	2	<	2			165	146	
12/26/99	Sun	14.0	< 0.1			7.35	7.50	3.30	4.08	<	2	<	2		172	153	
12/27/99	Mon	12.0	< 0.1			7.35	7.98	3.10	3.50	<	2	<	2		167	148	
12/28/99	Tue	12.0	< 0.1			7.45	7.54	3.60	3.11	<	2	<	2		169	152	
12/29/99	Wed	14.0	< 0.1			7.36	7.66	3.60	3.69	<	2	<	2	262	238	168	154
12/30/99	Thu	12.0	< 0.1			7.46	7.48	4.20	3.59	<	2	<	2		171	155	
12/31/99	Fri	13.0	< 0.1			7.50	7.52	5.40	3.98	<	2	<	2		174	159	
PERMIT MAX			0.1		2.0		8.5	20		240		23					
PERMIT MIN							6.5										
PERMIT AVE					1.0			10									
TOTAL		364.5	3.1	3.32	0.055	231.94	234.22	87.70	123.69	69	62	1025	929	4884	4302		
MAXIMUM		14.0	0.1	3.32	0.055	7.69	7.98	5.40	5.25	7	2	276	243	174	159		
MINIMUM		9.5	0	3.32	0.055	7.27	7.38	2.00	2.82	2	2	243	222	146	128		
AVERAGE		11.8	0.1	3.32	0.055	7.48	7.56	2.83	3.99	2	2	256	232	158	139		
# Tests		31	31	1	1	31	31	31	31	31	31	4	4	31	31		

SOUTH TAHOE
PUBLIC UTILITY DISTRICT
MEMORANDUM



Date: December 30, 1999
To: Bob Baer, Diane Noble
From: KYLE SCHRAUBEN
Topic: Export Line Check

On December 29, 1999, Greg Schrempp, Tim Rieger, and I conducted our check of the District's export line from the treatment plant to station 564+06 near the Harvey Place reservoir. Also checked was the Luther pass surge line. No damage to the pipe was found.

CC Terry Powers

SAMPLE LOCATIONS

TAHOE BASIN MONITORING WELLS

<u>Site</u>	<u>Location</u>
ERB	Emergency Retention Basin
CONTROL	North of Post Office
MW02-25, -50	Emergency Retention Basin, S side
MW03-25, -50	Emergency Retention Basin, S side
MW04-25, -50	Emergency Retention Basin, W side
MW07-25, -50	Emergency Retention Basin, N side
MW08-25, -50	Pond #1, SW corner
MW11	S.E. corner of wastewater treatment plant grounds
MW12	South of Emergency Pump Building, for buried sludge
MW13	Pond 2, along Heavenly Valley Creek, for buried sludge

HEAVENLY VALLEY CREEK

HVC-1	At Pioneer Trail
HVC-2	250 ft upstream of Pond #2
HVC-3	25 ft downstream of Johnson Blvd.
HVC-4	Effluent of drain pipe from Lower Shop area
HVC-5	Effluent of drainage pipe along Johnson Blvd, 10 feet upstream of Johnson Blvd.

ALPINE COUNTY MONITORING WELLS

<u>Site</u>	<u>Location</u>
ACMW-01AW	Below main dam at Harvey Place Reservoir
ACMW-01BE	Below auxiliary dam at Harvey Place Reservoir
ACMW-02, N&S	On dam access road at Diamond Valley Road
ACMW-03	Bruns ranch, east side of Highway 88
ACMW-04W	Gansberg ranch, west side of Highway 88
ACMW-05	Dressler ranch
ACMW-06, N&S	Celio ranch, on Diamond Valley Road

ALPINE SOILS

<u>Site</u>	<u>Ranch</u>
S2	Celio
S3	Hall
S4	Gansberg
S5	Gansberg
S6	Neddenriep
S7	Bruns
S8	Dressler

ALPINE GROUNDWATERS

<u>Site</u>	<u>Homeowner</u>
GW-01	Sagues
GW-03	Smith/Springmeyer
GW-04	Celio
GW-05	Neddenriep
GW-07	Gansberg, Jr.
GW-08	Arant
GW-11	Diamond Valley School
GW-14	Sierra Pines Store

ALPINE SURFACEWATERS

<u>Site</u>	<u>Location</u>
SW-01	Carson River, Woodfords
SW-02	Indian Creek, @ HWY 89
SW-03	Indian Creek, @ upper bridge
SW-04	Indian Creek, @ lower bridge
SW-05	Carson River, Paynesville
SW-06	Carson River, Stateline
SW-07	Fredericksberg Ditch, Stateline
SW-08	Irrigation Ditch along Carson River Road
SW-09	Carson River, Dressler Lane
SW-10	Indian Creek, @ Smith-Springmeyer Ranch

TAHOE BASIN MONITORING

01/05/00

Site	Date	ID	Location	Depth msl	Temp C	pH	EC umhos	Cl mg/L	COD mg/L	NO3-N mg/L	Comment
Buried Sludge Monitoring											
MW11	12/21/1999	19991221-14	Sludge Pond	6268.7	7.9	6.36	77	1.2	< 5.0	0.070	
MW12	12/21/1999	19991221-15	Sludge Pond	6265.5	8.8	5.34	142	2.0	< 5.0	0.187	
MW13	12/21/1999	19991221-16	Sludge Pond	6257.5	5.8	6.88	297	1.3	58.8	0.188	
ERB Monitoring											
CONTROL	12/21/1999	19991221-07	At Post Office	6284.1	9.1	6.26	172	7.2	< 5.0	2.730	
MW01.5	12/21/1999	19991221-08	SW corner of ERB	6269.1	8.8	6.89	174	3.1	< 5.0	0.749	
MW02-50	12/21/1999	19991221-09	Black Bart side of ERB	6268.8	8.6	6.02	378	34.1	< 5.0	3.680	
MW03-50	12/21/1999	19991221-10	Black Bart side of ERB	6268.8	8.6	6.02	378	34.1	< 5.0	3.680	
MW04-50	12/21/1999	19991221-11	Hank Monk side of ERB	6269.0	7.2	5.93	80	5.1	< 5.0	0.078	
MW07-50	12/21/1999	19991221-12	North side of ERB	6279.8	6.6	6.26	266	25.2	< 5.0	0.674	
Heavenly Valley Creek											
HVC-1	12/07/1999	19991207-15	Downstream of Pioneer		1.1	7.03	50	0.9	< 5.0	0.386	
HVC-2	12/07/1999	19991207-16	250' upstream of Pend #2		0.7	6.34	65	1.3	5.6	0.051	
HVC-3	12/07/1999	19991207-17	25' downstream of Johnson Blvd		0.4	6.77	57	1.4	< 5.0	0.038	
HVC-4	12/07/1999	19991207-18	Effluent of drain from Lower Shop		3.3	6.44	112	0.8	< 5.0	0.101	
HVC-5	12/07/1999	991207-HVC	Effluent of drainage pipe along Jo								Dry
Treatment Plant Monitoring											
MW08-25	12/21/1999	19991221-13	SW side of Pond #1	6246.9	9.5	5.88	1052	52.6	107.0	< 0.010	

ALPINE COUNTY MONITORING

01/05/00

Site	Date	ID	Location	Temp C	pH	EC umhos	DO mg/L	Alk mg/L	TDS mg/L	SS mg/L	Turb NTU	Cl mg/L	SO4 mg/L
Alpine Monitoring Wells													
ACMW-01AW	12/14/1999	19991214-13	Main Dam	10.4	6.12	86		40	77			1.3	
ACMW-01BE	12/14/1999	19991214-14	Secondary Dam	10.0	6.81	103		49	77			0.9	
ACMW-02N	12/14/1999	19991214-15	Access Gate	12.2	6.79	135		61	95			3.7	
ACMW-02S	12/14/1999	19991214-16	Access Gate	12.7	6.67	94		45	44			1.2	
ACMW-04W	12/14/1999	19991214-17	Gansberg	11.0	5.68	194		55	135			12.8	
ACMW-06N	12/14/1999	19991214-18	Celio	10.7	6.56	693		262	423			52.4	
ACMW-06S	12/14/1999	19991214-19	Celio	9.9	7.35	739		264	422			72.7	
Groundwaters													
GW-03	12/07/1999	19991207-07	Smith/Springmeyer	9.9	7.67	310		128	223			1.3	
GW-04	12/07/1999	19991207-08	Celio	13.0	7.53	266		117	195			3.1	
GW-05	12/07/1999	19991207-09	Neddenriep	10.5	6.65	281		62	174			25.6	
GW-07	12/07/1999	19991207-10	Gansberg	9.2	6.63	129		55	98			2.1	
GW-08	12/07/1999	19991207-11	Arant	10.3	6.62	3		52	153			26.3	
GW-11	12/07/1999	19991207-12	Diamond Val. School	8.6	6.60	99		47	74			1.1	
GW-14	12/07/1999	19991207-13	Sierra Pines	8.6	6.42	112		52	92			1.3	
Reservoirs													
HPR	12/01/1999	19991201-08	Harvey Place Reservoir	7.5	7.60	503	6.30		230		2.4	52.4	22.8
ICR-1	12/01/1999	19991201-09	Indian Creek Reservoir	4.7	8.67	112	7.17					1.6	
ICR-1	12/01/1999	19991201-10	Indian Creek Reservoir	4.3	8.17	113	7.17					1.6	
ICR-1	12/01/1999	19991201-11	Indian Creek Reservoir	4.2	8.03	114	6.92					1.6	
Surfacewaters: Carson R													
SW-01	12/01/1999	19991201-06	Carson R Woodfords	2.3	6.84	73	11.50		52			1.1	2.2
SW-05	12/01/1999	19991201-07	Carson R Paynesville	4.0	7.76	87	9.10		63			1.3	2.2

ALPINE COUNTY MONITORING

01/05/00

Site	Date	Total P mg/L	PO4-P mg/L	TKN mg/L	NH3-N mg/L	NO2-N mg/L	NO3-N mg/L	Total N mg/L	MBAS mg/L
Alpine Monitoring Wells									
ACMW-01AW	12/14/1999	0.027	<	0.100	0.021	<	0.010	0.067	0.177
ACMW-01BE	12/14/1999	0.016	<	0.100	<	0.020	<	0.010	0.288
ACMW-02N	12/14/1999	0.014	<	0.100	<	0.020	<	0.010	0.274
ACMW-02S	12/14/1999	0.012	<	0.100	<	0.020	<	0.010	0.120
ACMW-04W	12/14/1999	0.014	<	0.100	<	0.020	<	0.010	2.810
ACMW-06N	12/14/1999	0.272	<	0.053	<	0.010	<	0.010	0.020
ACMW-06S	12/14/1999	0.034		0.328	0.206			0.130	0.037
Groundwaters									
GW-03	12/07/1999	0.050	<	0.100	0.033	<	0.010	0.756	0.866
GW-04	12/07/1999	0.064	<	0.100	<	0.020	<	0.010	0.972
GW-05	12/07/1999	0.038	<	0.100	<	0.020	<	0.010	3.960
GW-07	12/07/1999	0.084	<	0.100	<	0.020	<	0.010	1.430
GW-08	12/07/1999	0.037	<	0.100	<	0.020	<	0.010	5.370
GW-11	12/07/1999	0.024	<	0.100	<	0.020	<	0.010	0.427
GW-14	12/07/1999	0.066	<	0.100	<	0.020	<	0.010	0.483
Reservoirs									
HPR	12/01/1999	2.880	2.250	18.400	19.300		0.477	1.220	20.097
ICR-1	12/01/1999	0.092		1.700	0.419	<	0.010	0.138	1.848
ICR-1	12/01/1999	0.054		1.330	0.376	<	0.010	0.137	1.477
ICR-1	12/01/1999	0.082		0.825	0.378	<	0.010	0.146	0.981
Surfacewaters: Carson R									
SW-01	12/01/1999	0.022	<	0.100	<	0.020	<	0.010	0.014
SW-05	12/01/1999	<	0.010	<	0.166	<	0.020	<	0.010
								0.041	0.217

ALPINE COUNTY MONITORING

01/05/00

Site	Date	COD mg/L	BOD mg/L	O & G mg/L	Boron mg/L	Ca mg/L	Mg mg/L	Na mg/L	K mg/L	SAR	Exch Na %	Hardness mg/L	Water Level MSL or Ft
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Alpine Monitoring Wells

ACMW-01AW	12/14/1999												5482.4
ACMW-01BE	12/14/1999												5490.0
ACMW-02N	12/14/1999												5458.2
ACMW-02S	12/14/1999												5458.7
ACMW-04W	12/14/1999												4898.1
ACMW-06N	12/14/1999												5216.2
ACMW-06S	12/14/1999												5204.7

Groundwaters

GW-03	12/07/1999												
GW-04	12/07/1999												
GW-05	12/07/1999												
GW-07	12/07/1999												
GW-08	12/07/1999												
GW-11	12/07/1999												
GW-14	12/07/1999												

Reservoirs

HPR	12/01/1999	26	3		0.22	17.1	3.6	43.3	9.3	2.49	57.6		32.0
ICR-1	12/01/1999												0.5
ICR-1	12/01/1999												19.0
ICR-1	12/01/1999												37.0

Surfacewaters: Carson R

SW-01	12/01/1999					7.4	1.9	3.9	1.5	0.33	23.0		
SW-05	12/01/1999					8.6	2.3	4.7	1.8	0.37	23.5		

**ALPINE COUNTY
BACTERIOLOGICAL MONITORING**

01/05/00

Alpine Monitoring Wells

Site	Date	Total Coliform MPN/100mL	Fecal Coliform MPN/100mL	Fecal Streptococci MPN/100mLL
ACMW-01AW	12/14/1999	< 1.1	< 1.1	
ACMW-01BE	12/14/1999	< 1.1	< 1.1	
ACMW-02N	12/14/1999	< 1.1	< 1.1	
ACMW-02S	12/14/1999	< 1.1	< 1.1	
ACMW-04W	12/14/1999	2.2	< 1.1	
ACMW-06N	12/14/1999	< 1.1	< 1.1	
ACMW-06S	12/14/1999	< 1.1	< 1.1	

Groundwaters

Site	Date	Total Coliform MPN/100mL	Fecal Coliform MPN/100mL	Fecal Streptococci MPN/100mLL
GW-03	12/07/1999	< 1.1	< 1.1	
GW-04	12/07/1999	< 1.1	< 1.1	
GW-05	12/07/1999	< 1.1	< 1.1	
GW-07	12/07/1999	< 1.1	< 1.1	
GW-08	12/07/1999	< 1.1	< 1.1	
GW-11	12/07/1999	< 1.1	< 1.1	
GW-14	12/07/1999	< 1.1	< 1.1	

Reservoirs

Site	Date	Total Coliform MPN/100mL	Fecal Coliform MPN/100mL	Fecal Streptococci MPN/100mLL
HPR	12/01/1999	1600	7	4
ICR-1	12/01/1999			
ICR-1	12/01/1999			
ICR-1	12/01/1999			

Surfacewaters: Carson R

Site	Date	Total Coliform MPN/100mL	Fecal Coliform MPN/100mL	Fecal Streptococci MPN/100mLL
SW-01	12/01/1999	90	40	
SW-05	12/01/1999	230	< 30	

Wastewater Reclamation Permit Compliance

The District is monitoring under the revisions approved by the Regional Board (letter dated November 30, 1998). The revisions provide for: quarterly monitoring of soils; discontinue testing for Oil & Grease on surfacewaters; and discontinue surfacewater monitoring, except SW-01 and SW-05, during the months of December, January and February.

The West Fork, Carson River Water Quality Objectives and East Fork, Carson River limitations were exceeded as follows (a ✓ indicates objective exceeded):

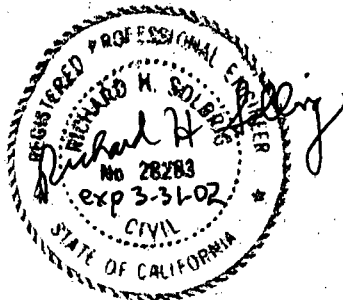
Site	Location	TDS		Cl ⁻		TKN		NO ₃ -N		Total N		Total P		SO ₄		Boron		Exch Na %	
		Limit	Exceedance	Limit	Exceedance	Limit	Exceedance	Limit	Exceedance	Limit	Exceedance	Limit	Exceedance	Limit	Exceedance	Limit	Exceedance	Limit	Exceedance
SW-01	Carson River, Woodfords	55		1.0		0.13	✓	0.02		0.15		0.02		2.0	✓	0.02	✓	20	✓
SW-06	Carson River, Stateline	70	✓	2.5		0.22		0.03		0.25		0.03		2.0	✓	0.02		20	✓
SW-02	Indian Creek, Upper	100		6.0						0.30		0.03		8.0		0.25		30	
SW-03	Indian Creek, Mid	100		6.0						0.30		0.03	✓	8.0		0.25		30	
SW-04	Indian Creek, Lower	100		6.0						0.30		0.03	✓	8.0		0.25		30	
SW-10	Indian Creek, Stateline	100		6.0						0.30		0.03	✓	8.0		0.25		30	

The Blue Green Algae tests for August, September, and October have been completed. The results are included in this report.

Certification

I hereby certify that the enclosed monitoring report was prepared under my direct supervision and that I am a duly Registered Engineer under the laws of the State of California.

Sincerely,



Richard Solbrig,
Assistant Manager/Engineer

Enclosures:

1.

November Monthly Report	Pages
Wastewater Treatment plant	2
Permit Compliance Record	1
Export pipeline inspection	1
Sample site locations	2
Monitoring wells (ERB) and Heavenly Valley Creek (HVC)	1
Alpine County Surfacewaters, Groundwaters and HPR	4
Indian Creek Reservoir	1
Blue Green Algae, August, September, October, November	2
Total number of pages:	14

- cc: Calif. Dept. of Health Services, ODW - Jess Morehouse
El Dorado Co. Dept. of Environmental Health - Virginia Huber
Nevada Division of Environmental Protection - Wendel McCurry
Alpine County Health Department - Dr. Richard Botto
Alpine County Health Department - Jim Goodloe
Alpine County Board of Supervisors
Desert Research Group (Alpine County Consultants) - Bill Albright
STPUD Board of Directors
STPUD General Manager / District Engineer - Robert G. Baer
STPUD Manager of Operations - Ross Johnson
STPUD Operations Chief Plant Operator - Jeff Lee
STPUD Laboratory Director - Terry Powers
STPUD Manager of Alpine County Operations - Hal Bird

SOUTH TAHOE PUBLIC UTILITY DISTRICT
WASTEWATER TREATMENT PLANT MONTHLY REPORT

12/08/99
14:29:58

NOVEMBER 1999

Date	Day	2-Hr Peak		FLOW MGD			PRECIP		D.O.	COD		BOD		SS	
		Inf	Inf	Eff	Pond Return	Pond Inf	Inch	Type	mg/L Fin	Raw	Fin	Raw	Fin	Raw	Fin
11/01/99	Mon	3.71	4.6	3.85					3.66	306					
11/02/99	Tue	3.79	4.9	3.67					3.54	407					
11/03/99	Wed	3.93	5.6	3.79					3.34	421	26.0	174	5.2	209	2.8
11/04/99	Thu	3.81	5.2	4.39					3.51	326					
11/05/99	Fri	3.95	5.8	3.70					4.71	317					
11/06/99	Sat	4.34	6.0	3.95					4.83	390	35.4	200	5.1	156	2.9
11/07/99	Sun	4.12	6.1	4.02			0.30	snow	6.25	361					
11/08/99	Mon	3.91	4.9	3.49			0.05	snow	3.87	389					
11/09/99	Tue	3.74	6.0	3.78					3.20	723					
11/10/99	Wed	3.77	4.4	3.52					2.96	391	36.1	162	6.3	141	3.6
11/11/99	Thu	4.04	6.0	3.96					4.46	732					
11/12/99	Fri	4.11	5.6	4.12					2.97	446					
11/13/99	Sat	4.34	6.4	4.12					4.07	402	43.0	179	8.5	185	3.5
11/14/99	Sun	4.27	6.4	4.25					7.58	617					
11/15/99	Mon	3.90	4.9	3.88					3.73	373					
11/16/99	Tue	3.89	4.7	3.91			0.35	rain	3.84	366					
11/17/99	Wed	3.88	5.6	3.52					4.36	412	37.3	204	6.0	177	2.6
11/18/99	Thu	3.82	4.8	3.82					2.79	368					
11/19/99	Fri	3.88	5.8	4.16			0.57	rain	4.37	384					
11/20/99	Sat	4.20	5.4	4.18			0.01	rain	3.50	429	32.7	191	6.9	143	3.1
11/21/99	Sun	4.11	6.4	4.05					4.14	472					
11/22/99	Mon	3.94	5.1	3.79					2.93	426					
11/23/99	Tue	3.98	5.8	4.01					3.34	421					
11/24/99	Wed	4.09	5.4	4.25					3.21	648	37.0	281	7.4	302	2.7
11/25/99	Thu	4.82	7.6	4.50					4.86	596					
11/26/99	Fri	4.85	8.8	4.41					3.62	723					
11/27/99	Sat	4.96	8.0	5.50					4.04	436	51.1	206	12.3	134	4.2
11/28/99	Sun	4.28	7.0	4.14					5.50	409					
11/29/99	Mon	3.80	5.2	3.80					5.51	419	43.9	181	6.9	141	3.3
11/30/99	Tue	3.58	5.4	3.28			0.10	snow	6.25	370					
PERMIT MAX		7.7									300		45		60
PERMIT MIN															
PERMIT AVE											60		30		30
TOTAL		121.81	173.8	119.81			1.38		124.94	13480	342.5	1778	64.5	1588	28.7
MAXIMUM		4.96	8.8	5.50			0.57		7.58	732	51.1	281	12.3	302	4.2
MINIMUM		3.58	4.4	3.28			0.01		2.79	306	26.0	162	5.1	134	2.6
AVERAGE		4.06	5.8	3.99			0.23		4.16	449		198		176	
# Tests		30	30	30	0	0	6		30	30	9	9	9	9	9

60 mean

30 mean

60

26.0

5.1

2.6

SOUTH TAHOE PUBLIC UTILITY DISTRICT
WASTEWATER TREATMENT PLANT MONTHLY REPORT

12/08/99
14:29:58

		NOVEMBER 1999																
		SETTLEABLE SOLIDS		MBAS		pH		TURBIDITY		Cl2		FINAL COLIFORMS			TDS		ALKALINITY	
Date	Day	mL/L		mg/L		Units		NTU		mg/L		MPN/100 mL			mg/L		mg/L	
		Raw	Fin	Raw	Fin	Raw	Fin	Raw	Fin	Raw	Fin	Total	7day-	Median	Raw	Fin	Raw	Fin
11/01/99	Mon	10.0	< 0.1			7.49	7.39	2.10	4.07	<	2	<	2				149	134
11/02/99	Tue	11.0	< 0.1	1.85	0.040	7.57	7.32	2.00	3.67	<	2	<	2				153	132
11/03/99	Wed	13.0	< 0.1			7.47	7.40	2.10							252	238	151	127
11/04/99	Thu	10.5	< 0.1			7.66	7.56	2.00	5.16	<	2	<	2				148	122
11/05/99	Fri	12.0	< 0.1			7.53	7.42	1.80	2.68	<	2	<	2				151	126
11/06/99	Sat	11.5	< 0.1			7.52	7.59	2.00	3.87	<	2	<	2				157	134
11/07/99	Sun	10.0	< 0.1			7.55	7.45	2.50	3.47	<	2	<	2				159	138
11/08/99	Mon	11.0	< 0.1			7.73	7.54	2.30	4.07	<	2	<	2				152	133
11/09/99	Tue	20.5	< 0.1			7.65	7.65	2.10	4.37	<	2	<	2				158	132
11/10/99	Wed	10.0	< 0.1			7.42	7.58	2.40	3.77	<	2	<	2		241	232	148	132
11/11/99	Thu	27.0	< 0.1			7.51	7.46	1.80	3.97	<	2	<	2				157	133
11/12/99	Fri	12.0	< 0.1			7.44	7.31	2.60	3.57	<	2	<	2				149	137
11/13/99	Sat	11.5	< 0.1			7.46	7.51	3.00	5.16	<	2	<	2				156	140
11/14/99	Sun	21.0	< 0.1			7.45	7.34	2.70	4.86	<	2	<	2				164	140
11/15/99	Mon	11.5	< 0.1			7.73	7.44	2.30	4.76	<	2	<	2				148	138
11/16/99	Tue	10.5	< 0.1			7.66	7.72	2.00	3.21	<	2	<	2				158	135
11/17/99	Wed	12.0	< 0.1			7.47	7.66	2.10	4.57	<	2	<	2		229	220	148	128
11/18/99	Thu	11.5	< 0.1			7.71	7.46	2.40	4.47	<	2	<	2				150	129
11/19/99	Fri	9.5	< 0.1			7.76	7.46	2.50	3.40	<	2	<	2				144	126
11/20/99	Sat	12.5	< 0.1			7.60	7.64	2.50	4.47	<	2	<	2				151	127
11/21/99	Sun	11.0	< 0.1			7.66	7.46	2.70	3.69	<	2	<	2				155	136
11/22/99	Mon	12.5	< 0.1			7.56	7.44	2.60	2.53	<	2	<	2				155	139
11/23/99	Tue	14.0	< 0.1			7.74	7.41	2.90	4.18	<	2	<	2				153	138
11/24/99	Wed	21.0	< 0.1			7.36	7.46	2.70	3.59	<	2	<	2		254	228	166	138
11/25/99	Thu	14.0	< 0.1			7.28	7.42	2.80	4.08	<	2	<	2				167	143
11/26/99	Fri	24.0	< 0.1			7.36	7.40	3.80	3.98	<	2	<	2				185	150
11/27/99	Sat	11.0	< 0.1			7.44	7.57	4.00	5.63	<	2	<	2				174	152
11/28/99	Sun	10.0	< 0.1			7.39	7.40	3.00	6.51	<	2	<	2				169	146
11/29/99	Mon	10.5	< 0.1			7.51	7.69	2.50	4.95	<	2	<	2		246	232	157	142
11/30/99	Tue	10.0	< 0.1			7.46	7.57	2.10	4.18	<	2	<	2				155	140
PERMIT MAX			0.1		2.0		8.5	20				240		23				
PERMIT MIN							6.5											
PERMIT AVE					1.0			10										
TOTAL		396.5	3.0	1.85	0.040	226.14	224.72	74.30	120.89		58		58		1222	1150	4687	4067
MAXIMUM		27.0	0.1	1.85	0.040	7.76	7.72	4.00	6.51		2		2		254	238	185	152
MINIMUM		9.5	0	1.85	0.040	7.28	7.31	1.80	2.53		2		2		229	220	144	122
AVERAGE		13.2	0.1					2.48	4.17				2		244	230	156	136
# Tests		30	30	1	1	30	30	30	29		29		29		5	5	30	30

2.0
6.5-8.5
20
23 7day ave
240 max 2 conc days

SOUTH TAHOE PUBLIC UTILITY DISTRICT
MEMORANDUM

Date: November 18, 1999

To: Bob Baer, Diane Noble, Terry Powers

From: Greg Schrempp

Topic: Export Line Inspection

On November 17, Tim Rieger and I conducted our check of the District's export line from the treatment plant to where the "C" line daylights at Harvey Place at Station 564+04. Several wet spots were checked, however no leaks were found. Due to a very heavy workload and a manpower shortage, this has been the first inspection of the export line since June 30, 1999.

SAMPLE LOCATIONS

TAHOE BASIN MONITORING WELLS

<u>Site</u>	<u>Location</u>
ERB	Emergency Retention Basin
CONTROL	North of Post Office
MW02-25, -50	Emergency Retention Basin, S side
MW03-25, -50	Emergency Retention Basin, S side
MW04-25, -50	Emergency Retention Basin, W side
MW07-25, -50	Emergency Retention Basin, N side
MW08-25, -50	Pond #1, SW corner
MW11	S.E. corner of wastewater treatment plant grounds
MW12	South of Emergency Pump Building, for buried sludge
MW13	Pond 2, along Heavenly Valley Creek, for buried sludge

HEAVENLY VALLEY CREEK

HVC-1	At Pioneer Trail
HVC-2	250 ft upstream of Pond #2
HVC-3	25 ft downstream of Johnson Blvd.
HVC-4	Effluent of drain pipe from Lower Shop area
HVC-5	Effluent of drainage pipe along Johnson Blvd, 10 feet upstream of Johnson Blvd.

ALPINE COUNTY MONITORING WELLS

<u>Site</u>	<u>Location</u>
ACMW-01AW	Below main dam at Harvey Place Reservoir
ACMW-01BE	Below auxiliary dam at Harvey Place Reservoir
ACMW-02, N&S	On dam access road at Diamond Valley Road
ACMW-03	Bruns ranch, east side of Highway 88
ACMW-04W	Gansberg ranch, west side of Highway 88
ACMW-05	Dressler ranch
ACMW-06, N&S	Celio ranch, on Diamond Valley Road

ALPINE SOILS

<u>Site</u>	<u>Ranch</u>
S2	Celio
S3	Hall
S4	Gansberg
S5	Gansberg
S6	Neddenriep
S7	Bruns
S8	Dressler

ALPINE GROUNDWATERS

<u>Site</u>	<u>Homeowner</u>
GW-01	Sagues
GW-03	Smith/Springmeyer
GW-04	Celio
GW-05	Neddenriep
GW-07	Gansberg, Jr.
GW-08	Arant
GW-11	Diamond Valley School
GW-14	Sierra Pines Store

ALPINE SURFACEWATERS

<u>Site</u>	<u>Location</u>
SW-01	Carson River, Woodfords
SW-02	Indian Creek, @ HWY 89
SW-03	Indian Creek, @ upper bridge
SW-04	Indian Creek, @ lower bridge
SW-05	Carson River, Paynesville
SW-06	Carson River, Stateline
SW-07	Fredericksberg Ditch, Stateline
SW-08	Irrigation Ditch along Carson River Road
SW-09	Carson River, Dressler Lane
SW-10	Indian Creek, @ Smith-Springmeyer Ranch

TAHOE BASIN MONITORING

12/09/99

Site	Date	ID	Location	Depth msl	Temp C	pH	EC umhos	Cl mg/L	COD mg/L	NO3-N mg/L	Comment
Buried Sludge Monitoring											
MW11	11/23/99	991123-13	Sludge Pond	6269.0	7.5	5.99	76	1.3	< 5.0	0.095	
MW12	11/23/99	991123-14	Sludge Pond	6265.6	8.8	5.89	146	2.2	5.3	0.209	
MW13	11/23/99	991123-15	Sludge Pond	6257.2	7.0	6.46	330	1.4	10.7	0.056	
ERB Monitoring											
CONTROL	11/23/99	991123-06	At Post Office	6284.3	8.5	6.22	176	7.0	< 5.0	2.450	
MW01.5	11/23/99	991123-07	SW corner of ERB	6269.1	8.6	6.58	173	3.1	< 5.0	0.661	
MW02-50	11/23/99	991123-08	ERB	6269.1	8.6	6.58	173	3.1	< 5.0	0.661	
MW03-50	11/23/99	991123-09	Black Bart side of ERB	6268.9	9.3	5.36	368	36.8	< 5.0	2.970	
MW04-50	11/23/99	991123-10	Hank Monk side of ERB	6269.0	7.5	5.41	74	4.9	< 5.0	0.051	
MW07-50	11/23/99	991123-11	North side of ERB	6279.8	7.2	5.82	266	25.9	6.3	0.621	
Heavenly Valley Creek											
HVC-1	11/09/99	991109-06	Downstream of Pioneer		4.2	6.43	46	3.1	< 5.0	0.020	
HVC-2	11/09/99	991109-07	250' upstream of Pond #2		2.7	6.48	49	1.0	< 5.0	0.016	
HVC-3	11/09/99	991109-08	25' downstream of Johnson Blvd		1.9	6.18	52	1.0	< 5.0	< 0.010	
HVC-4	11/09/99	91109-HVC	Effluent of drain from Lower Sho								
HVC-5	11/09/99	91109-HVC	Effluent of drainage pipe along J								
HVC-5	11/19/99	991119-06	Effluent of drainage pipe along J		8.0	6.97	67	12.6	25.7	0.123	Storm event
Treatment Plant Monitoring											
MW08-25	11/23/99	991123-12	SW side of Pond #1	6247.3	9.9	5.95	1044	50.5	85.3	< 0.010	

ALPINE COUNTY MONITORING

11/27/99

Site	Date	ID	Location	Temp C	pH	EC umhos	DO mg/L	Alk mg/L	TDS mg/L	SS mg/L	Turb NTU	Cl mg/L	SO4 mg/L
Alpine Monitoring Wells													
ACMW-01AW	11/16/99	991116-13	Main Dam	12.8	5.58	107		50	75		3.5	2.1	3.3
ACMW-01BE	11/16/99	991116-14	Secondary Dam	10.5	6.14	102		50	67		.66	0.7	2.7
ACMW-02N	11/16/99	991116-15	Access Gate	11.8	5.99	134		60	91		.53	3.1	2.4
ACMW-02S	11/16/99	991116-16	Access Gate	13.8	5.96	94		45	70		.24	1.1	2.4
ACMW-04W	11/16/99	991116-17	Gansberg	11.8	5.54	194		54	130		.33	12.8	9.5
ACMW-06N	11/16/99	991116-18	Celio	11.8	6.39	682		259	426		9.4	52.7	50.8
ACMW-06S	11/16/99	991116-19	Celio	11.8	6.72	758		277	483		.32	77.2	64.3
Groundwaters													
GW-01	11/09/99	991109-09	Cohen	10.0	6.88	163		67	86		92	9.2	
GW-03	11/09/99	991109-10	Smith/Springmeyer	12.2	7.37	311		129	221		.14	3.0	
GW-04	11/09/99	991109-11	Celio	14.5	7.27	263		117	193		.46	3.1	
GW-05	11/09/99	991109-12	Neddenriep	10.8	6.10	274		61	174		.16	25.5	
GW-07	11/09/99	991109-13	Gansberg	9.8	6.31	129		54	92		.15	1.7	
GW-08	11/09/99	991109-14	Arant	11.7	6.03	249		50	151		.4	25.2	
GW-11	11/09/99	991109-15	Diamond Val. School	15.7	6.29	102		47	79		.2	0.9	
GW-14	11/09/99	991109-16	Sierra Pines	10.8	6.23	111		51	83		.12	1.0	
Reservoirs													
HPR	11/02/99	991102-17	Harvey Place Reservoir	11.7	7.54	495	4.90	118	228	2.86	.8	52.2	24.8
Surfacewaters: Carson R													
SW-01	11/02/99	991102-08	Carson R Woodfords	5.9	7.17	75	10.40	34	51	0.87	.33	1.0	2.3
SW-05	11/02/99	991102-12	Carson R Paynesville	7.7	8.02	89	9.00	40	67	0.70	.34	1.5	2.5
SW-06	11/02/99	991102-13	Carson R Stateline	7.6	7.77	96	10.80	42	74	0.75	.34	1.8	3.4
SW-08	11/02/99	991102-14	Irrigation Ditch	14.8	7.74	127	8.00	55	101	15.70	3.5	1.8	6.5
SW-09	11/02/99	991102-15	Carson R Dressler Ln	9.3	7.47	116	9.80	47	82	0.85	.45	3.1	5.2
Surfacewaters: Indian Cr													
SW-02	11/02/99	991102-09	Indian Cr Upper	4.5	7.40	142	8.60	71	95	0.17	.84	1.2	2.4
SW-03	11/02/99	991102-10	Indian Cr Mid	4.9	7.07	82	10.40	38	60	1.94	1.7	1.3	2.7
SW-04	11/02/99	991102-11	Indian Cr Lower	6.2	7.38	90	10.50	41	62	6.49	2.4	1.7	2.7
SW-10	11/02/99	991102-16	Indian Cr at Bruns	6.3	7.64	93	10.20	42	71	3.09	2.2	1.6	3.0

ALPINE COUNTY MONITORING

11/27/99

Site	Date	TotalP mg/L	PO4-P mg/L	TKN mg/L	NH3-N mg/L	NO2-N mg/L	NO3-N mg/L	Total N mg/L	MBAS mg/L
Alpine Monitoring Wells									
ACMW-01A	11/16/99	0.032		0.109	< 0.020	< 0.010	0.116	0.235	
ACMW-01B	11/16/99	0.020	<	0.100	< 0.020	< 0.010	0.177	0.287	
ACMW-02N	11/16/99	0.020	<	0.100	< 0.020	< 0.010	0.123	0.233	
ACMW-02S	11/16/99	0.020		0.105	< 0.020	< 0.010	< 0.010	0.125	
ACMW-04W	11/16/99	0.020		0.100	< 0.020	< 0.010	2.300	2.410	
ACMW-06N	11/16/99	0.268		0.321	0.044	< 0.010	< 0.010	0.341	
ACMW-06S	11/16/99	0.044		0.326	0.076	0.012	0.026	0.364	
Groundwaters									
GW-01	11/09/99	0.050	<	0.100	0.022	< 0.010	0.014	0.124	
GW-03	11/09/99	0.040	<	0.100	< 0.020	< 0.010	0.643	0.753	
GW-04	11/09/99	0.058	<	0.100	< 0.020	< 0.010	0.729	0.839	
GW-05	11/09/99	0.036		0.106	< 0.020	< 0.010	3.050	3.166	
GW-07	11/09/99	0.078	<	0.100	< 0.020	< 0.010	1.010	1.120	
GW-08	11/09/99	0.040	<	0.100	< 0.020	< 0.010	4.310	4.420	
GW-11	11/09/99	0.026	<	0.100	< 0.020	< 0.010	0.350	0.460	
GW-14	11/09/99	0.058	<	0.100	< 0.020	< 0.010	0.399	0.509	
Reservoirs									
HPR	11/02/99	2.400	2.300	21.200	17.800	0.743	0.724	22.667	0.047
Surfacewaters: Carson R									
SW-01	11/02/99	0.020	< 0.010	0.168	< 0.020	< 0.010	< 0.010	0.188	
SW-05	11/02/99	0.026	< 0.010	0.230	< 0.020	< 0.010	0.024	0.264	
SW-06	11/02/99	0.023	< 0.010	0.123	< 0.020	< 0.010	0.028	0.161	
SW-08	11/02/99	0.078	0.028	0.359	< 0.020	< 0.010	0.312	0.681	
SW-09	11/02/99	0.030	0.010	0.268	< 0.020	< 0.010	0.022	0.300	
Surfacewaters: Indian Cr									
SW-02	11/02/99	0.024	0.012	0.214	< 0.020	< 0.010	< 0.010	0.234	
SW-03	11/02/99	0.032	0.018	0.137	< 0.020	< 0.010	< 0.010	0.157	
SW-04	11/02/99	0.048	0.018	0.154	< 0.020	< 0.010	< 0.010	0.174	
SW-10	11/02/99	0.044	0.020	0.131	< 0.020	< 0.010	< 0.010	0.151	

ALPINE COUNTY MONITORING

11/27/99

Site	Date	COD mg/L	BOD mg/L	O & G mg/L	Boron mg/L	Ca mg/L	Mg mg/L	Na mg/L	K mg/L	SAR	Exch Na %	Hardness mg/L	Water Level MSL or Ft
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Alpine Monitoring Wells

ACMW-01A	11/16/99	<	5									44.9	5482.5
ACMW-01B	11/16/99	<	5									40.2	5490.9
ACMW-02N	11/16/99	<	5									47.4	5458.4
ACMW-02S	11/16/99	<	5									34.8	5458.9
ACMW-04W	11/16/99	<	5									49.1	4900.5
ACMW-06N	11/16/99	<	5									254	5215.7
ACMW-06S	11/16/99	<	5									338	5204.4

Groundwaters

GW-01	11/09/99	<	5									56.2	
GW-03	11/09/99	<	5									126	
GW-04	11/09/99	<	5									104	
GW-05	11/09/99	<	5									91.6	
GW-07	11/09/99	<	5									52.9	
GW-08	11/09/99	<	5									44.3	
GW-11	11/09/99	<	5									39.8	
GW-14	11/09/99	<	5									34.4	

Reservoirs

HPR	11/02/99		34	3	0.28	17.6	3.6	46.3	9.5	2.63	58.7		22.0
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Surfacewaters: Carson R

SW-01	11/02/99	<	5	1	0.04	7.5	2.0	4.0	1.6	0.33	22.9		
SW-05	11/02/99	<	5	1	0.01	8.9	2.4	5.2	2.0	0.40	24.7		
SW-06	11/02/99	<	5	1	< 0.01	9.4	2.6	5.5	2.1	0.41	24.4		
SW-08	11/02/99		9	1	0.02	11.9	2.8	10.4	2.5	0.70	33.8		
SW-09	11/02/99		9	1	0.02	10.9	3.1	7.3	2.3	0.50	27.1		

Surfacewaters: Indian Cr

SW-02	11/02/99	<	5	2	< 0.01	15.8	3.7	8.9	1.8	0.52	25.3		
SW-03	11/02/99	<	5	1	< 0.01	8.3	2.3	4.6	1.7	0.36	23.7		
SW-04	11/02/99	<	5	1	< 0.01	9.2	2.6	5.2	1.9	0.39	23.8		
SW-10	11/02/99	<	5	1	0.01	9.4	2.6	5.2	1.8	0.39	23.7		

**ALPINE COUNTY
BACTERIOLOGICAL MONITORING**

11/27/99

Alpine Monitoring Wells

Site	Date	Total Coliform MPN/100mL	Fecal Coliform MPN/100mL	Fecal Streptococci MPN/100mLL
ACMW-01A	11/16/99	< 1.1	< 1.1	
ACMW-01B	11/16/99	< 1.1	< 1.1	
ACMW-02N	11/16/99	< 1.1	< 1.1	
ACMW-02S	11/16/99	< 1.1	< 1.1	
ACMW-04W	11/16/99	2.2	< 1.1	
ACMW-06N	11/16/99	< 1.1	< 1.1	
ACMW-06S	11/16/99	1.1	< 1.1	

Groundwaters

Site	Date	Total Coliform MPN/100mL	Fecal Coliform MPN/100mL	Fecal Streptococci MPN/100mLL
GW-01	11/09/99	< 1.1	< 1.1	
GW-03	11/09/99	< 1.1	< 1.1	
GW-04	11/09/99	2.2	< 1.1	
GW-05	11/09/99	< 1.1	< 1.1	
GW-07	11/09/99	1.1	< 1.1	
GW-08	11/09/99	2.2	< 1.1	
GW-11	11/09/99	< 1.1	< 1.1	
GW-14	11/09/99	< 1.1	< 1.1	

Reservoirs

Site	Date	Total Coliform MPN/100mL	Fecal Coliform MPN/100mL	Fecal Streptococci MPN/100mLL
HPR	11/02/99	1600	< 2	8

Surfacewaters: Carson R

Site	Date	Total Coliform MPN/100mL	Fecal Coliform MPN/100mL	Fecal Streptococci MPN/100mLL
SW-01	11/02/99	90	40	230
SW-05	11/02/99	40	< 30	40
SW-06	11/02/99	40	40	230
SW-08	11/02/99	4600	4600	230
SW-09	11/02/99	2400	930	40

Surfacewaters: Indian Cr

Site	Date	Total Coliform MPN/100mL	Fecal Coliform MPN/100mL	Fecal Streptococci MPN/100mLL
SW-02	11/02/99	90	90	< 30
SW-03	11/02/99	430	230	430
SW-04	11/02/99	150	70	150
SW-10	11/02/99	430	150	230

Indian Creek Reservoir

ID: 991102-18

Date: 11/02/99
Hour: 10:00

Sampler: Arce and Chernago

Minerals

Temp, C	11.7	SS, mg/L	4.4	Calcium, mg/L	12.8
pH	7.81	Turbidity, NTU	5.7	Magnesium, mg/L	2.1
EC, umhos/cm	113	Alkalinity, mg/L	49.3	Potassium, mg/L	2.73
DO, mg/L	9.40	Sulfate, mg/L	5.91	Sodium, mg/L	7.01
Chloride, mg/L	1.43	Boron:	.02	SAR, Calculated	.48
TDS, mg/L	86			Exch Na, %	25.69

Nutrients

TKN, mg/L	1.230	NO2-N, mg/L	0.010	Total P, mg/L	0.036
NH3-N, mg/L	0.334	NO3-N, mg/L	0.060	PO4-P, mg/L	< 0.010
FreeNH3-N:	< 0.010	Total N, mg/L	1.300	(Total P and PO4-P filtered through 0.45um filter)	

Organics

BOD, mg/L	1.47
COD, mg/L	22.3
MBAS, mg/L	

Site Conditions

Water Level, ft		Algae:	No
Air Temp:	16.2	Weeds:	No
Ice%:	0	Floaters:	No
WaterColor:	Brown		

Microbiological

Total Coliform:	30
Fecal Coliform:	< 2
Fecal Strep:	4

(Results reported as MPN/100 mL)

**ALPINE COUNTY
BLUE GREEN ALGAE**

ID#	Site	Location	Date	Colonies #	Colony # Cells	Filaments #	Filaments # Cells	Filaments #	Filament Length	Single Cells, #
August, 1999										
990803-07	SW-01	Carson R Woodfords	08/03/99	0	0	35	317	0	0	0
990803-08	SW-02	Indian Cr Upper	08/03/99	0	0	0	0	0	0	0
990803-09	SW-03	Indian Cr Mid	08/03/99	0	0	0	0	0	0	0
990803-10	SW-04	Indian Cr Lower	08/03/99	0	0	0	0	0	0	0
990803-11	SW-05	Carson R Paynesville	08/03/99	0	0	0	0	0	0	0
990803-12	SW-06	Carson R Stateline	08/03/99	0	0	0	0	0	0	0
990803-13	SW-07	Fredericksburg Ditch	08/03/99	0	0	0	0	0	0	0
990803-14	SW-08	Irrigation Ditch	08/03/99	0	0	0	0	0	0	0
990803-15	HPR	Harvey Place Reservoir	08/03/99	0	0	0	0	0	0	0
990803-16	ICR	Indian Creek Reservoir	08/03/99	70	24,700	4,720	165,000	0	0	0
September, 1999										
990914-07	SW-01	Carson R Woodfords	09/14/99	0	0	0	0	0	0	0
990914-08	SW-02	Indian Cr Upper	09/14/99	0	0	0	0	0	0	0
990914-09	SW-03	Indian Cr Mid	09/14/99	0	0	0	0	0	0	0
990914-10	SW-04	Indian Cr Lower	09/14/99	0	0	0	0	0	0	0
990914-11	SW-05	Carson R Paynesville	09/14/99	0	0	0	0	0	0	0
990914-12	SW-06	Carson R Stateline	09/14/99	0	0	0	0	0	0	0
990914-13	SW-08	Irrigation Ditch	09/14/99	0	0	0	0	0	0	0
990914-14	990914-1	Harvey Place Reservoir	09/14/99	2,260	3,011,000	141	4,230	0	0	0
990914-15	ICR	Indian Creek Reservoir	09/14/99	0	0	23,500	770,000	0	0	0

**ALPINE COUNTY
BLUE GREEN ALGAE**

ID#	Site	Location	Date	Colonies #	Colony # Cells	Filaments #	Filaments # Cells	Filaments #	Filament Length	Single Cells, #
October, 1999										
991005-06	SW-01	Carson R Woodfords	10/05/99	0	0	0	0	0	0	0
991005-07	SW-02	Indian Cr Upper	10/05/99	0	0	0	0	0	0	0
991005-08	SW-03	Indian Cr Mid	10/05/99	0	0	0	0	0	0	0
991005-09	SW-04	Indian Cr Lower	10/05/99	0	0	0	0	0	0	0
991005-10	SW-05	Carson R Paynesville	10/05/99	0	0	0	0	0	0	0
991005-11	SW-06	Carson R Stateline	10/05/99	0	0	0	0	0	0	0
991005-12	SW-08	Irrigation Ditch	10/05/99	0	0	0	0	0	0	0
991005-13	HPR	Harvey Place Reservoir	10/05/99	211	134,000	0	0	0	0	0
991005-14	ICR	Indian Creek Reservoir	10/05/99	0	0	14,000	647,000	0	0	0
November, 1999										
991102-08	SW-01	Carson R Woodfords	11/02/99	0	0	0	0	0	0	0
991102-09	SW-02	Indian Cr Upper	11/02/99	0	0	0	0	0	0	0
991102-10	SW-03	Indian Cr Mid	11/02/99	0	0	0	0	0	0	0
991102-11	SW-04	Indian Cr Lower	11/02/99	0	0	0	0	0	0	0
991102-12	SW-05	Carson R Paynesville	11/02/99	0	0	0	0	0	0	0
991102-13	SW-06	Carson R Stateline	11/02/99	0	0	0	0	0	0	0
991102-14	SW-08	Irrigation Ditch	11/02/99	0	0	0	0	0	0	0
991102-15	SW-09	Carson R Dressler Ln	11/02/99	0	0	0	0	0	0	0
991102-16	SW-10	Indian Cr at Bruns	11/02/99	0	0	0	0	0	0	0
991102-17	HPR	Harvey Place Reservoir	11/02/99	0	0	0	0	0	0	0
991102-18	ICR	Indian Creek Reservoir	11/02/99	0	0	528	10,800	0	0	0

Wastewater Reclamation Permit Compliance

The District is monitoring under the revisions approved by the Regional Board (letter dated November 30, 1998). The revisions provide for: quarterly monitoring of soils; discontinue testing for Oil & Grease on surfacewaters; and discontinue surfacewater monitoring, except SW-01 and SW-05, during the months of December, January and February. The West Fork, Carson River Water Quality Objectives and East Fork, Carson River limitations were exceeded as follows (a ✓ indicates objective exceeded):

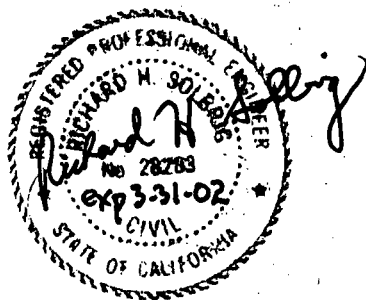
Site	Location	TDS		Cl ⁻		TKN		NO ₃ -N		Total N		Total P		SO ₄		Boron		Exch Na %	
		Limit	Exceedance	Limit	Exceedance	Limit	Exceedance	Limit	Exceedance	Limit	Exceedance	Limit	Exceedance	Limit	Exceedance	Limit	Exceedance	Limit	Exceedance
SW-01	Carson River, Woodfords	55		1.0		0.13		0.02		0.15		0.02		2.0	✓	0.02		20	✓
SW-06	Carson River, Stateline	70		2.5		0.22		0.03		0.25		0.03	✓	2.0	✓	0.02		20	✓
SW-02	Indian Creek, Upper	100		6.0						0.30		0.03		8.0		0.25		30	
SW-03	Indian Creek, Mid	100	✓	6.0						0.30	✓	0.03	✓	8.0		0.25		30	
SW-04	Indian Creek, Lower	100		6.0						0.30	✓	0.03	✓	8.0		0.25		30	
SW-10	Indian Creek, Stateline	100		6.0						0.30		0.03		8.0		0.25		30	

The Blue Green Algae tests for August, September, and October have not yet been completed. The results will be sent as soon as they are done. The Blue Green Algae tests for June and July and the soils tests results for September are included.

Certification

I hereby certify that the enclosed monitoring report was prepared under my direct supervision and that I am a duly Registered Engineer under the laws of the State of California.

Sincerely,



Richard Solbrig,
Assistant Manager/Engineer

Enclosures:

1.

October Monthly Report	Pages
Wastewater Treatment plant	2
Permit Compliance Record	1
Export pipeline inspection	0
Sample site locations	2
Monitoring wells (ERB) and Heavenly Valley Creek (HVC)	1
Alpine County Surfacewaters, Groundwaters and HPR	4
Indian Creek Reservoir	1
Blue Green Algae, June and July	1
September Soils	1
Total number of pages:	13

cc: Calif. Dept. of Health Services, ODW - Jess Morehouse
El Dorado Co. Dept. of Environmental Health - Virginia Huber
Nevada Division of Environmental Protection - Wendel McCurry
Alpine County Health Department - Dr. Richard Botto
Alpine County Health Department - Jim Goodloe
Alpine County Board of Supervisors
Desert Research Group (Alpine County Consultants) - Bill Albright
STPUD Board of Directors
STPUD General Manager / District Engineer - Robert G. Baer
STPUD Manager of Operations - Ross Johnson
STPUD Operations Chief Plant Operator - Jeff Lee
STPUD Laboratory Director - Terry Powers
STPUD Manager of Alpine County Operations - Hal Bird

SOUTH TAHOE PUBLIC UTILITY DISTRICT
WASTEWATER TREATMENT PLANT MONTHLY REPORT

11/08/99
10:10:10

OCTOBER 1999

Date	Day	2-Hr Peak		FLOW MGD		Pond Inf	PRECIP		D.O. mg/L Fin	COD mg/L		BOD mg/L		SS mg/L	
		Inf	Inf	Eff	Pond Return		Inch	Type		Raw	Fin	Raw	Fin	Raw	Fin
10/01/99	Fri	4.19	5.8	4.09					7.25	421					
10/02/99	Sat	4.73	7.4	4.55					3.36	404	32.8	187	6.2	142	2.5
10/03/99	Sun	4.73	6.3	4.32					4.96	373					
10/04/99	Mon	4.03	5.7	3.90					3.66	338					
10/05/99	Tue	4.19	5.0	3.80					4.58	338					
10/06/99	Wed	4.28	5.6	4.08					4.44	396	38.5	177	5.9	165	2.7
10/07/99	Thu	4.02	5.5	3.67					4.13	377					
10/08/99	Fri	4.30	5.8	4.27					3.56	396					
10/09/99	Sat	4.83	6.8	4.48					4.03	434	37.4			162	2.4
10/10/99	Sun	4.80	7.1	4.49					4.09	373					
10/11/99	Mon	4.34	5.4	4.19					4.35	435					
10/12/99	Tue	4.04	5.4	3.60					4.17	389					
10/13/99	Wed	4.10	5.4	4.09					4.81	573	38.8	203	5.3	222	3.5
10/14/99	Thu	4.23	5.8	4.10					4.81	426					
10/15/99	Fri	4.20	6.1	4.13						432					
10/16/99	Sat	4.70	7.0	4.29					4.69	423	14.8	170	6.5	138	3.8
10/17/99	Sun	4.57	6.9	4.35					4.59	366					
10/18/99	Mon	4.14	5.0	3.75					7.14	354					
10/19/99	Tue	4.04	5.3	3.58					3.41	409					
10/20/99	Wed	4.19	5.8	4.24					3.21	474	32.2	182	5.3	197	1.8
10/21/99	Thu	4.22	6.0	4.05					4.06	363					
10/22/99	Fri	4.12	6.6	3.51					3.53	347					
10/23/99	Sat	4.65	6.5	4.61					3.43	538	34.6			259	2.4
10/24/99	Sun	4.53	6.8	4.44					2.75	571					
10/25/99	Mon	4.18	5.2	4.31					3.29	561					
10/26/99	Tue	4.15	5.6	3.74					4.34	414					
10/27/99	Wed	4.33	6.0	4.09			1.12	Rain	4.54	419	39.2	184	6.7	176	3.6
10/28/99	Thu	4.19	5.3	4.57					4.23	407					
10/29/99	Fri	4.18	5.8	4.05					4.38	412					
10/30/99	Sat	4.28	6.0	3.91					4.04	423	29.5	159	6.0	120	3.6
10/31/99	Sun	4.23	6.1	3.99					5.67	416					
PERMIT MAX		7.7									300		45		60
PERMIT MIN											60		30		30
PERMIT AVE															
TOTAL		133.71	185.0	127.24			1.12		129.50	13002	297.8	1262	41.9	1581	26.2
MAXIMUM		4.83	7.4	4.61			1.12		7.25	573	39.2	203	6.7	259	3.8
MINIMUM		4.02	5.0	3.51			1.12		2.75	338	14.8	159	5.3	120	1.8
AVERAGE		4.31	6.0	4.10			1.12		4.32	419	33.1	180	6.0	176	2.9
# Tests		31	31	31	0	0	1		30	31	9	7	7	9	9

Effluent
BOD ✓
COD ✓
SS
Set Solids
Turb
MBAS

**SOUTH TAHOE PUBLIC UTILITY DISTRICT
WASTEWATER TREATMENT PLANT MONTHLY REPORT**

11/02/99

10:10:10

OCTOBER 1999

Date	Day	SETTLEABLE SOLIDS mL/L		MBAS mg/L		pH Units		TURBIDITY NTU		Cl2 mg/L	FINAL COLIFORMS MPN/100 mL			TDS mg/L		ALKALINITY mg/L	
		Raw	Fin	Raw	Fin	Raw	Fin	Raw	Fin		Fin	Total	7day-	Median	Raw	Fin	Raw
10/01/99	Fri	10.0	< 0.1			7.54	7.32	2.40	4.07	<	2	<	2			161	127
10/02/99	Sat	12.0	< 0.1			7.50	7.62	2.50	3.47	<	2	<	2			167	134
10/03/99	Sun	12.0	< 0.1			7.56	7.38	2.85	3.08	<	2	<	2			168	134
10/04/99	Mon	10.0	< 0.1			7.52	7.39	2.50	3.37	<	23	<	2			158	132
10/05/99	Tue	10.0	< 0.1	3.57	0.063	7.62	7.63	2.15	4.17	<	2	<	2			160	130
10/06/99	Wed	13.0	< 0.1			7.54	7.52	2.20	3.37	<	2	<	2	249	230	158	134
10/07/99	Thu	10.0	< 0.1			7.56	7.58	2.10	3.67	<	2	<	2			156	132
10/08/99	Fri	10.0	< 0.1			7.57	7.44	1.90	3.67	<	4	<	2			159	130
10/09/99	Sat	12.0	< 0.1			7.54	7.68	2.10	3.87	<	2	<	2			165	132
10/10/99	Sun	12.0	< 0.1			7.55	7.60	2.10	3.67	<	2	<	2			173	140
10/11/99	Mon	11.0	< 0.1			7.52	7.64	2.20	3.57	<	2	<	2			163	137
10/12/99	Tue	11.0	< 0.1			7.75	7.49	2.30	3.97	<	2	<	2			157	131
10/13/99	Wed	18.0	< 0.1			7.51	7.52	2.40		<		<		240	228	161	130
10/14/99	Thu	12.5	< 0.1			7.73	7.48	2.20	7.05	<	2	<	2			154	118
10/15/99	Fri	12.0	< 0.1			7.72	7.50	2.00	3.97	<	4	<	2			156	124
10/16/99	Sat	13.5	< 0.1			7.66	7.62	2.40	2.88	<	2	<	2			159	132
10/17/99	Sun	13.0	< 0.1			7.52	7.43	2.50	3.18	<	2	<	2			163	136
10/18/99	Mon	11.0	< 0.1			7.55	7.42	2.30	4.57	<	2	<	2			161	130
10/19/99	Tue	11.0	< 0.1			7.52	7.46	2.10	4.76	<	2	<	2			161	127
10/20/99	Wed	12.0	< 0.1			7.55	7.45	2.00	4.07	<	4	<	2	239	222	152	127
10/21/99	Thu	10.0	< 0.1			7.45	7.40	2.70	4.76	<	2	<	2			155	126
10/22/99	Fri	11.0	< 0.1			7.53	7.54	2.20	4.37	<	2	<	2			157	126
10/23/99	Sat	18.0	< 0.1			7.40	7.53	2.40	3.57	<	2	<	2			168	133
10/24/99	Sun	20.0	< 0.1			7.54	7.36	3.00	3.77	<	2	<	2			164	140
10/25/99	Mon	19.0	< 0.1			7.44	7.41	2.75	4.07	<	2	<	2			160	132
10/26/99	Tue	12.0	< 0.1			7.46	7.39	2.70	3.97	<	2	<	2			155	132
10/27/99	Wed	11.5	< 0.1			7.49	7.60	2.40	4.07	<	2	<	2	234	226	145	128
10/28/99	Thu	10.0	< 0.1			7.73	7.47	2.30	3.28	<	2	<	2			141	124
10/29/99	Fri	10.0	< 0.1			7.50	7.30	2.30	3.97	<	2	<	2			151	126
10/30/99	Sat	12.0	< 0.1			7.46	7.62	2.30	4.07	<	2	<	2			157	128
10/31/99	Sun	12.0	< 0.1			7.53	7.49	2.20	3.97	<	2	<	2			164	136
PERMIT MAX			0.1		2.0		8.5	20			240		23				
PERMIT MIN							6.5										
PERMIT AVE					1.0			10									
TOTAL		381.5	3.1	3.57	0.063	234.06	232.28	72.45	118.30		87		60	962	906	4929	4048
MAXIMUM		20.0	0.1	3.57	0.063	7.75	7.68	3.00	7.05		23		2	249	230	173	140
MINIMUM		10.0	0	3.57	0.063	7.40	7.30	1.90	2.88		2		2	234	222	141	118
AVERAGE		12.3	0.1	3.57	0.063	7.55	7.49	2.34	3.94		3		2	241	227	159	131
# Tests		31	31	1	1	31	31	31	30		30		30	4	4	31	31

SAMPLE LOCATIONS

TAHOE BASIN MONITORING WELLS

<u>Site</u>	<u>Location</u>
ERB	Emergency Retention Basin
CONTROL	North of Post Office
MW02-25, -50	Emergency Retention Basin, S side
MW03-25, -50	Emergency Retention Basin, S side
MW04-25, -50	Emergency Retention Basin, W side
MW07-25, -50	Emergency Retention Basin, N side
MW08-25, -50	Pond #1, SW corner
MW11	S.E. corner of wastewater treatment plant grounds
MW12	South of Emergency Pump Building, for buried sludge
MW13	Pond 2, along Heavenly Valley Creek, for buried sludge

HEAVENLY VALLEY CREEK

HVC-1	At Pioneer Trail
HVC-2	250 ft upstream of Pond #2
HVC-3	25 ft downstream of Johnson Blvd.
HVC-4	Effluent of drain pipe from Lower Shop area
HVC-5	Effluent of drainage pipe along Johnson Blvd, 10 feet upstream of Johnson Blvd.

ALPINE COUNTY MONITORING WELLS

<u>Site</u>	<u>Location</u>
ACMW-01AW	Below main dam at Harvey Place Reservoir
ACMW-01BE	Below auxiliary dam at Harvey Place Reservoir
ACMW-02, N&S	On dam access road at Diamond Valley Road
ACMW-03	Bruns ranch, east side of Highway 88
ACMW-04W	Gansberg ranch, west side of Highway 88
ACMW-05	Dressler ranch
ACMW-06, N&S	Celio ranch, on Diamond Valley Road

ALPINE SOILS

<u>Site</u>	<u>Ranch</u>
S2	Celio
S3	Hall
S4	Gansberg
S5	Gansberg
S6	Neddenriep
S7	Bruns
S8	Dressler

ALPINE GROUNDWATERS

<u>Site</u>	<u>Homeowner</u>
GW-01	Sagues
GW-03	Smith/Springmeyer
GW-04	Celio
GW-05	Neddenriep
GW-07	Gansberg, Jr.
GW-08	Arant
GW-11	Diamond Valley School
GW-14	Sierra Pines Store

ALPINE SURFACEWATERS

<u>Site</u>	<u>Location</u>
SW-01	Carson River, Woodfords
SW-02	Indian Creek, @ HWY 89
SW-03	Indian Creek, @ upper bridge
SW-04	Indian Creek, @ lower bridge
SW-05	Carson River, Paynesville
SW-06	Carson River, Stateline
SW-07	Fredericksberg Ditch, Stateline
SW-08	Irrigation Ditch along Carson River Road
SW-09	Carson River, Dressler Lane
SW-10	Indian Creek, @ Smith-Springmeyer Ranch

TAHOE BASIN MONITORING

10/29/99

Site	Date	ID	Location	Depth msl	Temp C	pH	EC umhos	Cl mg/L	COD mg/L	NO3-N mg/L	Comment
Buried Sludge Monitoring											
MW11	10/26/99	991026-16	Sludge Pond	6269.4	7.4	6.24	84	1.4	< 5.0	0.081	
MW12	10/26/99	991026-17	Sludge Pond	6265.6	8.4	5.94	152	2.1	8.3	0.172	
MW13	10/26/99	991026-18	Sludge Pond	6257.1	7.5	6.77	462	1.7	11.1	0.286	
ERB Monitoring											
CONTROL	10/26/99	991026-09	At Post Office	6284.7	8.8	6.35	177	7.1	12.4	2.320	
MW01-50	10/26/99	991026-10	SW corner of ERB	6272.0	7.5	6.94	175	2.8	< 5.0	0.610	
MW02-50	10/26/99	991026-11	Black Bart side of ERB	6269.0	8.5	6.33	455	42.8	< 5.0	9.530	
MW03-50	10/26/99	991026-12	Black Bart side of ERB	6269.0	9.1	6.00	371	33.0	6.0	2.820	
MW04-50	10/26/99	991026-13	Hank Monk side of ERB	6269.1	7.9	5.65	75	4.7	< 5.0	0.071	
MW07-50	10/26/99	991026-14	North side of ERB	6279.9	7.6	6.18	273	26.5	< 5.0	0.536	
Heavenly Valley Creek											
HVC-1	10/12/99	991012-18	Downstream of Pioneer		7.4	7.50	42	0.5	< 5.0	0.017	
HVC-2	10/12/99	991012-19	250' upstream of Pond #2		10.4	7.24	44	0.6	< 5.0	< 0.010	
HVC-3	10/12/99	991012-20	25' downstream of Johnson Blvd		9.9	7.31	44	0.7	< 5.0	< 0.010	
HVC-4	10/12/99	91012-HVC	Effluent of drain from Lower Sho								
HVC-5	10/12/99	91012-HVC	Effluent of drainage pipe along J								
HVC-5	10/27/99	91027-HVC	Effluent of drainage pipe along J								Dry; Rain began at 1800
HVC-5	10/28/99	91028-HVC	Effluent of drainage pipe along J								Dry; no evidence of discharge
Treatment Plant Monitoring											
MW08-25	10/26/99	991026-15	SW side of Pond #1	6247.0	10.6	6.34	1072	53.4	83.6	< 0.010	

ALPINE COUNTY MONITORING

11/03/99

Site	Date	ID	Location	Temp C	pH	EC umhos	DO mg/L	Alk mg/L	TDS mg/L	SS mg/L	Turb NTU	Cl mg/L	SO4 mg/L
Alpine Monitoring Wells													
ACMW-01AW	10/19/99	991019-06	Main Dam	13.0	6.62	102		42	77			3.1	
ACMW-01BE	10/19/99	991019-07	Secondary Dam	10.0	6.37	102		48	82			0.8	
ACMW-02N	10/19/99	991019-08	Access Gate	13.0	6.68	132		58	87			2.9	
ACMW-02S	10/19/99	991019-09	Access Gate	14.4	6.40	100		49	74			1.1	
ACMW-04W	10/19/99	991019-10	Gansberg	11.8	5.58	191		53	131			12.3	
ACMW-06N	10/19/99	991019-11	Celio	11.7	7.01	698		261	421			52.4	
ACMW-06S	10/19/99	991019-12	Celio	11.8	6.91	816		297	504			79.0	
Groundwaters													
GW-03	10/12/99	991012-10	Smith/Springmeyer	15.1	7.55	307		125	219			1.5	
GW-04	10/12/99	991012-11	Celio	14.4	7.82	263		114	196			3.0	
GW-05	10/12/99	991012-12	Neddenriep	12.1	6.07	272		61	172			25.7	
GW-07	10/12/99	991012-13	Gansberg	11.4	6.43	134		53	95			2.3	
GW-08	10/12/99	991012-14	Arant	13.4	6.49	236		50	149			23.1	
GW-11	10/12/99	991012-15	Diamond Val. School	16.7	6.33	99		46	76			0.9	
GW-14	10/12/99	991012-16	Sierra Pines	11.9	6.09	112		51	92			1.1	
Reservoirs													
HPR	10/05/99	991005-13	Harvey Place Reservoir	15.1	7.26	498	4.30	122	235	8.26	5.3	53.9	20.6
Surfacewaters: Carson R													
SW-01	10/05/99	991005-06	Carson R Woodfords	8.9	7.13	74	9.00	36	53	1.10	.28	0.7	2.4
SW-05	10/05/99	991005-10	Carson R Paynesville	10.1	7.40	82	8.10	40	62	1.86	.53	1.1	2.6
SW-06	10/05/99	991005-11	Carson R Stateline	11.1	7.38	89	8.90	41	69	1.94	.45	1.3	2.7
SW-08	10/05/99	991005-12	Irrigation Ditch	15.5	7.22	123	7.60	56	95	19.90	3.8	1.4	4.5
Surfacewaters: Indian Cr													
SW-02	10/05/99	991005-07	Indian Cr Upper	8.9	7.36	124	7.40	65	91	1.26	1.9	0.8	3.1
SW-03	10/05/99	991005-08	Indian Cr Mid	11.7	6.96	165	7.70	81	118	4.54	6.5	3.2	4.8
SW-04	10/05/99	991005-09	Indian Cr Lower	10.0	7.29	131	7.60	64	94	4.68	4.4	2.0	3.6

ALPINE COUNTY MONITORING

11/03/99

Site	Date	TotalP mg/L	PO4-P mg/L	TKN mg/L	NH3-N mg/L	NO2-N mg/L	NO3-N mg/L	Total N mg/L	MBAS mg/L
Alpine Monitoring Wells									
ACMW-01A	10/19/99	0.032	<	0.100	< 0.020	< 0.010	0.150	0.260	
ACMW-01B	10/19/99	0.028	<	0.100	< 0.020	< 0.010	0.187	0.297	
ACMW-02N	10/19/99	0.022	<	0.100	< 0.020	< 0.010	0.138	0.248	
ACMW-02S	10/19/99	0.022	<	0.100	< 0.020	< 0.010	< 0.010	0.120	
ACMW-04W	10/19/99	0.020	<	0.100	< 0.020	< 0.010	2.340	2.450	
ACMW-06N	10/19/99	0.284		0.124	0.056	< 0.010	< 0.010	0.144	
ACMW-06S	10/19/99	0.041		0.129	< 0.020	< 0.010	0.075	0.214	
Groundwaters									
GW-03	10/12/99	0.036	<	0.100	< 0.020	< 0.010	0.659	0.769	
GW-04	10/12/99	0.056	<	0.100	< 0.020	< 0.010	0.756	0.866	
GW-05	10/12/99	0.036	<	0.100	< 0.020	< 0.010	3.060	3.170	
GW-07	10/12/99	0.086	<	0.100	< 0.020	< 0.010	1.480	1.590	
GW-08	10/12/99	0.052	<	0.100	< 0.020	< 0.010	4.430	4.540	
GW-11	10/12/99	0.028	<	0.100	< 0.020	< 0.010	0.361	0.471	
GW-14	10/12/99	0.057	<	0.100	< 0.020	< 0.010	0.421	0.531	
Reservoirs									
HPR	10/05/99	2.450	2.250	16.700	19.000	0.989	0.540	18.229	
Surfacewaters: Carson R									
SW-01	10/05/99	0.018	< 0.010	0.120	< 0.020	< 0.010	< 0.010	0.140	
SW-05	10/05/99	0.032	0.016	0.231	< 0.020	< 0.010	0.022	0.263	
SW-06	10/05/99	0.038	< 0.010	0.194	< 0.020	< 0.010	0.012	0.216	
SW-08	10/05/99	0.106	0.026	0.475	< 0.020	< 0.010	0.334	0.819	
Surfacewaters: Indian Cr									
SW-02	10/05/99	0.026	0.012	0.103	< 0.020	< 0.010	< 0.010	0.123	
SW-03	10/05/99	0.122	0.066	0.305	< 0.020	< 0.010	0.013	0.328	
SW-04	10/05/99	0.087	0.040	0.252	< 0.020	< 0.010	0.015	0.277	

ALPINE COUNTY MONITORING

11/03/99

Site	Date	COD mg/L	BOD mg/L	O & G mg/L	Boron mg/L	Ca mg/L	Mg mg/L	Na mg/L	K mg/L	SAR	Exch Na %	Hardness mg/L	Water Level MSL or Ft
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Alpine Monitoring Wells

ACMW-01A	10/19/99												5482.3
ACMW-01B	10/19/99												5491.2
ACMW-02N	10/19/99												5458.8
ACMW-02S	10/19/99												5459.5
ACMW-04W	10/19/99												4904.9
ACMW-06N	10/19/99												5215.8
ACMW-06S	10/19/99												5204.5

Groundwaters

GW-03	10/12/99												
GW-04	10/12/99												
GW-05	10/12/99												
GW-07	10/12/99												
GW-08	10/12/99												
GW-11	10/12/99												
GW-14	10/12/99												

Reservoirs

HPR	10/05/99	27	4		0.25	13.7	3.4	46.7	10.8	2.92	62.1		11.5
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Surfacewaters: Carson R

SW-01	10/05/99		1		0.02	7.0	2.0	4.1	1.7	0.35	24.2		
SW-05	10/05/99		1		0.01	7.4	2.2	4.8	2.1	0.40	25.5		
SW-06	10/05/99		1		0.02	7.6	2.4	5.0	2.1	0.40	25.5		
SW-08	10/05/99		1		0.01	10.3	2.7	10.3	2.5	0.74	35.9		

Surfacewaters: Indian Cr

SW-02	10/05/99		1		0.01	12.1	3.1	8.0	2.2	0.53	27.5		
SW-03	10/05/99		1		0.02	14.0	4.3	11.2	2.3	0.67	30.5		
SW-04	10/05/99		1		0.02	11.1	3.7	7.8	1.8	0.52	27.1		

**ALPINE COUNTY
BACTERIOLOGICAL MONITORING**

11/03/99

Alpine Monitoring Wells

Site	Date		Total Coliform MPN/100mL		Fecal Coliform MPN/100mL		Fecal Streptococci MPN/100mLL
ACMW-01A	10/19/99		2.2		1.1		
ACMW-01B	10/19/99	<	1.1	<	1.1		
ACMW-02N	10/19/99		1.1	<	1.1		
ACMW-02S	10/19/99		3.6	<	1.1		
ACMW-04W	10/19/99		6.9	<	1.1		
ACMW-06N	10/19/99		9.2	<	1.1		
ACMW-06S	10/19/99	>	23	<	1.1		

Groundwaters

Site	Date		Total Coliform MPN/100mL		Fecal Coliform MPN/100mL		Fecal Streptococci MPN/100mLL
GW-03	10/12/99	<	1.1	<	1.1		
GW-04	10/12/99	<	1.1	<	1.1		
GW-05	10/12/99		2.2	<	1.1		
GW-07	10/12/99		1.1	<	1.1		
GW-08	10/12/99		6.9	<	1.1		
GW-11	10/12/99	<	1.1	<	1.1		
GW-14	10/12/99	<	1.1	<	1.1		

Reservoirs

Site	Date		Total Coliform MPN/100mL		Fecal Coliform MPN/100mL		Fecal Streptococci MPN/100mLL
HPR	10/05/99		110		17		8

Surfacewaters: Carson R

Site	Date		Total Coliform MPN/100mL		Fecal Coliform MPN/100mL		Fecal Streptococci MPN/100mLL
SW-01	10/05/99	<	30	<	30		
SW-05	10/05/99		4600		90		
SW-06	10/05/99		2400		230		
SW-08	10/05/99		4600		1500		

Surfacewaters: Indian Cr

Site	Date		Total Coliform MPN/100mL		Fecal Coliform MPN/100mL		Fecal Streptococci MPN/100mLL
SW-02	10/05/99		270	<	30		
SW-03	10/05/99		11000		4600		
SW-04	10/05/99		430		430		

Indian Creek Reservoir

ID: 991005-14

Date: 10/05/99
Hour: 09:53

Sampler: Arce and Chernago

Minerals

Temp, C	14.3	SS, mg/L	32.4	Calcium, mg/L	11
pH	8.05	Turbidity, NTU	9	Magnesium, mg/L	2.27
EC, umhos/cm	106	Alkalinity, mg/L	50.1	Potassium, mg/L	2.82
DO, mg/L	7.70	Sulfate, mg/L	5.12	Sodium, mg/L	7.26
Chloride, mg/L	1.58	Boron:	.04	SAR, Calculated	.52
TDS, mg/L	85			Exch Na, %	28.1

Nutrients

TKN, mg/L	1.320	NO ₂ -N, mg/L	< 0.010	Total P, mg/L	0.026
NH ₃ -N, mg/L	0.129	NO ₃ -N, mg/L	< 0.010	PO ₄ -P, mg/L	< 0.010
FreeNH ₃ -N:	< 0.010	Total N, mg/L	1.340		(Total P and PO ₄ -P filtered through 0.45um filter)

Organics

BOD, mg/L	4.15
COD, mg/L	32.5
MBAS, mg/L	0.012

Site Conditions

Water Level, ft		Algae:	Yes
Air Temp:	16.0	Weeds:	Yes
Ice%:	0	Floaters:	No
WaterColor:	Green		

Microbiological

Total Coliform:	50
Fecal Coliform:	13
Fecal Strep:	12

(Results reported as MPN/100 mL)

ALPINE COUNTY SOILS

10/30/99

Site	Date	Location	Type	pH	EC mmho	%Sat	TKN mg/Kg	NO3-N mg/L	Total P mg/Kg	Exch P mg/L
S2a	09/02/99	Celio	KT	8.01	1.74	57.2	1,990	4.1	850	7.0
S3a	09/02/99	Hall	SMB	6.19	0.45	37.8	1,230	1.2	990	10.2
S4a	09/02/99	Gansberg	DI	6.41	0.67	35.2	1,520	4.9	530	9.6
S5a	09/02/99	Gansberg	HRB	6.29	0.38	30.0	1,010	6.4	810	14.7
S6a	09/02/99	Neddenriep	DWB	6.45	0.42	40.4	1,410	3.8	690	39.3
S7a	09/02/99	Bruns	JaC	6.14	0.16	38.8	1,580		820	5.2
S8a	09/02/99	Dressler	SOD	6.32	0.16	16.0	236	2.5	340	8.2

Site	Date	Cl mg/L	SO4 mg/Kg	CEC meq/100g	Cu mg/Kg	Mo mg/Kg	Ca mg/L	Mg mg/L	Na mg/L	SAR	% Na	
S2a	09/02/99		48	28.6	14.0	<	1.0	64.4	34.9	208.0	5.18	5.9
S3a	09/02/99		12	19.2	20.0	<	1.0	51.0	11.2	36.6	1.21	< 1.0
S4a	09/02/99		6	17.2	34.0	<	1.0	67.7	10.6	68.4	2.04	1.7
S5a	09/02/99		2	12.6	24.0	<	1.0	71.9	6.4	35.3	1.07	< 1.0
S6a	09/02/99		7	16.2	31.0	<	1.0	13.4	2.4	65.1	4.30	4.7
S7a	09/02/99		3	14.6	35.0	<	1.0	18.9	3.7	10.9	0.60	< 1.0
S8a	09/02/99		1	8.6	14.0	<	1.0	23.4	4.7	9.6	0.47	< 1.0

**ALPINE COUNTY
BLUE GREEN ALGAE**

ID#	Site	Location	Date	Colonies #	Colony # Cells	Filaments #	Filaments # Cells	Filaments #	Filament Length	Single Cells, #
June, 1999										
990608-10	SW-01	Carson R Woodfords	06/08/99	0	0	0	0	0	0	0
990608-11	SW-02	Indian Cr Upper	06/08/99	0	0	0	0	0	0	0
990608-12	SW-03	Indian Cr Mid	06/08/99	0	0	0	0	0	0	0
990608-13	SW-04	Indian Cr Lower	06/08/99	0	0	0	0	0	0	0
990608-14	SW-05	Carson R Paynesville	06/08/99	0	0	0	0	0	0	0
990608-15	SW-06	Carson R Stateline	06/08/99	0	0	0	0	0	0	0
990608-16	SW-08	Irrigation Ditch	06/08/99	0	0	0	0	0	0	0
990608-17	HPR	Harvey Place Reservoir	06/08/99	0	0	0	0	0	0	0
990608-18	ICR	Indian Creek Reservoir	06/08/99	0	0	0	0	0	0	0
July, 1999										
990713-10	SW-01	Carson R Woodfords	07/13/99	0	0	0	0	0	0	0
990713-11	SW-02	Indian Cr Upper	07/13/99	0	0	0	0	0	0	0
990713-12	SW-03	Indian Cr Mid	07/13/99	0	0	0	0	0	0	0
990713-13	SW-04	Indian Cr Lower	07/13/99	0	0	0	0	0	0	0
990713-14	SW-05	Carson R Paynesville	07/13/99	0	0	0	0	0	0	0
990713-15	SW-06	Carson R Stateline	07/13/99	0	0	0	0	0	0	0
990713-16	SW-07	Fredericksburg Ditch	07/13/99	0	0	0	0	0	0	0
990713-17	SW-08	Irrigation Ditch	07/13/99	0	0	0	0	0	0	0
990713-18	HPR	Harvey Place Reservoir	07/13/99	0	0	0	0	0	0	0
990713-19	ICR	Indian Creek Reservoir	07/13/99	35	10,600	35	1,410	0	0	0

Wastewater Reclamation Permit Compliance

The District is monitoring under the revisions approved by the Regional Board (letter dated November 30, 1998). The revisions provide for: quarterly monitoring of soils; discontinue testing for Oil & Grease on surfacewaters; and discontinue surfacewater monitoring, except SW-01 and SW-05, during the months of December, January and February. The West Fork, Carson River Water Quality Objectives and East Fork, Carson River limitations were exceeded as follows (a ✓ indicates objective exceeded):

Site	Location	TDS		Cl ⁻		TKN		NO ₃ -N		Total N		Total P		SO ₄		Boron		Exch Na %	
		Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence
SW-01	Carson River, Woodfords	55		1.0	✓	0.13	✓	0.02	✓	0.15	✓	0.02		2.0	✓	0.02		20	NA
SW-06	Carson River, Stateline	70		2.5		0.22		0.03	✓	0.25		0.03		2.0	✓	0.02		20	NA
SW-02	Indian Creek, Upper	100		6.0						0.30		0.03		8.0		0.25		30	NA
SW-03	Indian Creek, Mid	100	✓	6.0						0.30	✓	0.03	✓	8.0		0.25		30	NA
SW-04	Indian Creek, Lower	100	✓	6.0						0.30	✓	0.03	✓	8.0		0.25		30	NA
SW-10	Indian Creek, Stateline	100		6.0						0.30		0.03		8.0		0.25		30	NA

The Blue Green Algae tests for June, July, August and September have not yet been completed. The results will be sent as soon as they are done. The soils tests results for June are included.

Certification

I hereby certify that the enclosed monitoring report was prepared under my direct supervision and that I am a duly Registered Engineer under the laws of the State of California.

Sincerely,



Richard Solbrig,
Assistant Manager/Engineer

Enclosures:

1.

September Monthly Report	Pages
Wastewater Treatment plant	2
Permit Compliance Record	1
Export pipeline inspection	0
Sample site locations	2
Monitoring wells (ERB) and Heavenly Valley Creek (HVC)	1
Alpine County Surfacewaters, Groundwaters and HPR	4
Indian Creek Reservoir	1
June Soils	1
Total number of pages:	12

cc: Calif. Dept. of Health Services, ODW - Jess Morehouse
El Dorado Co. Dept. of Environmental Health - Virginia Huber
Nevada Division of Environmental Protection - Wendel McCurry
Alpine County Health Department - Dr. Richard Botto
Alpine County Health Department - Jim Goodloe
Alpine County Board of Supervisors
Desert Research Group (Alpine County Consultants) - Bill Albright
STPUD Board of Directors
STPUD General Manager / District Engineer - Robert G. Baer
STPUD Manager of Operations - Ross Johnson
STPUD Operations Chief Plant Operator - Jeff Lee
STPUD Laboratory Director - Terry Powers
STPUD Manager of Alpine County Operations - Hal Bird

**SOUTH TAHOE PUBLIC UTILITY DISTRICT
WASTEWATER TREATMENT PLANT MONTHLY REPORT**

10/06/99
09:26:40

SEPTEMBER 1999

Date	Day	FLOW MGD			Pond Inf	PRECIP Inch	Type	D.O. mg/L Fin	COD mg/L		BOD mg/L		SS mg/L	
		2-Hr Peak Inf	2-Hr Peak Inf	Eff					Pond Return	Raw	Fin	Raw	Fin	Raw
09/01/99	Wed	3.99	6.4	4.06				4.20	407	30.8	178	5.0	145	1.4
09/02/99	Thu	4.00	6.0	4.03				3.99	375					
09/03/99	Fri	4.34	6.0	4.72				5.25	428					
09/04/99	Sat	5.20	7.8	5.28				4.38	448	41.4	186	10.0	224	2.5
09/05/99	Sun	5.41	7.3	5.44				3.75	451					
09/06/99	Mon	4.88	8.0	4.90				5.18	419					
09/07/99	Tue	4.13	5.3	3.88				3.95	405					
09/08/99	Wed	4.02	5.2	4.52				4.19	383	36.6	164	3.5	132	1.3
09/09/99	Thu	4.12	6.5	3.88		0.01	Rain	4.90	393					
09/10/99	Fri	4.26	5.8	4.32		0.01	Rain	5.30	370					
09/11/99	Sat	4.65	5.8	4.85				4.00	426	26.9	199	4.6	187	1.7
09/12/99	Sun	4.50	6.8	4.19				4.52	405					
09/13/99	Mon	4.15	5.2	4.44				3.81	412					
09/14/99	Tue	4.04	5.5	4.16				4.47	451					
09/15/99	Wed	4.10	6.0	4.16				4.63	468	31.7	193	4.7	178	1.4
09/16/99	Thu	3.92	5.8	4.10				4.65	324					
09/17/99	Fri	4.33	5.6	3.93				4.70	370					
09/18/99	Sat	4.44	7.0	4.78		0.07	Rain	7.03	409	33.4	181	5.3	148	1.4
09/19/99	Sun	4.57	6.3	4.52				3.79	432					
09/20/99	Mon	4.06	6.0	3.86				4.26	400					
09/21/99	Tue	4.04	5.8	4.02				4.66	412					
09/22/99	Wed	4.22	5.3	3.96				3.93	438	25.8	176	3.8	172	0.7
09/23/99	Thu	4.57	6.4	4.09				3.58	354					
09/24/99	Fri	4.56	6.3	4.56				3.33	428					
09/25/99	Sat	5.01	7.8	4.55				5.05	429	30.6	188	5.4	138	1.6
09/26/99	Sun	4.77	7.2	4.41				4.70	393					
09/27/99	Mon	4.35	5.3	3.93				4.17	414					
09/28/99	Tue	4.30	6.0	3.95				3.45	428					
09/29/99	Wed	4.36	5.3	4.42				4.80	440				168	2.0
09/30/99	Thu	4.01	6.0	3.54				4.43	382	29.3	179	5.5		
PERMIT MAX		7.7								300		45		60
PERMIT MIN														
PERMIT AVE										60		30		30
TOTAL		131.30	185.7	129.45			0.08	133.05	12294	286.5	1644	47.8	1492	14.0
MAXIMUM		5.41	8.0	5.44			0.07	7.03	468	41.4	199	10.0	224	2.5
MINIMUM		3.92	5.2	3.54			0.01	3.33	324	25.8	164	3.5	132	0.7
AVERAGE		4.38	6.2	4.32			0.03	4.44	410	31.8	183	5.3	166	1.6
# Tests		30	30	30	0	0	3	30	30	9	9	9	9	9

**SOUTH TAHOE PUBLIC UTILITY DISTRICT
WASTEWATER TREATMENT PLANT MONTHLY REPORT**

10/06/99
09:26:40

SEPTEMBER 1999

Date	Day	SETTLEABLE SOLIDS mL/L		MBAS mg/L		pH Units		TURBIDITY NTU		Cl2 mg/L	FINAL COLIFORMS MPN/100 mL			TDS mg/L		ALKALINITY mg/L		
		Raw	Fin	Raw	Fin	Raw	Fin	Fin	Fin		Total	7day	Median	Raw	Fin	Raw	Fin	
09/01/99	Wed	11.0	<	0.1			7.54	7.74	1.70	4.37	<	2		2	253	236	166	127
09/02/99	Thu	10.0	<	0.1			7.82	7.64	1.80	4.76	<	2	<	2			159	125
09/03/99	Fri	12.0	<	0.1			7.59	7.56	2.40	4.47	<	2	<	2			165	138
09/04/99	Sat	13.0	<	0.1			7.53	7.76	3.10	3.18	<	2	<	2			169	148
09/05/99	Sun	15.0	<	0.1			7.54	7.90	4.90	3.67	<	2	<	2			181	153
09/06/99	Mon	13.0	<	0.1			7.52	7.57	2.80	2.38	<	2	<	2			174	152
09/07/99	Tue	10.5	<	0.1			7.74	7.61	2.10	5.96	<	2	<	2			162	137
09/08/99	Wed	10.0	<	0.1			7.51	7.64	1.50	3.67	<	2	<	2	242	227	162	136
09/09/99	Thu	10.5	<	0.1			7.50	7.36	1.90	3.37	<	2	<	2			157	136
09/10/99	Fri	10.0	<	0.1			7.66	7.42	1.60	4.17	<	2	<	2			160	133
09/11/99	Sat	12.5	<	0.1			7.51	7.57	1.80	2.98	<	2	<	2			166	132
09/12/99	Sun	12.0	<	0.1			7.53	7.48	2.00	6.94	<	2	<	2			168	137
09/13/99	Mon	11.5	<	0.1			7.75	7.60	1.80	5.96	<	2	<	2			162	132
09/14/99	Tue	11.0	<	0.1	3.61	0.052	7.56	7.66	1.70	3.28	<	2	<	2			163	130
09/15/99	Wed	14.5	<	0.1			7.62	7.75	1.80	3.28	<	2	<	2	259	226	161	127
09/16/99	Thu	10.0	<	0.1			7.58	7.52	1.90	3.77	<	2	<	2			158	123
09/17/99	Fri	11.0	<	0.1			7.59	7.67	1.80	3.87	<	2	<	2			162	122
09/18/99	Sat	11.5	<	0.1			7.47	7.64	1.70	3.87	<	2	<	2			164	130
09/19/99	Sun	10.5	<	0.1			7.51	7.48	1.60	3.18	<	2	<	2			164	134
09/20/99	Mon	11.0	<	0.1			7.74	7.74	1.30	6.55	<	2	<	2			159	126
09/21/99	Tue	10.5	<	0.1			7.51	7.51	1.40	4.67	<	2	<	2			156	125
09/22/99	Wed	12.0	<	0.1			7.52	7.81	1.30	2.98	<	2	<	2	257	226	156	122
09/23/99	Thu	10.0	<	0.1			7.56	7.20	1.30	3.67	<	2	<	2			156	120
09/24/99	Fri	12.0	<	0.1			7.75	7.34	1.70	5.26	<	2	<	2			161	120
09/25/99	Sat	12.0	<	0.1			7.58	7.60	1.90	2.98	<	2	<	2			166	129
09/26/99	Sun	12.0	<	0.1			7.56	7.30	2.20	3.28	<	2	<	2			151	134
09/27/99	Mon	10.5	<	0.1			7.57	7.34	2.20	4.37	<	2	<	2			163	131
09/28/99	Tue	11.0	<	0.1			7.53	7.42	3.00	4.86	<	4	<	2			160	128
09/29/99	Wed	13.5	<	0.1			7.60	7.41	2.20	3.77	<	2	<	2	264	227	158	125
09/30/99	Thu	11.0	<	0.1			7.53	7.32	2.40	3.28	<	2	<	2			164	124
PERMIT MAX				0.1				2.0		8.5				20			240	23
PERMIT MIN										6.5								
PERMIT AVE								1.0		10								
TOTAL		345.0		3.0	3.61	0.052	227.52	226.56	60.80	122.80		62	60	1275	1142	4873	3936	
MAXIMUM		15.0		0.1	3.61	0.052	7.82	7.90	4.90	6.94		4	2	264	236	181	153	
MINIMUM		10.0		0	3.61	0.052	7.47	7.20	1.30	2.38		2	2	242	226	151	120	
AVERAGE		11.5		0.1	3.61	0.052	7.58	7.55	2.03	4.09		2	2	255	228	162	131	
# Tests		30		30	1	1	30	30	30	30		30	30	5	5	30	30	

SAMPLE LOCATIONS

TAHOE BASIN MONITORING WELLS

<u>Site</u>	<u>Location</u>
ERB	Emergency Retention Basin
CONTROL	North of Post Office
MW02-25, -50	Emergency Retention Basin, S side
MW03-25, -50	Emergency Retention Basin, S side
MW04-25, -50	Emergency Retention Basin, W side
MW07-25, -50	Emergency Retention Basin, N side
MW08-25, -50	Pond #1, SW corner
MW11	S.E. corner of wastewater treatment plant grounds
MW12	South of Emergency Pump Building, for buried sludge
MW13	Pond 2, along Heavenly Valley Creek, for buried sludge

HEAVENLY VALLEY CREEK

HVC-1	At Pioneer Trail
HVC-2	250 ft upstream of Pond #2
HVC-3	25 ft downstream of Johnson Blvd.
HVC-4	Effluent of drain pipe from Lower Shop area
HVC-5	Effluent of drainage pipe along Johnson Blvd, 10 feet upstream of Johnson Blvd.

ALPINE COUNTY MONITORING WELLS

<u>Site</u>	<u>Location</u>
ACMW-01AW	Below main dam at Harvey Place Reservoir
ACMW-01BE	Below auxiliary dam at Harvey Place Reservoir
ACMW-02, N&S	On dam access road at Diamond Valley Road
ACMW-03	Bruns ranch, east side of Highway 88
ACMW-04W	Gansberg ranch, west side of Highway 88
ACMW-05	Dressler ranch
ACMW-06, N&S	Celio ranch, on Diamond Valley Road

ALPINE SOILS

<u>Site</u>	<u>Ranch</u>
S2	Celio
S3	Hall
S4	Gansberg
S5	Gansberg
S6	Neddenriep
S7	Bruns
S8	Dressler

ALPINE GROUNDWATERS

<u>Site</u>	<u>Homeowner</u>
GW-01	Sagues
GW-03	Smith/Springmeyer
GW-04	Celio
GW-05	Neddenriep
GW-07	Gansberg, Jr.
GW-08	Arant
GW-11	Diamond Valley School
GW-14	Sierra Pines Store

ALPINE SURFACEWATERS

<u>Site</u>	<u>Location</u>
SW-01	Carson River, Woodfords
SW-02	Indian Creek, @ HWY 89
SW-03	Indian Creek, @ upper bridge
SW-04	Indian Creek, @ lower bridge
SW-05	Carson River, Paynesville
SW-06	Carson River, Stateline
SW-07	Fredericksberg Ditch, Stateline
SW-08	Irrigation Ditch along Carson River Road
SW-09	Carson River, Dressler Lane
SW-10	Indian Creek, @ Smith-Springmeyer Ranch

TAHOE BASIN MONITORING

10/08/99

Site	Date	ID	Location	Depth msl	Temp C	pH	EC umhos	Cl mg/L	COD mg/L	NO3-N mg/L	Comment
Buried Sludge Monitoring											
MW11	09/28/99	990928-20	Sludge Pond	6269.5	8.9	6.77	77	1.6	10.7	0.100	
MW12	09/28/99	990928-21	Sludge Pond	6265.8	9.9	6.43	153	2.3	< 5.0	0.161	
MW13	09/28/99	990928-22	Sludge Pond	6256.5	9.5	6.74	570	2.1	18.2	0.542	
ERB Monitoring											
CONTROL	09/28/99	990928-13	At Post Office	6284.8	9.4	7.01	182	7.2	12.1	2.510	
MW01.5	09/28/99	990928-14	SW corner of ERB	6269.2	10.3	7.34	172	3.3	< 5.0	0.630	
MW02-50	09/28/99	990928-15	Black Bart side of ERB	6269.0	10.0	6.77	449	42.0	< 5.0	9.860	
MW03-50	09/28/99	990928-16	Black Bart side of ERB	6269.1	9.9	6.40	370	35.0	< 5.0	2.900	
MW04-50	09/28/99	990928-17	Hank Monk side of ERB	6269.3	8.0	6.38	75	5.2	6.6	0.034	
MW07-50	09/28/99	990928-18	North side of ERB	6280.1	7.9	6.62	267	26.0	< 5.0	0.588	
Heavenly Valley Creek											
HVC-1	09/08/99	990908-06	Downstream of Pioneer		7.9	6.70	40	0.5	< 5.0	0.025	
HVC-2	09/08/99	990908-07	250' upstream of Pond #2		6.8	6.65	43	0.7	< 5.0	< 0.010	
HVC-3	09/08/99	990908-08	25' downstream of Johnson Blvd		7.0	6.75	44	0.8	< 5.0	< 0.010	
HVC-4	09/08/99	990908-09	Effluent of drain from Lower Sho		10.4	6.57	149	0.9	< 5.0	0.049	
HVC-5	09/08/99	990908-HVC	Effluent of drainage pipe along J								No Flow
Treatment Plant Monitoring											
MW08-25	09/28/99	990928-19	SW side of Pond #1	6247.0	10.4	6.62	1045	52.5	102.6	< 0.010	

ALPINE COUNTY MONITORING

10/08/99

Site	Date	ID	Location	Temp C	pH	EC umhos	DO mg/L	Alk mg/L	TDS mg/L	SS mg/L	Turb NTU	Cl mg/L	SO4 mg/L
Alpine Monitoring Wells													
ACMW-01AW	09/21/99	990921-09	Main Dam	14.0	6.08	105		42	82			3.3	
ACMW-01BE	09/21/99	990921-10	Secondary Dam	11.4	6.00	103		49	77			0.7	
ACMW-02N	09/21/99	990921-11	Access Gate	12.5	6.31	136		59	89			3.0	
ACMW-02S	09/21/99	990921-12	Access Gate	15.0	6.15	108		51	80			1.1	
ACMW-03	09/21/99	990921-13	HWY 88	14.7	5.90	314		50	189			52.6	
ACMW-04W	09/21/99	990921-14	Gansberg	11.9	5.74	196		51	132			12.3	
ACMW-06N	09/21/99	990921-15	Celio	11.5	6.20	691		261	427			53.5	
ACMW-06S	09/21/99	990921-16	Celio	12.1	6.65	853		299	532			81.5	
Groundwaters													
GW-03	09/07/99	990907-10	Smith/Springmeyer	17.4	7.27	310		129	228			1.7	
GW-04	09/07/99	990907-11	Celio	14.9	7.44	261		116	200			3.0	
GW-05	09/07/99	990907-12	Neddenriep	13.7	6.36	268		62	178			24.9	
GW-07	09/07/99	990907-13	Gansberg	12.7	6.08	135		55	96			1.9	
GW-08	09/07/99	990907-14	Arant	13.9	6.36	228		52	150			20.1	
GW-11	09/07/99	990907-15	Diamond Val. School	17.4	5.99	97		47	80			0.9	
GW-14	09/07/99	990907-16	Sierra Pines	14.1	6.15	111		52	100			1.0	
Reservoirs													
HPR	09/14/99	990914-14	Harvey Place Reservoir	18.6	7.82	469	9.40	114	233	22.80	12	52.3	20.2
Surfacewaters: Carson R													
SW-01	09/14/99	990914-07	Carson R Woodfords	9.8	7.04	71	11.20	33	55	1.08	.33	1.8	2.5
SW-05	09/14/99	990914-11	Carson R Paynesville	12.2	7.47	80	9.80	36	60	2.13	.5	1.0	2.6
SW-06	09/14/99	990914-12	Carson R Staseline	13.6	7.49	81	10.20	37	64	2.96	.45	1.4	2.7
SW-08	09/14/99	990914-13	Irrigation Ditch	17.4	7.39	127	9.00	54	95	12.50	2.5	1.8	4.5
Surfacewaters: Indian Cr													
SW-02	09/14/99	990914-08	Indian Cr Upper	11.9	7.42	133	10.20	66	98	2.10	1.9	1.1	3.5
SW-03	09/14/99	990914-09	Indian Cr Mid	13.9	7.06	188	9.70	88	132	6.37	9.8	5.0	5.0
SW-04	09/14/99	990914-10	Indian Cr Lower	12.3	7.25	136	8.50	65	103	12.40	5.4	2.2	4.1

ALPINE COUNTY MONITORING

10/08/99

Site	Date	TotalP mg/L	PO4-P mg/L	TKN mg/L	NH3-N mg/L	NO2-N mg/L	NO3-N mg/L	Total N mg/L	MBAS mg/L
Alpine Monitoring Wells									
ACMW-01A	09/21/99	0.032		0.115	< 0.020	< 0.010	0.338	0.463	
ACMW-01B	09/21/99	0.022		0.109	< 0.020	< 0.010	0.208	0.327	
ACMW-02N	09/21/99	0.022		0.150	< 0.020	< 0.010	0.154	0.314	
ACMW-02S	09/21/99	0.022		0.186	< 0.020	< 0.010	< 0.010	0.206	
ACMW-03	09/21/99	0.050		0.304	< 0.020	< 0.010	2.760	3.074	
ACMW-04W	09/21/99	0.062		0.299	< 0.020	< 0.010	2.330	2.639	
ACMW-06N	09/21/99	0.306		0.500	0.088	< 0.010	< 0.010	0.520	
ACMW-06S	09/21/99	0.060		0.186	< 0.020	< 0.010	0.085	0.281	
Groundwaters									
GW-03	09/07/99	0.036		0.107	< 0.020	< 0.010	0.696	0.813	
GW-04	09/07/99	0.058	<	0.100	< 0.020	< 0.010	0.798	0.908	
GW-05	09/07/99	0.035		0.159	< 0.020	< 0.010	3.050	3.219	
GW-07	09/07/99	0.082		0.158	< 0.020	< 0.010	1.270	1.438	
GW-08	09/07/99	0.050		0.185	< 0.020	< 0.010	4.360	4.555	
GW-11	09/07/99	0.022		0.143	< 0.020	< 0.010	0.394	0.547	
GW-14	09/07/99	0.066	<	0.100	< 0.020	< 0.010	0.444	0.554	
Reservoirs									
HPR	09/14/99	2.860	2.480	19.600	12.900	0.424	1.230	21.254	0.040
Surfacewaters: Carson R									
SW-01	09/14/99	0.018	< 0.010	0.163	< 0.020	< 0.010	0.030	0.203	
SW-05	09/14/99	0.022	< 0.010	0.189	< 0.020	< 0.010	0.036	0.235	
SW-06	09/14/99	0.032	< 0.010	0.190	< 0.020	< 0.010	0.036	0.236	
SW-08	09/14/99	0.066	0.030	0.359	0.026	< 0.010	0.343	0.712	
Surfacewaters: Indian Cr									
SW-02	09/14/99	0.024	< 0.010	0.244	< 0.020	< 0.010	0.017	0.271	
SW-03	09/14/99	0.216	0.064	0.356	< 0.020	< 0.010	0.029	0.395	
SW-04	09/14/99	0.110	0.046	0.376	< 0.020	< 0.010	0.028	0.414	

**ALPINE COUNTY
BACTERIOLOGICAL MONITORING**

10/08/99

Alpine Monitoring Wells

Site	Date		Total Colliform MPN/100mL		Fecal Colliform MPN/100mL		Fecal Streptococci MPN/100mLL
ACMW-01A	09/21/99	<	1.1	<	1.1		
ACMW-01B	09/21/99	<	1.1	<	1.1		
ACMW-02N	09/21/99		9.2	<	1.1		
ACMW-02S	09/21/99		2.2	<	1.1		
ACMW-03	09/21/99		2.2	<	1.1		
ACMW-04W	09/21/99		5.1	<	1.1		
ACMW-06N	09/21/99		23		16.1		
ACMW-06S	09/21/99	>	23	<	1.1		

Groundwaters

Site	Date		Total Colliform MPN/100mL		Fecal Colliform MPN/100mL		Fecal Streptococci MPN/100mLL
GW-03	09/07/99	<	1.1	<	1.1		
GW-04	09/07/99		16.1	<	1.1		
GW-05	09/07/99		2.2	<	1.1		
GW-07	09/07/99	<	1.1	<	1.1		
GW-08	09/07/99		12	<	1.1		
GW-11	09/07/99	<	1.1	<	1.1		
GW-14	09/07/99	<	1.1	<	1.1		

Reservoirs

Site	Date		Total Colliform MPN/100mL		Fecal Colliform MPN/100mL		Fecal Streptococci MPN/100mLL
HPR	09/14/99		900		2		14

Surfacewaters: Carson R

Site	Date		Total Colliform MPN/100mL		Fecal Colliform MPN/100mL		Fecal Streptococci MPN/100mLL
SW-01	09/14/99		430		30		
SW-05	09/14/99		230		90		
SW-06	09/14/99		1500	<	30		
SW-08	09/14/99		2400		930		

Surfacewaters: Indian Cr

Site	Date		Total Colliform MPN/100mL		Fecal Colliform MPN/100mL		Fecal Streptococci MPN/100mLL
SW-02	09/14/99		2100		30		
SW-03	09/14/99		150		90		
SW-04	09/14/99		750		90		

Indian Creek Reservoir

ID: 990914-15

Date: 09/14/99
Hour: 10:20

Sampler: D Trebotich / D Arce

Minerals

Temp, C	17.5	SS, mg/L	13.4	Calcium, mg/L
pH	8.62	Turbidity, NTU	8.3	Magnesium, mg/L
EC, umhos/cm	104	Alkalinity, mg/L	46.9	Potassium, mg/L
DO, mg/L	9.90	Sulfate, mg/L	3.56	Sodium, mg/L
Chloride, mg/L	1.15	Boron:	.04	SAR, Calculated
TDS, mg/L	80			Exch Na, %

Nutrients

TKN, mg/L	1.360	NO ₂ -N, mg/L	< 0.010	Total P, mg/L	0.028
NH ₃ -N, mg/L	0.021	NO ₃ -N, mg/L	0.017	PO ₄ -P, mg/L	< 0.010
FreeNH ₃ -N:	< 0.010	Total N, mg/L	1.387		(Total P and PO ₄ -P filtered through 0.45um filter)

Organics

BOD, mg/L	4.76
COD, mg/L	25.7
MBAS, mg/L	

Site Conditions

Water Level, ft		Algae:	Yes
Air Temp:	20.8	Weeds:	No
Ice%:	0	Floaters:	No
WaterColor:	Green		

Microbiological

Total Coliform:	50
Fecal Coliform:	< 2
Fecal Strep:	2

(Results reported as MPN/100 mL)

NEL LABORATORIES

CLIENT: RWQCB-Lahontan
 PROJECT ID: STPUD
 PROJECT #: 989-081

CLIENT ID: 9900EN046
 DATE SAMPLED: 10/14/99
 NEL SAMPLE ID: R9910059-01

TEST: Inorganic Non-Metals
 MATRIX: Waste Water

PARAMETER	REPORTING			METHOD	UNITS	ANALYZED
	RESULT	LIMIT	D. F.			
Nitrate/Nitrite as N, Total	0.29	0.05	1	SM 4500-NO3 F	mg/L-N	10/20/99
Orthophosphate, as P	1.8 Hr	0.1	10	SM 4500-P F	mg/L-P	10/22/99
Specific Conductance	493	1.	1	SM 2510 B	µS/cm	10/21/99
TKN (Total Kjeldahl Nitrogen)	17	0.3	1	SM 4500-N C/NH3 E	mg/L-N	10/25/99
Total Dissolved Solids	198	25.	1	SM 2540 C	mg/L	10/21/99
Total Phosphorus	1.6	0.1	10	SM 4500-P E	mg/L-P	10/22/99
Total Suspended Solids	3.60	2.	1	SM 2540 D	mg/L	10/21/99

D.F. - Dilution Factor

ND - Not Detected

This report shall not be reproduced except in full, without the written approval of the laboratory.

Wastewater Reclamation Permit Compliance

The District is monitoring under the revisions approved by the Regional Board (letter dated November 30, 1998). The revisions provide for: quarterly monitoring of soils; discontinue testing for Oil & Grease on surfacewaters; and discontinue surfacewater monitoring, except SW-01 and SW-05, during the months of December, January and February. The West Fork, Carson River Water Quality Objectives and East Fork, Carson River limitations were exceeded as follows (a ✓ indicates objective exceeded):

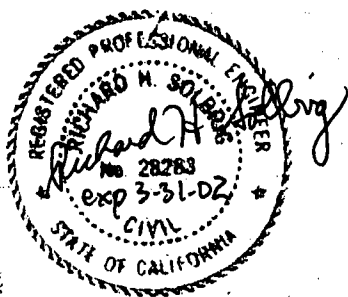
Site	Location	TDS		Cl ⁻		TKN		NO ₃ -N		Total N		Total P		SO ₄		Boron		Exch Na %	
		Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence
SW-01	Carson River, Woodfords	55		1.0		0.13	✓	0.02		0.15	✓	0.02		2.0	✓	0.02		20	
SW-06	Carson River, Stateline	70		2.5		0.22	✓	0.03		0.25	✓	0.03		2.0	✓	0.02		20	
SW-02	Indian Creek, Upper	100		6.0						0.30	✓	0.03	✓	8.0		0.25		30	
SW-03	Indian Creek, Mid	100	✓	6.0						0.30		0.03	✓	8.0		0.25		30	
SW-04	Indian Creek, Lower	100		6.0						0.30	✓	0.03	✓	8.0		0.25		30	
SW-10	Indian Creek, Stateline	100		6.0						0.30		0.03		8.0		0.25		30	

The Blue Green Algae tests for June, July, and August have not yet been completed as well as the soils tests for June and the cations and SAR's for August. The results will be sent as soon as they are done.

Certification

I hereby certify that the enclosed monitoring report was prepared under my direct supervision and that I am a duly Registered Engineer under the laws of the State of California.

Sincerely,



Richard Solbrig,
Assistant Manager/Engineer

Enclosures:

1.

August Monthly Report	Pages
Wastewater Treatment plant	2
Permit Compliance Record	1
Export pipeline inspection	0
Sample site locations	2
Monitoring wells (ERB) and Heavenly Valley Creek (HVC)	1
Alpine County Surfacewaters, Groundwaters and HPR	4
Indian Creek Reservoir.	1
Total number of pages:	11

- cc: Calif. Dept. of Health Services, ODW - Jess Morehouse
El Dorado Co. Dept. of Environmental Health - Virginia Huber
Nevada Division of Environmental Protection - Wendel McCurry
Alpine County Health Department - Dr. Richard Botto
Alpine County Health Department - Jim Goodloe
Alpine County Board of Supervisors
Desert Research Group (Alpine County Consultants) - Bill Albright
STPUD Board of Directors
STPUD General Manager / District Engineer - Robert G. Baer
STPUD Manager of Operations - Ross Johnson
STPUD Operations Chief Plant Operator - Jeff Lee
STPUD Laboratory Director - Terry Powers
STPUD Manager of Alpine County Operations - Hal Bird

**SOUTH TAHOE PUBLIC UTILITY DISTRICT
WASTEWATER TREATMENT PLANT MONTHLY REPORT**

09/09/99
10:25:08

AUGUST 1999

Date	Day	FLOW MGD			Pond Inf	PRECIP Inch	Type	D.O. mg/L Fin	COD mg/L		BOD mg/L		SS mg/L	
		2-Hr Peak Inf	2-Hr Peak Inf	Eff					Pond Return	Raw	Fin	Raw	Fin	Raw
08/01/99	Sun	5.30	8.0	5.04				2.84	426					
08/02/99	Mon	5.13	6.9	5.06				3.13	472					
08/03/99	Tue	5.07	7.2	5.07		0.65	Hail	3.33	485					
08/04/99	Wed	4.99	7.2	5.24		0.05	Rain	2.91	436	43.8	175	5.5	190	2.6
08/05/99	Thu	5.09	7.8	5.04				3.32	472					
08/06/99	Fri	5.42	7.0	5.46		0.04	Rain	4.28	458					
08/07/99	Sat	5.37	9.5	4.86				6.09	484	31.8	177	7.6	181	2.4
08/08/99	Sun	5.63	7.7	5.30				4.69	412					
08/09/99	Mon	5.08	7.5	4.99		0.22	Rain	3.31	414					
08/10/99	Tue	5.04	6.6	4.91		0.14	Rain	3.00	402					
08/11/99	Wed	5.48	7.5	5.04				2.88	376	39.5	158	8.9	120	3.0
08/12/99	Thu	5.42	8.2	5.34				3.22	430					
08/13/99	Fri	5.06	7.6	5.48				3.25	474					
08/14/99	Sat	5.92	8.4	5.18				5.37		44.1		9.2		2.8
08/15/99	Sun	5.26	8.0	5.48				3.39	458					
08/16/99	Mon	4.91	6.4	5.45				2.83	396					
08/17/99	Tue	4.77	6.5	4.43				4.16	449					
08/18/99	Wed	4.93	6.9	5.08				3.32	470	35.4	189	5.4	175	2.5
08/19/99	Thu	4.74	6.9	4.91				3.69	405					
08/20/99	Fri	4.92	7.2	5.00				4.13	439					
08/21/99	Sat	5.60	7.8	5.41				4.25	496	36.6	168	6.6	160	3.3
08/22/99	Sun	4.83	8.2	5.02		0.08	Rain	3.55	437					
08/23/99	Mon	4.67	6.0	4.74				5.97	396					
08/24/99	Tue	4.56	6.5	4.29				5.08	414					
08/25/99	Wed	4.16	6.0	4.37				3.85	420	41.0	186	6.1	169	2.8
08/26/99	Thu	4.67	6.4	4.91		0.12	Rain	4.00	458					
08/27/99	Fri	4.52	6.0	4.61		0.01	Rain	4.97	416					
08/28/99	Sat	4.97	7.2	4.54				4.83	420	32.8	182	6.8	171	3.0
08/29/99	Sun	4.68	7.0	4.82				3.70	419					
08/30/99	Mon	4.19	6.0	4.39				3.80	396					
08/31/99	Tue	4.00	5.6	3.92				4.31	412					
PERMIT MAX		7.7								300		45		60
PERMIT MIN														
PERMIT AVE										60		30		30
TOTAL		154.38	221.7	153.38		1.31		121.45	13042	305.0	1235	55.9	1166	22.5
MAXIMUM		5.92	9.5	5.48		0.65		6.09	496	44.1	189	9.2	190	3.3
MINIMUM		4.00	5.6	3.92		0.01		2.83	376	31.8	158	5.4	120	2.4
AVERAGE		4.98	7.2	4.95		0.16		3.92	435	38.1	176	7.0	167	2.8
# Tests		31	31	31	0	0	8	31	30	8	7	8	7	8

**SOUTH TAHOE PUBLIC UTILITY DISTRICT
WASTEWATER TREATMENT PLANT MONTHLY REPORT**

09/09/99

10:25:08

AUGUST 1999

Date	Day	SETTLEABLE SOLIDS mL/L		MBAS mg/L		pH Units		TURBIDITY	CI2	FINAL COLIFORMS MPN/100 mL			TDS mg/L		ALKALINITY mg/L	
		Raw	Fin	Raw	Fin	Raw	Fin	Fin	mg/L	Total	7day-	Median	Raw	Fin	Raw	Fin
08/01/99	Sun	13.0	< 0.1			7.50	7.56	2.00	2.23	< 2	< 2				174	168
08/02/99	Mon	13.5	< 0.1			7.61	7.72	2.00	0.97	2	2				167	163
08/03/99	Tue	13.0	< 0.1	2.14	0.038	7.52	7.77	2.50	1.34	< 2	< 2				166	148
08/04/99	Wed	13.0	< 0.1			7.42	7.67	2.40	1.69	2	2	239	221		166	142
08/05/99	Thu	12.5	< 0.1			7.69	7.66	2.00	1.29	240	2				164	136
08/06/99	Fri	14.0	< 0.1			7.51	7.42	2.10	0.99	2	2				171	133
08/07/99	Sat	13.5	< 0.1			7.62	7.64	2.10	0.60	11	2				177	128
08/08/99	Sun	13.5	< 0.1			7.52	7.18	2.00	0.99	4	2				176	119
08/09/99	Mon	13.0	< 0.1			7.67	7.14	1.90	1.41	2	2				164	96
08/10/99	Tue	13.0	< 0.1			7.54	7.00	2.40	5.36	2	2				171	86
08/11/99	Wed	12.0	< 0.1			7.59	7.38	3.00	4.96	2	2	243	240		165	108
08/12/99	Thu	13.0	< 0.1			7.48	7.20	2.90	5.56	2	2				170	118
08/13/99	Fri	15.5	< 0.1			7.85	7.40	2.40	3.37	< 2	2				179	126
08/14/99	Sat		< 0.1				7.72	2.90	2.18	< 2	2				142	
08/15/99	Sun	14.0	< 0.1			7.40	7.30	3.00	4.67	< 2	2				177	144
08/16/99	Mon	14.0	< 0.1			7.49	7.49	2.70	3.18	< 2	< 2				174	147
08/17/99	Tue	11.0	< 0.1			7.53	7.57	1.80	2.38	< 2	< 2				171	144
08/18/99	Wed	12.5	< 0.1			7.63	7.57	2.00	1.89	< 2	< 2	255	230		170	144
08/19/99	Thu	12.5	< 0.1			7.74	7.55	2.00	1.79	< 2	< 2				168	142
08/20/99	Fri	14.0	< 0.1			7.52	7.44	2.10	1.79	< 2	< 2				175	144
08/21/99	Sat	15.0	< 0.1			7.52	7.70	2.40	1.69	< 2	< 2				172	148
08/22/99	Sun	14.0	< 0.1			7.53	7.46	2.60	1.59	2	< 2				175	150
08/23/99	Mon	11.0	< 0.1			7.55	7.58	2.50	2.08	8	< 2				169	148
08/24/99	Tue	11.0	< 0.1			7.56	7.76	2.30	2.08	11	< 2				165	137
08/25/99	Wed	14.0	< 0.1			7.54	7.48	2.50	1.79	< 2	< 2	246	229		166	136
08/26/99	Thu	12.5	< 0.1			7.63	7.60	2.90	3.28	2	2				170	134
08/27/99	Fri	11.5	< 0.1			7.51	7.48	2.60	2.88	< 2	2				163	136
08/28/99	Sat	12.5	< 0.1			7.49	7.70	2.40	3.08	2	2				169	136
08/29/99	Sun	13.0	< 0.1			7.54	7.50	2.20	5.46	2	2				174	136
08/30/99	Mon	12.0	< 0.1			7.52	7.54	2.00	8.14	< 2	2				162	133
08/31/99	Tue	12.0	< 0.1			7.59	7.70	1.80	4.57	2	2				163	130
PERMIT MAX			0.1		2.0		8.5	20		240	23					
PERMIT MIN							6.5									
PERMIT AVE					1.0			10								
TOTAL		389.0	3.1	2.14	0.038	226.81	232.88	72.40	85.28	326	62	983	920	5093	4202	
MAXIMUM		15.5	0.1	2.14	0.038	7.85	7.77	3.00	8.14	240	2	255	240	179	168	
MINIMUM		11.0	0	2.14	0.038	7.40	7.00	1.80	0.60	2	2	239	221	162	86	
AVERAGE		13.0	0.1	2.14	0.038	7.56	7.51	2.34	2.75	11	2	246	230	170	136	
# Tests		30	31	1	1	30	31	31	31	31	31	4	4	30	31	

SAMPLE LOCATIONS

TAHOE BASIN MONITORING WELLS

<u>Site</u>	<u>Location</u>
ERB	Emergency Retention Basin
CONTROL	North of Post Office
MW02-25, -50	Emergency Retention Basin, S side
MW03-25, -50	Emergency Retention Basin, S side
MW04-25, -50	Emergency Retention Basin, W side
MW07-25, -50	Emergency Retention Basin, N side
MW08-25, -50	Pond #1, SW corner
MW11	S.E. corner of wastewater treatment plant grounds
MW12	South of Emergency Pump Building, for buried sludge
MW13	Pond 2, along Heavenly Valley Creek, for buried sludge

HEAVENLY VALLEY CREEK

HVC-1	At Pioneer Trail
HVC-2	250 ft upstream of Pond #2
HVC-3	25 ft downstream of Johnson Blvd.
HVC-4	Effluent of drain pipe from Lower Shop area
HVC-5	Effluent of drainage pipe along Johnson Blvd, 10 feet upstream of Johnson Blvd.

ALPINE COUNTY MONITORING WELLS

<u>Site</u>	<u>Location</u>
ACMW-01AW	Below main dam at Harvey Place Reservoir
ACMW-01BE	Below auxiliary dam at Harvey Place Reservoir
ACMW-02, N&S	On dam access road at Diamond Valley Road
ACMW-03	Bruns ranch, east side of Highway 88
ACMW-04W	Gansberg ranch, west side of Highway 88
ACMW-05	Dressler ranch
ACMW-06, N&S	Celio ranch, on Diamond Valley Road

ALPINE SOILS

<u>Site</u>	<u>Ranch</u>
S2	Celio
S3	Hall
S4	Gansberg
S5	Gansberg
S6	Neddenriep
S7	Bruns
S8	Dressler

ALPINE GROUNDWATERS

<u>Site</u>	<u>Homeowner</u>
GW-01	Sagues
GW-03	Smith/Springmeyer
GW-04	Celio
GW-05	Neddenriep
GW-07	Gansberg, Jr.
GW-08	Arant
GW-11	Diamond Valley School
GW-14	Sierra Pines Store

ALPINE SURFACEWATERS

<u>Site</u>	<u>Location</u>
SW-01	Carson River, Woodfords
SW-02	Indian Creek, @ HWY 89
SW-03	Indian Creek, @ upper bridge
SW-04	Indian Creek, @ lower bridge
SW-05	Carson River, Paynesville
SW-06	Carson River, Stateline
SW-07	Fredericksberg Ditch, Stateline
SW-08	Irrigation Ditch along Carson River Road
SW-09	Carson River, Dressler Lane
SW-10	Indian Creek, @ Smith-Springmeyer Ranch

TAHOE BASIN MONITORING

09/13/99

Site	Date	ID	Location	Depth msl	Temp C	pH	EC umhos	Cl mg/L	COD mg/L	NO3-N mg/L	Comment
Buried Sludge Monitoring											
MW11	08/24/99	990824-17	Sludge Pond	6270.0	8.5	6.38	77	1.3	< 5.0	0.091	
MW12	08/24/99	990824-18	Sludge Pond	6266.2	9.0	6.16	157	2.6	10.4	0.167	
MW13	08/24/99	990824-19	Sludge Pond	6257.4	8.7	7.10	893	5.4	28.1	5.340	
ERB Monitoring											
CONTROL	08/24/99	990824-10	At Post Office	6285.2	8.0	6.90	170	6.9	8.0	2.690	
MW01-50	08/24/99	990824-11	SW corner of ERB	6272.2	9.1	7.20	162	3.3	< 5.0	0.673	
MW02-50	08/24/99	990824-12	Black Bart side of ERB	6269.3	10.0	6.58	414	42.3	8.3	10.500	
MW03-50	08/24/99	990824-13	Black Bart side of ERB	6269.3	8.5	6.34	329	35.8	6.3	2.980	
MW04-50	08/24/99	990824-14	Hank Monk side of ERB	6270.0	8.5	6.07	70	5.5	5.3	0.168	
MW07-50	08/24/99	990824-15	North side of ERB	6280.3	9.6	6.39	262	25.4	5.6	0.564	
Heavenly Valley Creek											
HVC-1	08/10/99	990810-07	Downstream of Pioneer		9.8	7.01	41	0.8	< 5.0	0.020	
HVC-2	08/10/99	990810-08	250' upstream of Pond #2		9.8	6.38	45	1.0	11.1	< 0.010	
HVC-3	08/10/99	990810-09	25' downstream of Johnson Blvd		9.7	6.93	46	1.0	11.1	< 0.010	
HVC-4	08/10/99	990810-10	Effluent of drain from Lower Sho		11.2	6.80	139	1.2	15.2	0.014	
HVC-5	08/10/99	90810-HVC	Effluent of drainage pipe along J								No Flow
Treatment Plant Monitoring											
MW08-25	08/24/99	990824-16	SW side of Pond #1	6247.4	10.2	6.43	1030	52.7	85.2	< 0.010	

ALPINE COUNTY MONITORING

09/14/99

Site	Date	ID	Location	Temp C	pH	EC umhos	DO mg/L	Alk mg/L	TDS mg/L	SS mg/L	Turb NTU	Cl mg/L	SO4 mg/L
Alpine Monitoring Wells													
ACMW-01AW	08/17/99	990817-10	Main Dam	12.5	6.02	97		42	83			2.3	
ACMW-01BE	08/17/99	990817-11	Secondary Dam	10.7	5.98	103		49	76			1.1	
ACMW-02N	08/17/99	990817-12	Access Gate	12.3	6.29	126		57	89			2.8	
ACMW-02S	08/17/99	990817-13	Access Gate	15.7	5.85	116		56	80			0.9	
ACMW-03	08/17/99	990817-14	HWY 88	14.2	5.77	192		65	135			15.7	
ACMW-04W	08/17/99	990817-15	Gansberg	11.7	5.69	194		51	127			12.2	
ACMW-06N	08/17/99	990817-16	Celio	11.8	6.72	696		256	431			52.6	
ACMW-06S	08/17/99	990817-17	Celio	12.3	6.74	831		298	521			79.0	
Groundwaters													
GW-03	08/10/99	990810-11	Smith/Springmeyer	16.4	7.51	305		129	226			1.7	
GW-04	08/10/99	990810-12	Celio	14.4	7.50	260		116	196			3.3	
GW-05	08/10/99	990810-13	Neddenriep	13.7	6.36	248		62	178			25.3	
GW-07	08/10/99	990810-14	Gansberg	12.2	6.21	114		54	97			1.8	
GW-08	08/10/99	990810-15	Arant	15.2	6.42	220		51	151			20.8	
GW-11	08/10/99	990810-16	Diamond Val. School	21.2	6.36	98		47	81			1.0	
GW-14	08/10/99	990810-17	Sierra Pines	14.8	6.54	111		53	98			1.1	
Reservoirs													
HPR	08/03/99	990803-15	Harvey Place Reservoir	21.6	7.98	430	4.60	99	224	19.90	4.2	49.4	13.2
Surfacewaters: Carson R													
SW-01	08/03/99	990803-07	Carson R Woodfords	13.0	7.57	63	5.70	30	47	1.76	.61	0.5	2.2
SW-05	08/03/99	990803-11	Carson R Paynesville	16.7	7.89	72	5.60	34	60	3.02	1.1	0.9	2.6
SW-06	08/03/99	990803-12	Carson R Stateline	16.9	7.84	87	6.10	36	58	3.18	1	0.9	2.6
SW-07	08/03/99	990803-13	Fredericksburg Ditch	16.5	7.30	196	5.90	72	134	5.78	2.8	10.9	6.8
SW-08	08/03/99	990803-14	Irrigation Ditch	20.4	7.78	116	5.20	53	89	11.30	2.6	1.4	3.4
Surfacewaters: Indian Cr													
SW-02	08/03/99	990803-08	Indian Cr Upper	15.7	7.57	133	4.30	67	97	1.50	1.8	0.9	3.2
SW-03	08/03/99	990803-09	Indian Cr Mid	16.8	7.53	191	6.10	90	134	3.62	7.8	4.4	3.4
SW-04	08/03/99	990803-10	Indian Cr Lower	15.7	7.69	112	5.70	60	89	2.68	3.8	1.8	4.0

ALPINE COUNTY MONITORING

09/14/99

Site	Date	TotalP mg/L	PO4-P mg/L	TKN mg/L	NH3-N mg/L	NO2-N mg/L	NO3-N mg/L	Total N mg/L	MBAS mg/L
Alpine Monitoring Wells									
ACMW-01A	08/17/99	0.023		0.132	< 0.020	< 0.010	0.322	0.464	
ACMW-01B	08/17/99	0.010		0.180	< 0.020	< 0.010	0.311	0.501	
ACMW-02N	08/17/99	0.034		0.170	< 0.020	< 0.010	0.123	0.303	
ACMW-02S	08/17/99 <	0.010		0.230	< 0.020	< 0.010	< 0.010	0.250	
ACMW-03	08/17/99	0.056		0.320	< 0.020	0.010	0.823	1.153	
ACMW-04W	08/17/99	0.020		0.336	< 0.020	< 0.010	3.040	3.386	
ACMW-06N	08/17/99	0.026		0.619	0.039	< 0.010	< 0.010	0.639	
ACMW-06S	08/17/99	0.036		0.416	< 0.020	< 0.010	0.030	0.456	
Groundwaters									
GW-03	08/10/99	0.044	<	0.100	< 0.020	< 0.010	0.633	0.743	
GW-04	08/10/99	0.062	<	0.100	< 0.020	< 0.010	0.729	0.839	
GW-05	08/10/99	0.032	<	0.100	< 0.020	< 0.010	2.820	2.930	
GW-07	08/10/99	0.092		0.101	< 0.020	< 0.010	1.000	1.111	
GW-08	08/10/99	0.044	<	0.100	< 0.020	< 0.010	4.260	4.370	
GW-11	08/10/99	0.028		0.171	< 0.020	< 0.010	0.313	0.494	
GW-14	08/10/99	0.056	<	0.100	< 0.020	< 0.010	0.406	0.516	
Reservoirs									
HPR	08/03/99	2.220	2.050	15.400	10.900	0.437	1.730	17.567	
Surfacewaters: Carson R									
SW-01	08/03/99	0.020	0.010	0.150	< 0.020	< 0.010	< 0.010	0.170	
SW-05	08/03/99	0.024	0.010	0.171	< 0.020	< 0.010	0.019	0.200	
SW-06	08/03/99	0.026	0.010	0.282	< 0.020	< 0.010	0.026	0.318	
SW-07	08/03/99	0.138	0.096	0.583	0.031	< 0.010	0.746	1.339	
SW-08	08/03/99	0.057	0.022	0.313	< 0.020	< 0.010	0.228	0.551	
Surfacewaters: Indian Cr									
SW-02	08/03/99	0.042	0.014	0.391	< 0.020	< 0.010	< 0.010	0.411	
SW-03	08/03/99	0.112	0.034	0.287	< 0.020	< 0.010	0.013	0.310	
SW-04	08/03/99	0.092	0.044	0.394	< 0.020	< 0.010	< 0.010	0.414	

ALPINE COUNTY MONITORING

09/14/99

Site	Date	COD mg/L	BOD mg/L	O & G mg/L	Boron mg/L	Ca mg/L	Mg mg/L	Na mg/L	K mg/L	SAR	Exch Na %	Hardness mg/L	Water Level MSL or Ft
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Alpine Monitoring Wells

ACMW-01A	08/17/99												5483.1
ACMW-01B	08/17/99												5492.7
ACMW-02N	08/17/99												5460.1
ACMW-02S	08/17/99												5462.2
ACMW-03	08/17/99												5038.9
ACMW-04W	08/17/99												4908.1
ACMW-06N	08/17/99												5215.0
ACMW-06S	08/17/99												5204.8

Groundwaters

GW-03	08/10/99												
GW-04	08/10/99												
GW-05	08/10/99												
GW-07	08/10/99												
GW-08	08/10/99												
GW-11	08/10/99												
GW-14	08/10/99												

Reservoirs

HPR	08/03/99	29	8		0.22								39.0
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Surfacewaters: Carson R

SW-01	08/03/99		1		<	0.01							
SW-05	08/03/99		1		<	0.01							
SW-06	08/03/99		1		<	0.01							
SW-07	08/03/99		1			0.03							
SW-08	08/03/99		1		<	0.01							

Surfacewaters: Indian Cr

SW-02	08/03/99		1		<	0.01							
SW-03	08/03/99		1		<	0.01							
SW-04	08/03/99		1		<	0.01							

**ALPINE COUNTY
BACTERIOLOGICAL MONITORING**

09/14/99

Alpine Monitoring Wells

Site	Date	Total Colliform MPN/100mL	Fecal Colliform MPN/100mL	Fecal Streptococci MPN/100mLL
ACMW-01A	08/17/99	9.2	1.1	1.1
ACMW-01B	08/17/99	< 1.1	< 1.1	1.1
ACMW-02N	08/17/99	23	16.1	1.1
ACMW-02S	08/17/99	12	< 1.1	1.1
ACMW-03	08/17/99	1.1	< 1.1	1.1
ACMW-04W	08/17/99	1.1	< 1.1	1.1
ACMW-06N	08/17/99	< 1.1	< 1.1	1.1
ACMW-06S	08/17/99	1.1	< 1.1	1.1

Groundwaters

Site	Date	Total Colliform MPN/100mL	Fecal Colliform MPN/100mL	Fecal Streptococci MPN/100mLL
GW-03	08/10/99	< 1.1	< 1.1	1.1
GW-04	08/10/99	5.1	< 1.1	1.1
GW-05	08/10/99	5.1	1.1	1.1
GW-07	08/10/99	< 1.1	< 1.1	1.1
GW-08	08/10/99	> 23	< 1.1	1.1
GW-11	08/10/99	< 1.1	< 1.1	1.1
GW-14	08/10/99	< 1.1	< 1.1	1.1

Reservoirs

Site	Date	Total Colliform MPN/100mL	Fecal Colliform MPN/100mL	Fecal Streptococci MPN/100mLL
HPR	08/03/99	70	2	30

Surfacewaters: Carson R

Site	Date	Total Colliform MPN/100mL	Fecal Colliform MPN/100mL	Fecal Streptococci MPN/100mLL
SW-01	08/03/99	40	< 30	30
SW-05	08/03/99	930	150	70
SW-06	08/03/99	930	1500	1500
SW-07	08/03/99	4600	1500	1500
SW-08	08/03/99	1500	1500	1500

Surfacewaters: Indian Cr

Site	Date	Total Colliform MPN/100mL	Fecal Colliform MPN/100mL	Fecal Streptococci MPN/100mLL
SW-02	08/03/99	930	230	
SW-03	08/03/99	430	< 30	
SW-04	08/03/99	930	90	

Indian Creek Reservoir

ID: 990803-16

Date: 08/03/99
Hour: 10:58

Sampler: B Chernago / D Arce

Minerals

Temp, C	21.7	SS, mg/L	18.1	Calcium, mg/L
pH	9.40	Turbidity, NTU	5.8	Magnesium, mg/L
EC, umhos/cm	103	Alkalinity, mg/L	47.4	Potassium, mg/L
DO, mg/L	7.50	Sulfate, mg/L	2.83	Sodium, mg/L
Chloride, mg/L	1.4	Boron:	< .01	SAR, Calculated
TDS, mg/L	78			Exch Na, %

Nutrients

TKN, mg/L	1.500	NO ₂ -N, mg/L	< 0.010	Total P, mg/L	0.022
NH ₃ -N, mg/L	< 0.020	NO ₃ -N, mg/L	< 0.010	PO ₄ -P, mg/L	< 0.010
FreeNH ₃ -N:	0.011	Total N, mg/L	1.520		(Total P and PO ₄ -P filtered through 0.45um filter)

Organics

BOD, mg/L	4.70
COD, mg/L	28.1
MBAS, mg/L	< 0.025

Site Conditions

Water Level, ft		Algae:	Yes
Air Temp:	23.0	Weeds:	No
Ice%:	0	Floaters:	Yes
WaterColor:	Green		

Microbiological

Total Coliform:	30
Fecal Coliform:	< 2
Fecal Strep:	13

(Results reported as MPN/100 mL)

Wastewater Reclamation Permit Compliance

The District is monitoring under the revisions approved by the Regional Board (letter dated November 30, 1998). The revisions provide for: quarterly monitoring of soils; discontinue testing for Oil & Grease on surfacewaters; and discontinue surfacewater monitoring, except SW-01 and SW-05, during the months of December, January and February. The West Fork, Carson River Water Quality Objectives and East Fork, Carson River limitations were exceeded as follows (a ✓ indicates objective exceeded):

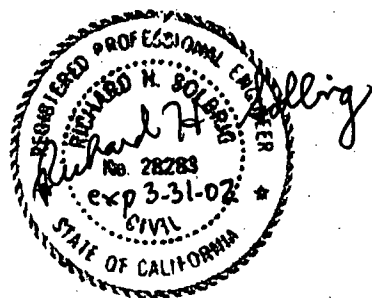
Site	Location	TDS		Cl ⁻		TKN		NO ₃ -N		Total N		Total P		SO ₄		Boron		Exch Na %	
		Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence
SW-01	Carson River, Woodfords	55		1.0		0.13		0.02		0.15		0.02		2.0	✓	0.02		20	
SW-06	Carson River, Stateline	70		2.5		0.22		0.03		0.25		0.03		2.0	✓	0.02		20	✓
SW-02	Indian Creek, Upper	100		6.0						0.30		0.03		8.0		0.25		30	
SW-03	Indian Creek, Mid	100		6.0						0.30		0.03	✓	8.0		0.25		30	
SW-04	Indian Creek, Lower	100		6.0						0.30	✓	0.03	✓	8.0		0.25		30	
SW-10	Indian Creek, Stateline	100		6.0						0.30		0.03		8.0		0.25		30	

The Blue Green Algae tests for June and July have not yet been completed as well as the soils tests for June. The results will be sent as soon as they are done.

Certification

I hereby certify that the enclosed monitoring report was prepared under my direct supervision and that I am a duly Registered Engineer under the laws of the State of California.

Sincerely,



Richard Solbrig,
Assistant Manager/Engineer

Enclosures:

1.

July Monthly Report	Pages
Wastewater Treatment plant	2
Permit Compliance Record	1
Export pipeline inspection	0
Sample site locations	2
Monitoring wells (ERB) and Heavenly Valley Creek (HVC)	1
Alpine County Surfacewaters, Groundwaters and HPR	4
Indian Creek Reservoir	1
Total number of pages:	11

- cc:** Calif. Dept. of Health Services, ODW - Jess Morehouse
El Dorado Co. Dept. of Environmental Health - Virginia Huber
Nevada Division of Environmental Protection - Wendel McCurry
Alpine County Health Department - Dr. Richard Botto
Alpine County Health Department - Jim Goodloe
Alpine County Board of Supervisors
Desert Research Group (Alpine County Consultants) - Bill Albright
STPUD Board of Directors
STPUD General Manager / District Engineer - Robert G. Baer
STPUD Manager of Operations - Ross Johnson
STPUD Operations Chief Plant Operator - Jeff Lee
STPUD Laboratory Director - Terry Powers
STPUD Manager of Alpine County Operations - Hal Bird

**SOUTH TAHOE PUBLIC UTILITY DISTRICT
WASTEWATER TREATMENT PLANT MONTHLY REPORT**

08/13/99

07:42:16

JULY 1999

Date	Day	2-Hr Peak		FLOW MGD			PRECIP		D.O. mg/L Fin	COD mg/L Raw	BOD mg/L		SS mg/L		
		Inf	Inf	Eff	Pond Return	Pond Inf	Inch	Type			Fin	Raw	Fin	Raw	Fin
07/01/99	Thu	4.85	6.0	4.94					4.69	391					
07/02/99	Fri	5.19	7.2	5.36					4.18	430					
07/03/99	Sat	6.42	8.6	5.77					5.04	484	45.8	193	10.3	181	4.4
07/04/99	Sun	6.57	9.2	6.12					5.86	485					
07/05/99	Mon	5.85	10.6	5.93					4.08	453					
07/06/99	Tue	4.89	7.0	5.19					3.42	405					
07/07/99	Wed	4.70	7.0	4.88					2.67	465	50.4	182	10.8	175	5.7
07/08/99	Thu	5.01	6.4	4.77					2.97	391					
07/09/99	Fri	4.92	7.5	5.09					6.15	446					
07/10/99	Sat	5.49	7.2	5.26					5.31	450	30.8	176	5.2	185	2.2
07/11/99	Sun	5.38	8.4	5.17					3.94	414					
07/12/99	Mon	4.88	7.1	5.21					3.59	412					
07/13/99	Tue	5.05	6.7	5.56					2.40	386					
07/14/99	Wed	4.82	7.0	4.38					3.99	391	31.8	154	6.4	158	2.3
07/15/99	Thu	4.85	6.5	5.09					3.31	405					
07/16/99	Fri	5.07	6.2	5.18					3.62	384					2.0
07/17/99	Sat	5.40	8.0	5.31					4.32	388	36.0	173	6.6	160	2.5
07/18/99	Sun	5.38	6.8	5.15					4.23	409					
07/19/99	Mon	4.84	7.5	4.93					3.45	405					
07/20/99	Tue	4.69	6.9	4.81					3.93	396					
07/21/99	Wed	4.66	6.8	4.74					4.20	448	29.0			164	1.9
07/22/99	Thu	4.95	7.8	4.84					4.69	495					
07/23/99	Fri	5.07	7.3	5.18					4.43	504					
07/24/99	Sat	5.68	7.2	5.18					4.35	519	42.1	234	9.0	206	3.6
07/25/99	Sun	5.42	7.1	5.25					3.01	543					
07/26/99	Mon	5.00	7.2	5.43					2.12	575					
07/27/99	Tue	4.97	6.3	4.69					4.27	522					
07/28/99	Wed	4.80	6.2	4.66					3.34	560	54.0			260	3.9
07/29/99	Thu	4.82	7.2	4.02					4.00	504					
07/30/99	Fri	5.11	7.2	4.68					4.60	451					
07/31/99	Sat	5.54	8.6	5.43					2.85	528	40.4	207	4.8	196	2.5
PERMIT MAX		7.7									300		45		60
PERMIT MIN															
PERMIT AVE											60		30		30
TOTAL		160.27	226.7	158.20			0.00		123.01	14039	360.3	1319	53.0	1685	31.0
MAXIMUM		6.57	10.6	6.12			ERR		6.15	575	54.0	234	10.8	260	5.7
MINIMUM		4.66	6.0	4.02			ERR		2.12	384	29.0	154	4.8	158	1.9
AVERAGE		5.17	7.3	5.10			ERR		3.97	453	40.0	188	7.6	187	3.1
# Tests		31	31	31	0	0	0		31	31	9	7	7	9	10

**SOUTH TAHOE PUBLIC UTILITY DISTRICT
WASTEWATER TREATMENT PLANT MONTHLY REPORT**

08/13/99

07:42:16

JULY 1999

Date	Day	SETTLEABLE SOLIDS mL/L		MBAS mg/L		pH Units		TURBIDITY NTU		Cl2 mg/L	FINAL COLIFORMS MPN/100 mL			TDS mg/L		ALKALINITY mg/L	
		Raw	Fin	Raw	Fin	Raw	Fin	Fin	Fin		Total	7day-	Median	Raw	Fin	Raw	Fin
07/01/99	Thu	11.0	< 0.1			7.40	7.60	2.40	2.72	<	2	<	2			159	146
07/02/99	Fri	13.0	< 0.1			7.59	7.56	3.00	3.69	<	2	<	2			161	147
07/03/99	Sat	13.5	< 0.1			7.57	7.86	3.30	2.91	<	2	<	2			179	162
07/04/99	Sun	15.5	< 0.1			7.64	7.56	3.20	3.11	<	2	<	2			181	166
07/05/99	Mon	15.0	< 0.1			7.59	7.60	3.60	4.76	<	2	<	2			178	172
07/06/99	Tue	13.5	< 0.1			7.44	7.68	3.90	2.19	<	2	<	2			168	166
07/07/99	Wed	12.0	< 0.1			7.42	7.87	4.20	3.69	<	2	<	2	251	244	164	156
07/08/99	Thu	9.5	< 0.1			7.43	7.31	19.00	4.76	<	2	<	2			159	146
07/09/99	Fri	11.0	< 0.1			7.36	7.34	2.60	5.44	<	2	<	2			153	146
07/10/99	Sat	13.0	< 0.1			7.37	7.58	1.80	4.08	<	2	<	2			165	155
07/11/99	Sun	13.0	< 0.1			7.39	7.49	2.10	3.69	<	2	<	2			166	160
07/12/99	Mon	11.5	< 0.1			7.47	7.50	2.90	2.82		4	<	2			162	158
07/13/99	Tue	11.0	< 0.1	3.76	0.110	7.44	7.58	3.10	3.11		2		2			159	152
07/14/99	Wed	11.5	< 0.1			7.60	7.59	2.60	2.14		2		2	238	228	153	149
07/15/99	Thu	11.5	< 0.1			7.46	7.49	2.20	2.23	<	2		2			157	146
07/16/99	Fri	12.0	< 0.1			7.44	7.50	2.10	2.72		2		2			161	148
07/17/99	Sat	13.5	< 0.1			7.47	7.68	2.50	2.62	<	2	<	2			166	154
07/18/99	Sun	13.0	< 0.1			7.43	7.43	2.30	2.43		2	<	2			169	158
07/19/99	Mon	11.5	< 0.1			7.65	7.61	2.20	3.01	<	2		2			159	154
07/20/99	Tue	11.0	< 0.1			7.47	7.52	2.20	3.40	<	2		2			162	152
07/21/99	Wed	14.0	< 0.1			7.62	7.60	2.30	3.01		4		2	238	227	159	152
07/22/99	Thu	13.5	< 0.1			7.61	7.70	2.50	2.52		2	<	2			162	151
07/23/99	Fri	14.0	< 0.1			7.50	7.62	2.90	3.40		2	<	2			169	156
07/24/99	Sat	14.0	< 0.1			7.43	7.74	3.50	1.85	<	2		2			172	160
07/25/99	Sun	19.0	< 0.1			7.38	7.61	4.00	2.72	<	2	<	2			175	163
07/26/99	Mon	15.5	< 0.1			7.59	7.74	3.90	5.73	<	2	<	2			168	155
07/27/99	Tue	15.0	< 0.1			7.33	7.64	4.50	3.50		2	<	2			164	154
07/28/99	Wed	15.0	< 0.1			7.42	7.73	3.50	4.47	<	2	<	2	242	232	167	146
07/29/99	Thu	12.0	< 0.1			7.37	7.65	2.60	3.69		2	<	2			165	156
07/30/99	Fri	13.0	< 0.1			7.35	7.72	2.20	2.67		2		2			166	161
07/31/99	Sat	13.0	< 0.1			7.42	7.80	2.20	2.14	<	2	<	2			170	162
PERMIT MAX			0.1		2.0		8.5	20			240		23				
PERMIT MIN							6.5										
PERMIT AVE					1.0			10									
TOTAL		404.5	3.1	3.76	0.110	231.65	235.90	105.30	101.22		66		62	969	931	5118	4809
MAXIMUM		19.0	0.1	3.76	0.110	7.65	7.87	19.00	5.73		4		2	251	244	181	172
MINIMUM		9.5	0	3.76	0.110	7.33	7.31	1.80	1.85		2		2	238	227	153	146
AVERAGE		13.0	0.1	3.76	0.110	7.47	7.61	3.40	3.27		2		2	242	233	165	155
# Tests		31	31	1	1	31	31	31	31		31		31	4	4	31	31

SAMPLE LOCATIONS

TAHOE BASIN MONITORING WELLS

<u>Site</u>	<u>Location</u>
ERB	Emergency Retention Basin
CONTROL	North of Post Office
MW02-25, -50	Emergency Retention Basin, S side
MW03-25, -50	Emergency Retention Basin, S side
MW04-25, -50	Emergency Retention Basin, W side
MW07-25, -50	Emergency Retention Basin, N side
MW08-25, -50	Pond #1, SW corner
MW11	S.E. corner of wastewater treatment plant grounds
MW12	South of Emergency Pump Building, for buried sludge
MW13	Pond 2, along Heavenly Valley Creek, for buried sludge

HEAVENLY VALLEY CREEK

HVC-1	At Pioneer Trail
HVC-2	250 ft upstream of Pond #2
HVC-3	25 ft downstream of Johnson Blvd.
HVC-4	Effluent of drain pipe from Lower Shop area
HVC-5	Effluent of drainage pipe along Johnson Blvd, 10 feet upstream of Johnson Blvd.

ALPINE COUNTY MONITORING WELLS

<u>Site</u>	<u>Location</u>
ACMW-01AW	Below main dam at Harvey Place Reservoir
ACMW-01BE	Below auxiliary dam at Harvey Place Reservoir
ACMW-02, N&S	On dam access road at Diamond Valley Road
ACMW-03	Bruns ranch, east side of Highway 88
ACMW-04W	Gansberg ranch, west side of Highway 88
ACMW-05	Dressler ranch
ACMW-06, N&S	Celio ranch, on Diamond Valley Road

ALPINE SOILS

<u>Site</u>	<u>Ranch</u>
S2	Celio
S3	Hall
S4	Gansberg
S5	Gansberg
S6	Neddenriep
S7	Bruns
S8	Dressler

ALPINE GROUNDWATERS

<u>Site</u>	<u>Homeowner</u>
GW-01	Sagues
GW-03	Smith/Springmeyer
GW-04	Celio
GW-05	Neddenriep
GW-07	Gansberg, Jr.
GW-08	Arant
GW-11	Diamond Valley School
GW-14	Sierra Pines Store

ALPINE SURFACEWATERS

<u>Site</u>	<u>Location</u>
SW-01	Carson River, Woodfords
SW-02	Indian Creek, @ HWY 89
SW-03	Indian Creek, @ upper bridge
SW-04	Indian Creek, @ lower bridge
SW-05	Carson River, Paynesville
SW-06	Carson River, Stateline
SW-07	Fredericksberg Ditch, Stateline
SW-08	Irrigation Ditch along Carson River Road
SW-09	Carson River, Dressler Lane
SW-10	Indian Creek, @ Smith-Springmeyer Ranch

TAHOE BASIN MONITORING

08/03/99

Site	Date	ID	Location	Depth msl	Temp C	pH	EC umhos	Cl mg/L	COD mg/L	NO3-N mg/L	Comment
Buried Sludge Monitoring											
MW11	07/27/99	990727-33	Sludge Pond	6270.3	10.5	6.61	78	1.1	10.0	0.105	
MW12	07/27/99	990727-34	Sludge Pond	6266.6	10.9	6.54	158	2.4	6.6	0.181	
MW13	07/27/99	990727-35	Sludge Pond	6256.9	11.4	7.17	883	5.5	26.4	4.750	
ERB Monitoring											
CONTROL	07/27/99	990727-26	At Post Office	6285.2	11.5	7.20	178	6.9	< 5.0	2.660	
MW01.5	07/27/99	990727-27	SW corner of ERB	6269.6	11.3	7.51	168	3.6	< 5.0	0.694	
MW02-50	07/27/99	990727-28	Black Bart side of ERB	6269.4	12.0	6.87	456	43.3	< 5.0	10.100	
MW03-50	07/27/99	990727-29	Black Bart side of ERB	6269.5	11.4	6.50	381	36.3	< 5.0	3.200	
MW04-50	07/27/99	990727-30	Hank Monk side of ERB	6270.6	10.1	6.47	76	5.5	< 5.0	0.043	
MW07-50	07/27/99	990727-31	North side of ERB	6280.7	11.2	6.80	270	26.3	< 5.0	0.516	
Heavenly Valley Creek											
HVC-1	07/06/99	990706-25	Downstream of Pioneer		12.6	7.07	29	0.5	< 5.0	0.058	
HVC-2	07/06/99	990706-26	250' upstream of Pond #2		16.3	7.02	31	0.5	< 5.0	0.015	
HVC-3	07/06/99	990706-27	25' downstream of Johnson Blvd		15.6	6.95	32	0.5	< 5.0	< 0.010	
HVC-4	07/06/99	990706-28	Effluent of drain from Lower Sho		14.9	6.71	117	0.6	6.3	0.053	
HVC-5	07/06/99	90706-HVC	Effluent of drainage pipe along J								Dry
Treatment Plant Monitoring											
MW08-25	07/27/99	990727-32	SW side of Pond #1	6247.8	11.6	6.44	1035	52.1	87.5	< 0.010	

ALPINE COUNTY MONITORING

08/13/99

Site	Date	ID	Location	Temp C	pH	EC umhos	DO mg/L	Alk mg/L	TDS mg/L	SS mg/L	Turb NTU	Cl mg/L	SO4 mg/L
Alpine Monitoring Wells													
ACMW-01AW	07/20/99	990720-10	Main Dam	11.5	6.47	98		45	82			0.9	
ACMW-01BE	07/20/99	990720-11	Secondary Dam	10.7	6.42	103		47	83			1.2	
ACMW-02N	07/20/99	990720-12	Access Gate	12.8	6.49	123		56	90			2.6	
ACMW-02S	07/20/99	990720-13	Access Gate	13.6	6.28	122		56	87			1.9	
ACMW-03	07/20/99	990720-14	HWY 88	13.0	6.01	175		64	120			7.0	
ACMW-04W	07/20/99	990720-15	Gansberg	12.4	5.94	198		49	143			12.5	
ACMW-06N	07/20/99	990720-16	Celio	11.0	7.13	692		259	435			52.8	
ACMW-06S	07/20/99	990720-17	Celio	12.6	7.13	799		294	512			77.6	
Groundwaters													
GW-03	07/06/99	990706-17	Smith/Springmeyer	18.0	7.39	310		129	224			1.4	
GW-04	07/06/99	990706-18	Celio	16.4	7.19	265		116	195			3.1	
GW-05	07/06/99	990706-19	Neddenriep	13.0	6.15	279		61	173			25.9	
GW-07	07/06/99	990706-20	Gansberg	12.4	6.01	125		53	95			1.3	
GW-08	07/06/99	990706-21	Arant	14.0	6.02	235		49	146			21.1	
GW-11	07/06/99	990706-22	Diamond Val. School	24.3	6.05	99		46	72			1.1	
GW-14	07/06/99	990706-23	Sierra Pines	14.0	6.25	111		50	84			1.0	
Reservoirs													
HPR	07/13/99	990713-18	Harvey Place Reservoir	21.4	7.62	418	4.90	95	241	25.60	1.3	48.8	14.4
Surfacewaters: Carson R													
SW-01	07/13/99	990713-10	Carson R Woodfords	14.1	6.94	49	6.20	23	43	3.02	.12	0.6	2.3
SW-05	07/13/99	990713-14	Carson R Paynesville	18.1	7.07	55	6.00	26	52	7.38	1.4	0.7	2.5
SW-06	07/13/99	990713-15	Carson R Stateline	19.9	7.10	60	5.90	28	60	4.24	1.4	1.0	2.6
SW-07	07/13/99	990713-16	Fredericksburg Ditch	23.4	6.99	219	4.80	101	184	1.82	2.2	4.3	5.1
SW-08	07/13/99	990713-17	Irrigation Ditch	19.6	6.55	72	5.50	33	76	25.00	3.2	1.3	4.9
Surfacewaters: Indian Cr													
SW-02	07/13/99	990713-11	Indian Cr Upper	17.5	7.07	95	6.10	49	84	1.08	1.4	< 0.5	2.9
SW-03	07/13/99	990713-12	Indian Cr Mid	19.8	6.75	114	6.30	55	99	4.77	4.8	1.7	4.5
SW-04	07/13/99	990713-13	Indian Cr Lower	17.9	6.81	98	5.80	48	85	16.80	5.7	1.1	4.2

ALPINE COUNTY MONITORING

08/13/99

Site	Date	TotalP mg/L	PO4-P mg/L	TKN mg/L	NH3-N mg/L	NO2-N mg/L	NO3-N mg/L	Total N mg/L	MBAS mg/L
Alpine Monitoring Wells									
ACMW-01A	07/20/99		<	0.100	< 0.020	< 0.010	0.163	0.273	
ACMW-01B	07/20/99		<	0.100	< 0.020	< 0.010	0.421	0.531	
ACMW-02N	07/20/99		<	0.100	< 0.020	< 0.010	0.123	0.233	
ACMW-02S	07/20/99		<	0.100	< 0.020	< 0.010	0.026	0.136	
ACMW-03	07/20/99			0.152	< 0.020	< 0.010	0.537	0.699	
ACMW-04W	07/20/99			0.157	< 0.020	< 0.010	3.020	3.187	
ACMW-06N	07/20/99			0.351	0.045	< 0.010	< 0.010	0.371	
ACMW-06S	07/20/99			0.160	< 0.020	< 0.010	0.039	0.209	
Groundwaters									
GW-03	07/06/99		<	0.100	< 0.020	< 0.010	0.645	0.755	
GW-04	07/06/99		<	0.100	< 0.020	< 0.010	0.740	0.850	
GW-05	07/06/99			0.272	< 0.020	< 0.010	2.920	3.202	
GW-07	07/06/99		<	0.100	< 0.020	< 0.010	0.850	0.960	
GW-08	07/06/99		<	0.100	< 0.020	< 0.010	4.240	4.350	
GW-11	07/06/99		<	0.100	< 0.020	< 0.010	0.333	0.443	
GW-14	07/06/99		<	0.100	< 0.020	< 0.010	0.408	0.518	
Reservoirs									
HPR	07/13/99	2.080	2.080	10.700	10.000	0.481	1.960	13.141	0.120
Surfacewaters: Carson R									
SW-01	07/13/99	< 0.010	< 0.010	0.110	0.061	< 0.010	< 0.010	0.130	
SW-05	07/13/99	< 0.010	< 0.010	0.193	< 0.020	< 0.010	< 0.010	0.213	
SW-06	07/13/99	< 0.010	< 0.010	0.179	< 0.020	< 0.010	0.011	0.200	
SW-07	07/13/99	0.062	0.062	0.763	0.020	< 0.010	0.083	0.856	
SW-08	07/13/99	0.028	0.028	0.882	0.029	< 0.010	0.047	0.939	
Surfacewaters: Indian Cr									
SW-02	07/13/99	0.014	0.014	0.273	0.021	< 0.010	< 0.010	0.293	
SW-03	07/13/99	0.050	0.050	0.261	0.040	< 0.010	0.023	0.294	
SW-04	07/13/99	0.040	0.040	0.391	0.021	< 0.010	< 0.010	0.411	

ALPINE COUNTY MONITORING

08/13/99

Site	Date	COD mg/L	BOD mg/L	O & G mg/L	Boron mg/L	Ca mg/L	Mg mg/L	Na mg/L	K mg/L	SAR	Exch Na %	Hardness mg/L	Water Level MSL or Ft
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Alpine Monitoring Wells

ACMW-01A	07/20/99												5483.0
ACMW-01B	07/20/99												5493.9
ACMW-02N	07/20/99												5460.1
ACMW-02S	07/20/99												5462.2
ACMW-03	07/20/99												5041.1
ACMW-04W	07/20/99												4907.6
ACMW-06N	07/20/99												5214.5
ACMW-06S	07/20/99												5203.4

Groundwaters

GW-03	07/06/99												
GW-04	07/06/99												
GW-05	07/06/99												
GW-07	07/06/99												
GW-08	07/06/99												
GW-11	07/06/99												
GW-14	07/06/99												

Reservoirs

HPR	07/13/99	19	>	9		0.18							46.5
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Surfacewaters: Carson R

SW-01	07/13/99	0		<	0.01	5.5	1.4	2.2	1.0	0.22	18.8		
SW-05	07/13/99	1		<	0.01	5.7	1.6	2.6	1.3	0.25	20.3		
SW-06	07/13/99	1		<	0.10	6.3	1.6	3.0	1.4	0.28	21.6		
SW-07	07/13/99	1			0.03	25.6	4.4	12.3	5.0	0.59	23.2		
SW-08	07/13/99	3			0.01	7.6	1.9	4.4	2.5	0.37	24.0		

Surfacewaters: Indian Cr

SW-02	07/13/99	0		<	0.01	11.6	2.7	5.0	1.6	0.34	20.5		
SW-03	07/13/99	1		<	0.01	12.7	3.1	6.5	1.9	0.42	23.2		
SW-04	07/13/99	1			0.02	11.4	3.0	4.7	1.8	0.32	18.9		

**ALPINE COUNTY
BACTERIOLOGICAL MONITORING**

08/13/99

Alpine Monitoring Wells

Site	Date	Total Coliform MPN/100mL	Fecal Coliform MPN/100mL	Fecal Streptococci MPN/100mLL
ACMW-01A	07/20/99	5.1	<	1.1
ACMW-01B	07/20/99	<	1.1	<
ACMW-02N	07/20/99	<	1.1	<
ACMW-02S	07/20/99	16.1		1.1
ACMW-03	07/20/99	2.2	<	1.1
ACMW-04W	07/20/99	3.6	<	1.1
ACMW-06N	07/20/99	<	1.1	<
ACMW-06S	07/20/99	<	1.1	<

Groundwaters

Site	Date	Total Coliform MPN/100mL	Fecal Coliform MPN/100mL	Fecal Streptococci MPN/100mLL
GW-03	07/06/99	<	1.1	<
GW-04	07/06/99		1.1	<
GW-05	07/06/99	<	1.1	<
GW-07	07/06/99	<	1.1	<
GW-08	07/06/99	6.9	<	1.1
GW-11	07/06/99	<	1.1	<
GW-14	07/06/99	<	1.1	<

Reservoirs

Site	Date	Total Coliform MPN/100mL	Fecal Coliform MPN/100mL	Fecal Streptococci MPN/100mLL
HPR	07/13/99	240	<	2
				17

Surfacewaters: Carson R

Site	Date	Total Coliform MPN/100mL	Fecal Coliform MPN/100mL	Fecal Streptococci MPN/100mLL
SW-01	07/13/99	390	<	30
SW-05	07/13/99	2400		430
SW-06	07/13/99	11000		430
SW-07	07/13/99	11000		4600
SW-08	07/13/99	24000		11000

Surfacewaters: Indian Cr

Site	Date	Total Coliform MPN/100mL	Fecal Coliform MPN/100mL	Fecal Streptococci MPN/100mLL
SW-02	07/13/99	1500		230
SW-03	07/13/99	2400		930
SW-04	07/13/99	4600		430

Indian Creek Reservoir

ID: 990713-19

Date: 07/13/99
Hour: 10:10

Sampler: Arce and Chernago

Minerals

Temp, C	23.9	SS, mg/L	5.43	Calcium, mg/L
pH	9.30	Turbidity, NTU	3.6	Magnesium, mg/L
EC, umhos/cm	106	Alkalinity, mg/L	45.5	Potassium, mg/L
DO, mg/L	6.20	Sulfate, mg/L	2.92	Sodium, mg/L
Chloride, mg/L	1.26	Boron:	.02	SAR, Calculated
TDS, mg/L	90			Exch Na, %

Nutrients

TKN, mg/L	0.533	NO ₂ -N, mg/L	< 0.010	Total P, mg/L	0.020
NH ₃ -N, mg/L	< 0.020	NO ₃ -N, mg/L	< 0.010	PO ₄ -P, mg/L	< 0.010
FreeNH ₃ -N:	< 0.001	Total N, mg/L	0.553		(Total P and PO ₄ -P filtered through 0.45um filter)

Organics

BOD, mg/L	4.35
COD, mg/L	19.6
MBAS, mg/L	

Site Conditions

Water Level, ft		Algae:	Yes
Air Temp:	22.1	Weeds:	Yes
Ice%:	0	Floaters:	No
WaterColor:	Brown-green		

Microbiological

Total Coliform:	50
Fecal Coliform:	< 2
Fecal Strep:	< 2

(Results reported as MPN/100 mL)

Wastewater Reclamation Permit Compliance

The District is monitoring under the revisions approved by the Regional Board (letter dated November 30, 1998). The revisions provide for: quarterly monitoring of soils; discontinue testing for Oil & Grease on surfacwaters; and discontinue surfacwater monitoring, except SW-01 and SW-05, during the months of December, January and February. The West Fork, Carson River Water Quality Objectives and East Fork, Carson River limitations were exceeded as follows (a ✓ indicates objective exceeded):

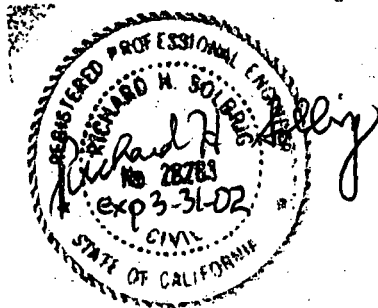
Site	Location	TDS		Cl ⁻		TKN		NO ₃ -N		Total N		Total P		SO ₄		Boron		Exch Na %	
		Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence
SW-01	Carson River, Woodfords	55		1.0		0.13	✓	0.02		0.15	✓	0.02	✓	2.0	✓	0.02		20	
SW-06	Carson River, Stateline	70		2.5		0.22	✓	0.03		0.25	✓	0.03	✓	2.0	✓	0.02		20	✓
SW-02	Indian Creek, Upper	100		6.0						0.30		0.03		8.0		0.25		30	
SW-03	Indian Creek, Mid	100		6.0						0.30	✓	0.03	✓	8.0		0.25		30	
SW-04	Indian Creek, Lower	100		6.0						0.30	✓	0.03	✓	8.0		0.25		30	
SW-10	Indian Creek, Stateline	100		6.0						0.30		0.03		8.0		0.25		30	

The Blue Green Algae tests for May and the March soils results are included in this report.

Certification

I hereby certify that the enclosed monitoring report was prepared under my direct supervision and that I am a duly Registered Engineer under the laws of the State of California.

Sincerely,



Richard Solbrig,
Assistant Manager/Engineer

Enclosures:

1.

June Monthly Report	Pages
Wastewater Treatment plant	2
Permit Compliance Record	1
Export pipeline inspection	1
Sample site locations	2
Monitoring wells (ERB) and Heavenly Valley Creek (HVC)	1
Alpine County Surfacewaters, Groundwaters and HPR	5
Indian Creek Reservoir	1
Alpine County soils -March 1999	1
Total number of pages:	14

- cc: Calif. Dept. of Health Services, ODW - Jess Morehouse
El Dorado Co. Dept. of Environmental Health - Virginia Huber
Nevada Division of Environmental Protection - Wendel McCurry
Alpine County Health Department - Dr. Richard Botto
Alpine County Health Department - Jim Goodloe
Alpine County Board of Supervisors
Desert Research Group (Alpine County Consultants) - Bill Albright
STPUD Board of Directors
STPUD General Manager / District Engineer - Robert G. Baer
STPUD Manager of Operations - Ross Johnson
STPUD Operations Chief Plant Operator - Jeff Lee
STPUD Laboratory Director - Terry Powers
STPUD Manager of Alpine County Operations - Hal Bird

**SOUTH TAHOE PUBLIC UTILITY DISTRICT
WASTEWATER TREATMENT PLANT MONTHLY REPORT**

07/12/99
14:02:30

JUNE 1999

Date	Day	FLOW MGD			Pond Inf	PRECIP		D.O. mg/L Fin	COD mg/L		BOD mg/L		SS mg/L	
		Inf	2-Hr Peak Inf	Eff		Pond Return	Inch		Type	Raw	Fin	Raw	Fin	Raw
06/01/99	Tue	4.60	5.8	4.61				5.97	382					
06/02/99	Wed	4.47	5.5	4.57			0.35	5.50	451	33.0	165	5.3	181	2.5
06/03/99	Thu	4.41	5.8	4.51			0.05	5.94	303					
06/04/99	Fri	4.55	5.8	4.53			0.02	5.15	472					
06/05/99	Sat	5.18	6.7	5.32				5.83	808	37.6	331	5.7	388	3.0
06/06/99	Sun	4.86	6.8	4.55				5.62	490					
06/07/99	Mon	4.38	6.0	4.29				5.19	550					
06/08/99	Tue	4.89	6.0	5.17				5.72	405					
06/09/99	Wed	4.23	5.8	4.42				6.77	380	34.2	152	5.0	134	2.6
06/10/99	Thu	4.52	5.1	4.51				6.99	319					
06/11/99	Fri	4.98	6.4	4.71	0.41	0.41		5.07	352					
06/12/99	Sat	5.10	7.8	5.24				4.25	370	41.6	155	6.5	147	4.1
06/13/99	Sun	4.99	6.6	5.33				4.06	421					
06/14/99	Mon	4.64	5.8	4.67				4.54	368	36.1	130	6.4	132	2.6
06/15/99	Tue	4.59	6.0	4.63				4.55	405					
06/16/99	Wed	4.57	6.0	4.74				4.73	527					
06/17/99	Thu	4.48	5.3	4.89				3.30	379					
06/18/99	Fri	4.79	6.8	4.46				4.93	439					
06/19/99	Sat	5.32	7.0	5.37				5.01	348	28.0	169	8.2	139	2.8
06/20/99	Sun	4.94	7.8	4.93				4.72	370					
06/21/99	Mon	4.68	6.1	4.59				4.14	379					
06/22/99	Tue	4.63	6.2	4.49				3.69	347					
06/23/99	Wed	4.62	8.0	4.97				2.95	392	35.4	163	4.2	162	1.8
06/24/99	Thu	4.92	6.2	4.92				4.15	391					
06/25/99	Fri	4.73	6.9	4.56				4.49	442					
06/26/99	Sat	5.13	7.6	5.21				3.40	391	32.2	162	6.7	153	2.5
06/27/99	Sun	4.84	7.3	5.01				4.41	382					
06/28/99	Mon	4.55	6.5	4.10				4.71	375					
06/29/99	Tue	4.69	6.0	5.31				3.02	423					
06/30/99	Wed	4.76	6.5	4.69				4.08	413	32.9			166	3.4
PERMIT MAX		7.7								300		45		60
PERMIT MIN														
PERMIT AVE										60		30		30
TOTAL		142.05	192.1	143.30	0.41	0.41	0.42	142.88	12474	311.0	1427	47.9	1602	25.3
MAXIMUM		5.32	8.0	5.37	0.41	0.41	0.35	6.99	808	41.6	331	8.2	388	4.1
MINIMUM		4.23	5.1	4.10	0.41	0.41	0.02	2.95	303	28.0	130	4.2	132	1.8
AVERAGE		4.73	6.4	4.78	0.41	0.41	0.14	4.76	416	34.6	178	6.0	178	2.8
# Tests		30	30	30	1	1	3	30	30	9	8	8	9	9

**SOUTH TAHOE PUBLIC UTILITY DISTRICT
WASTEWATER TREATMENT PLANT MONTHLY REPORT**

07/12/99

14:02:30

JUNE 1999

Date	Day	SETTLEABLE SOLIDS mL/L		MBAS mg/L		pH Units		TURBIDITY NTU		Cl2 mg/L	FINAL COLIFORMS MPN/100 mL			TDS mg/L		ALKALINITY mg/L	
		Raw	Fin	Raw	Fin	Raw	Fin	Raw	Fin		Total	7day-	Median	Raw	Fin	Raw	Fin
06/01/99	Tue	9.5	< 0.1			7.46	7.54	2.30	4.76	<	2	<	2			147	136
06/02/99	Wed	11.0	< 0.1			7.38	7.55	2.00	3.98	<	2	<	2	222	214	151	136
06/03/99	Thu	9.0	< 0.1			7.41	7.36	1.90	3.69	<	2	<	2			141	130
06/04/99	Fri	15.5	< 0.1			7.56	7.52	2.00	5.63	<	2	<	2			149	128
06/05/99	Sat	29.0	< 0.1			7.47	7.68	2.30	4.27	<	2	<	2			163	136
06/06/99	Sun	16.5	< 0.1			7.59	7.62	3.20	3.79	<	2	<	2			156	143
06/07/99	Mon	15.0	< 0.1			7.33	7.51	2.50	6.02	<	2	<	2			153	139
06/08/99	Tue	13.0	< 0.1	2.16	0.059	7.39	7.50	2.20	3.98	<	2	<	2			150	139
06/09/99	Wed	10.0	< 0.1			7.46	7.70	2.10	4.27	<	2	<	2	232	216	147	134
06/10/99	Thu	9.5	< 0.1			7.55	7.63	2.30	3.89	<	2	<	2			147	135
06/11/99	Fri	11.5	< 0.1			7.39	7.50	2.60	4.08	<	2	<	2			149	135
06/12/99	Sat	12.0	< 0.1			7.41	7.59	2.60	4.76	<	2	<	2			154	138
06/13/99	Sun	12.0	< 0.1			7.38	7.48	2.40	3.50	<	2	<	2			158	142
06/14/99	Mon	10.0	< 0.1			7.43	7.56	2.20	3.30	<	2	<	2	225	224	155	144
06/15/99	Tue	10.0	< 0.1			7.35	7.55	2.05	2.43	<	2	<	2			150	140
06/16/99	Wed	15.5	< 0.1			7.51	7.56	2.00	3.11	<	2	<	2			147	135
06/17/99	Thu	10.0	< 0.1			7.57	7.56	2.00	3.21	<	2	<	2			149	135
06/18/99	Fri	9.5	< 0.1			7.37	7.44	2.10	3.11	<	2	<	2			153	138
06/19/99	Sat	10.0	< 0.1			7.37	7.62	2.40	3.98	<	2	<	2			156	140
06/20/99	Sun	11.5	< 0.1			7.40	7.44	2.05	3.01	<	2	<	2			155	142
06/21/99	Mon	10.0	< 0.1			7.46	7.46	1.60	2.62	<	2	<	2			154	140
06/22/99	Tue	9.5	< 0.1			7.41	7.45	1.50	3.40	<	2	<	2			152	139
06/23/99	Wed	10.0	< 0.1			7.41	7.56	1.50	2.23	<	2	<	2	223	216	151	138
06/24/99	Thu	10.0	< 0.1			7.38	7.50	1.70	3.30	<	2	<	2			153	139
06/25/99	Fri	11.0	< 0.1			7.43	7.48	1.80	3.11	<	2	<	2			154	141
06/26/99	Sat	10.0	< 0.1			7.42	7.68	2.10	2.82	<	2	<	2			163	147
06/27/99	Sun	12.0	< 0.1			7.41	7.45	2.20	2.53	<	2	<	2			163	147
06/28/99	Mon	11.0	< 0.1			7.60	7.60	2.00	4.86	<	2	<	2			157	144
06/29/99	Tue	11.0	< 0.1			7.42	7.38	2.00	1.94	<	2	<	2			157	144
06/30/99	Wed	12.0	< 0.1			7.36	7.61	2.20	3.30	<	2	<	2	247	220	153	140
PERMIT MAX			0.1		2.0		8.5	20			240	23					
PERMIT MIN							6.5										
PERMIT AVE					1.0			10									
TOTAL		356.5	3.0	2.16	0.059	223.08	226.08	63.80	108.88		60	60	1149	1090	4587	4164	
MAXIMUM		29.0	0.1	2.16	0.059	7.60	7.70	3.20	6.02		2	2	247	224	163	147	
MINIMUM		9.0	0	2.16	0.059	7.33	7.36	1.50	1.94		2	2	222	214	141	128	
AVERAGE		11.9	0.1	2.16	0.059	7.44	7.54	2.13	3.63		2	2	230	218	153	139	
# Tests		30	30	1	1	30	30	30	30		30	30	5	5	30	30	

**SOUTH TAHOE
PUBLIC UTILITY DISTRICT
MEMORANDUM**



Date: June 30, 1999
To: Bob Baer, Diane Noble
From: Tim Rieger
Topic: Export Line Check

On June 29, & 30, 1999, Greg Schrempp and I conducted our check of the District's export line from the treatment plant to station 564+06 near the Harvey Place reservoir. Also checked was the Luther pass surge line.

Several wet spots were checked. However, nothing positive was found. No damage to the pipe was found.

CC: Terry Powers

SAMPLE LOCATIONS

TAHOE BASIN MONITORING WELLS

<u>Site</u>	<u>Location</u>
ERB	Emergency Retention Basin
CONTROL	North of Post Office
MW02-25, -50	Emergency Retention Basin, S side
MW03-25, -50	Emergency Retention Basin, S side
MW04-25, -50	Emergency Retention Basin, W side
MW07-25, -50	Emergency Retention Basin, N side
MW08-25, -50	Pond #1, SW corner
MW11	S.E. corner of wastewater treatment plant grounds
MW12	South of Emergency Pump Building, for buried sludge
MW13	Pond 2, along Heavenly Valley Creek, for buried sludge

HEAVENLY VALLEY CREEK

HVC-1	At Pioneer Trail
HVC-2	250 ft upstream of Pond #2
HVC-3	25 ft downstream of Johnson Blvd.
HVC-4	Effluent of drain pipe from Lower Shop area
HVC-5	Effluent of drainage pipe along Johnson Blvd, 10 feet upstream of Johnson Blvd.

ALPINE COUNTY MONITORING WELLS

<u>Site</u>	<u>Location</u>
ACMW-01AW	Below main dam at Harvey Place Reservoir
ACMW-01BE	Below auxiliary dam at Harvey Place Reservoir
ACMW-02, N&S	On dam access road at Diamond Valley Road
ACMW-03	Bruns ranch, east side of Highway 88
ACMW-04W	Gansberg ranch, west side of Highway 88
ACMW-05	Dressler ranch
ACMW-06, N&S	Celio ranch, on Diamond Valley Road

ALPINE SOILS

<u>Site</u>	<u>Ranch</u>
S2	Celio
S3	Hall
S4	Gansberg
S5	Gansberg
S6	Neddenriep
S7	Bruns
S8	Dressler

ALPINE GROUNDWATERS

<u>Site</u>	<u>Homeowner</u>
GW-01	Sagues
GW-03	Smith/Springmeyer
GW-04	Celio
GW-05	Neddenriep
GW-07	Gansberg, Jr.
GW-08	Arant
GW-11	Diamond Valley School
GW-14	Sierra Pines Store

ALPINE SURFACEWATERS

<u>Site</u>	<u>Location</u>
SW-01	Carson River, Woodfords
SW-02	Indian Creek, @ HWY 89
SW-03	Indian Creek, @ upper bridge
SW-04	Indian Creek, @ lower bridge
SW-05	Carson River, Paynesville
SW-06	Carson River, Stateline
SW-07	Fredericksberg Ditch, Stateline
SW-08	Irrigation Ditch along Carson River Road
SW-09	Carson River, Dressler Lane
SW-10	Indian Creek, @ Smith-Springmeyer Ranch

TAHOE BASIN MONITORING

07/14/99

Site	Date	ID	Location	Depth msl	Temp C	pH	EC umhos	Cl mg/L	COD mg/L	NO3-N mg/L	Comment
Buried Sludge Monitoring											
MW11	06/15/99	990615-14	Sludge Pond	6270.5	9.2	6.61	83	1.0	< 5.0	0.124	
MW12	06/15/99	990615-15	Sludge Pond	6267.3	8.7	6.29	162	2.5	14.5	0.144	
MW13	06/15/99	990615-16	Sludge Pond	6258.3	8.6	7.01	904	4.8	25.7	4.940	
ERB Monitoring											
CONTROL	06/15/99	990615-07	At Post Office	6284.9	9.3	6.73	174	6.9	< 5.0	2.470	
MW01.5	06/15/99	990615-08	SW corner of ERB	6269.8	9.7	6.90	166	3.8	< 5.0	0.670	
MW02-50	06/15/99	990615-09	Black Bart side of ERB	6269.7	10.5	6.27	449	42.5	< 5.0	9.580	
MW03-50	06/15/99	990615-10	Black Bart side of ERB	6269.7	10.6	6.10	400	39.4	< 5.0	4.080	
MW04-50	06/15/99	990615-11	Hank Monk side of ERB	6272.3	9.2	6.06	78	6.0	< 5.0	0.050	
MW07-50	06/15/99	990615-12	North side of ERB	6281.0	8.2	6.30	266	25.4	5.6	0.570	
Heavenly Valley Creek											
HVC-1	06/01/99	990601-23	Downstream of Pioneer		7.5	7.19	31	0.5	8.7	0.049	
HVC-2	06/01/99	990601-24	250' upstream of Pond #2		10.0	7.01	31	0.6	< 5.0	0.011	
HVC-3	06/01/99	990601-25	25' downstream of Johnson Blvd		9.7	6.84	34	0.6	6.6	< 0.010	
HVC-4	06/01/99	990601-26	Effluent of drain from Lower Sho		10.7	6.69	105	0.5	< 5.0	0.053	
HVC-5	06/01/99	90601-HVC	Effluent of drainage pipe along J								
HVC-5	06/02/99	90602-HVC	Effluent of drainage pipe along J								
Treatment Plant Monitoring											
MW08-25	06/15/99	990615-13	SW side of Pond #1	6248.8	9.4	6.35	1010	49.2	76.5	< 0.010	

ALPINE COUNTY MONITORING

07/14/99

Site	Date	ID	Location	Temp C	pH	EC umhos	DO mg/L	Alk mg/L	TDS mg/L	SS mg/L	Turb NTU	Cl mg/L	SO4 mg/L
Alpine Monitoring Wells													
ACMW-01AW	06/22/99	990622-20	Main Dam	9.8	6.72	104		49	81				1.1
ACMW-01BE	06/22/99	990622-21	Secondary Dam	10.6	6.55	150		72	104				1.5
ACMW-02N	06/22/99	990622-22	Access Gate	12.1	6.87	127		58	89				3.0
ACMW-02S	06/22/99	990622-23	Access Gate	12.3	6.60	85		39	67				1.2
ACMW-03	06/22/99	990622-24	HWY 88	11.2	6.64	120		51	97				2.8
ACMW-04W	06/22/99	990622-25	Gansberg	12.7	6.25	195		51	134				12.2
ACMW-06N	06/22/99	990622-26	Celio	11.1	7.20	690		261	422				53.3
ACMW-06S	06/22/99	990622-27	Celio	12.3	7.22	700		245	421				75.7
Groundwaters													
GW-03	06/01/99	990601-15	Smith/Springmeyer	16.0	7.44	310		127	224				1.4
GW-04	06/01/99	990601-16	Celio	14.8	7.48	267		114	201				3.0
GW-05	06/01/99	990601-17	Neddenriep	14.1	6.29	282		60	197				27.2
GW-07	06/01/99	990601-18	Gansberg	11.8	6.21	125		54	101				1.3
GW-08	06/01/99	990601-19	Arant	13.1	6.32	235		49	149				23.0
GW-11	06/01/99	990601-20	Diamond Val. School	21.2	6.18	98		45	89				0.9
GW-14	06/01/99	990601-21	Sierra Pines	12.9	6.36	112		51	108				1.1
Reservoirs													
HPR	06/08/99	990608-17	Harvey Place Reservoir	16.5	7.18	431	5.90	101	200	2.29	2.7	46.7	17.6
Surfacewaters: Carson R													
SW-01	06/08/99	990608-10	Carson R Woodfords	4.2	6.77	44	10.90	21	38	8.30	1.6	0.5	2.6
SW-05	06/08/99	990608-14	Carson R Paynesville	10.2	6.83	47	10.20	23	39	9.20	2	0.7	2.6
SW-06	06/08/99	990608-15	Carson R Stateline	9.1	6.77	59	9.85	23	42	30.50	2.5	0.7	2.6
SW-08	06/08/99	990608-16	Irrigation Ditch	16.5	7.06	109	7.70	46	83	17.30	3.1	1.2	3.3
Surfacewaters: Indian Cr													
SW-02	06/08/99	990608-11	Indian Cr Upper	7.4	6.65	72	9.60	37	60	2.25	1.9	0.5	3.1
SW-03	06/08/99	990608-12	Indian Cr Mid	10.0	6.60	89	9.35	39	68	3.61	2.8	2.1	3.0
SW-04	06/08/99	990608-13	Indian Cr Lower	10.4	7.02	88	8.70	45	69	5.22	2.7	1.1	2.9

ALPINE COUNTY MONITORING

07/14/99

Site	Date	Total P mg/L	PO4-P mg/L	TKN mg/L	NH3-N mg/L	NO2-N mg/L	NO3-N mg/L	Total N mg/L	MBAS mg/L
Alpine Monitoring Wells									
ACMW-01A	06/22/99		<	0.100	< 0.020	<	0.010	0.212	0.322
ACMW-01B	06/22/99		<	0.100	< 0.020	<	0.010	0.317	0.427
ACMW-02N	06/22/99		<	0.100	< 0.020	<	0.010	0.116	0.226
ACMW-02S	06/22/99		<	0.100	< 0.020	<	0.010	0.125	0.235
ACMW-03	06/22/99			0.278	0.014	<	0.010	0.525	0.813
ACMW-04W	06/22/99			0.423	0.034	<	0.010	2.670	3.103
ACMW-06N	06/22/99			0.300	0.041	<	0.010	< 0.100	0.410
ACMW-06S	06/22/99			0.137	0.043	<	0.010	0.054	0.201
Groundwaters									
GW-03	06/01/99		<	0.100	< 0.020	<	0.010	0.650	0.760
GW-04	06/01/99		<	0.100	< 0.020	<	0.010	0.753	0.863
GW-05	06/01/99		<	0.110	< 0.020	<	0.010	3.120	3.240
GW-07	06/01/99		<	0.100	< 0.020	<	0.010	0.754	0.864
GW-08	06/01/99		<	0.100	< 0.020	<	0.010	4.150	4.260
GW-11	06/01/99		<	0.100	< 0.020	<	0.010	0.385	0.495
GW-14	06/01/99		<	0.100	< 0.020	<	0.010	0.412	0.522
Reservoirs									
HPR	06/08/99	1.950	1.950	16.500	14.100	0.161	1.350	18.011	
Surfacewaters: Carson R									
SW-01	06/08/99	< 0.010	< 0.010	0.231	< 0.020	<	0.010	< 0.010	0.251
SW-05	06/08/99	0.014	0.014	0.249	< 0.020	<	0.010	< 0.010	0.269
SW-06	06/08/99	< 0.010	< 0.010	0.276	< 0.020	<	0.010	0.011	0.297
SW-08	06/08/99	0.014	0.014	0.489	0.022	<	0.010	0.195	0.694
Surfacewaters: Indian Cr									
SW-02	06/08/99	< 0.010	< 0.010	0.294	< 0.020	<	0.010	< 0.010	0.314
SW-03	06/08/99	0.020	0.020	0.292	< 0.020	<	0.010	0.014	0.316
SW-04	06/08/99	0.036	0.036	0.228	< 0.020	<	0.010	< 0.010	0.248

ALPINE COUNTY MONITORING

07/14/99

Site	Date	COD mg/L	BOD mg/L	O & G mg/L	Boron mg/L	Ca mg/L	Mg mg/L	Na mg/L	K mg/L	SAR	Exch Na %	Hardness mg/L	Water Level MSL or Ft
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Alpine Monitoring Wells

ACMW-01A	06/22/99												5482.9
ACMW-01B	06/22/99												5495.9
ACMW-02N	06/22/99												5460.0
ACMW-02S	06/22/99												5462.8
ACMW-03	06/22/99												5042.0
ACMW-04W	06/22/99												4906.9
ACMW-06N	06/22/99												5214.9
ACMW-06S	06/22/99												5203.9

Groundwaters

GW-03	06/01/99												
GW-04	06/01/99												
GW-05	06/01/99												
GW-07	06/01/99												
GW-08	06/01/99												
GW-11	06/01/99												
GW-14	06/01/99												

Reservoirs

HPR	06/08/99	15	3		0.16	12.8	3.3	42.9	8.0	2.77	62.7		53.0
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Surfacewaters: Carson R

SW-01	06/08/99		1		0.01	4.3	1.3	2.0	0.8	0.22	20.3		
SW-05	06/08/99		1	<	0.01	4.0	1.4	2.1	0.8	0.23	21.3		
SW-06	06/08/99		1	<	0.01	4.3	1.5	2.2	0.9	0.24	21.3		
SW-08	06/08/99		1	<	0.01	8.5	2.3	7.7	1.7	0.60	33.6		

Surfacewaters: Indian Cr

SW-02	06/08/99		1	<	0.01	7.0	1.8	4.4	1.0	0.38	26.8		
SW-03	06/08/99		1	<	0.01	7.5	2.2	5.0	1.2	0.42	27.4		
SW-04	06/08/99		1	<	0.01	8.0	2.4	4.9	1.1	0.39	25.7		

**ALPINE COUNTY
BACTERIOLOGICAL MONITORING**

07/13/99

Alpine Monitoring Wells

Site	Date	Total Coliform MPN/100mL	Fecal Coliform MPN/100mL	Fecal Streptococci MPN/100mLL
ACMW-01A	06/22/99	1.1	<	1.1
ACMW-01B	06/22/99	1.1	<	1.1
ACMW-02N	06/22/99	<	1.1	<
ACMW-02S	06/22/99	1.1	<	1.1
ACMW-03	06/22/99	<	1.1	<
ACMW-04W	06/22/99	2.2	<	1.1
ACMW-06N	06/22/99	<	1.1	<
ACMW-06S	06/22/99	<	1.1	<

Groundwaters

Site	Date	Total Coliform MPN/100mL	Fecal Coliform MPN/100mL	Fecal Streptococci MPN/100mLL
GW-03	06/01/99	<	1.1	<
GW-04	06/01/99	<	1.1	<
GW-05	06/01/99	<	1.1	<
GW-07	06/01/99	<	1.1	<
GW-08	06/01/99	<	1.1	<
GW-11	06/01/99	<	1.1	<
GW-14	06/01/99	<	1.1	<

Reservoirs

Site	Date	Total Coliform MPN/100mL	Fecal Coliform MPN/100mL	Fecal Streptococci MPN/100mLL
HPR	06/08/99	8	2	12

Surfacewaters: Carson R

Site	Date	Total Coliform MPN/100mL	Fecal Coliform MPN/100mL	Fecal Streptococci MPN/100mLL
SW-01	06/08/99	90	<	30
SW-05	06/08/99	<	30	<
SW-06	06/08/99	230		90
SW-08	06/08/99	2400		930

Surfacewaters: Indian Cr

Site	Date	Total Coliform MPN/100mL	Fecal Coliform MPN/100mL	Fecal Streptococci MPN/100mLL
SW-02	06/08/99	2400	40	
SW-03	06/08/99	430	430	
SW-04	06/08/99	930	90	

**ALPINE COUNTY
BLUE GREEN ALGAE**

ID#	Site	Location	Date	Colonies #	Colony # Cells	Filaments #	Filaments # Cells	Filaments #	Filament Length	Single Cells, #
May, 1999										
990504-14	SW-01	Carson R Woodfords	05/04/99	0	0	0	0	0	0	0
990504-15	SW-02	Indian Cr Upper	05/04/99	0	0	0	0	0	0	0
990504-16	SW-03	Indian Cr Mid	05/04/99	0	0	0	0	0	0	0
990504-17	SW-04	Indian Cr Lower	05/04/99	0	0	0	0	0	0	0
990504-18	SW-05	Carson R Paynesville	05/04/99	0	0	0	0	0	0	0
990504-19	SW-06	Carson R Stateline	05/04/99	0	0	0	0	0	0	0
990504-20	SW-08	Irrigation Ditch	05/04/99	0	0	0	0	0	0	0
990504-21	SW-09	Carson R Dressler Ln	05/04/99	0	0	0	0	0	0	0
990504-22	SW-10	Indian Cr at Bruns	05/04/99	0	0	0	0	0	0	0
990504-23	HPR	Harvey Place Reservoir	05/04/99	0	0	0	0	0	0	0
990504-24	ICR	Indian Creek Reservoir	05/04/99	0	0	0	0	0	0	0

Indian Creek Reservoir

ID: 990608-18

Date: 06/08/99
Hour: 10:12

Sampler: Trebotich and Kunibe

Minerals

Temp, C	16.6	SS, mg/L	3.32	Calcium, mg/L	9.19
pH	8.13	Turbidity, NTU	5.9	Magnesium, mg/L	1.87
EC, umhos/cm	108	Alkalinity, mg/L	41.2	Potassium, mg/L	1.94
DO, mg/L	6.10	Sulfate, mg/L	4.43	Sodium, mg/L	5.29
Chloride, mg/L	1.31	Boron:	.02	SAR, Calculated	.42
TDS, mg/L	75			Exch Na, %	25.78

Nutrients

TKN, mg/L	0.794	NO ₂ -N, mg/L	< 0.010	Total P, mg/L	0.023
NH ₃ -N, mg/L	< 0.020	NO ₃ -N, mg/L	< 0.010	PO ₄ -P, mg/L	< 0.010
FreeNH ₃ -N:	< 0.001	Total N, mg/L	0.814		(Total P and PO ₄ -P filtered through 0.45um filter)

Organics

BOD, mg/L	1.68
COD, mg/L	19.9
MBAS, mg/L	0.004

Site Conditions

Water Level, ft		Algae:	Yes
Air Temp:	20.8	Weeds:	Yes
Ice%:	0	Floaters:	Yes
WaterColor:	Green		

Microbiological

Total Coliform:	30
Fecal Coliform:	< 2
Fecal Strep:	8

(Results reported as MPN/100 mL)

ALPINE COUNTY SOILS

07/14/99

Site	Date	Location	Type	pH	EC mmho	%Sat	TKN mg/Kg	NO3-N mg/L	Total P mg/Kg	Exch P mg/L
S2a	03/04/99	Celio	KT	8.23	1.31	59.3	1,820	9.3	790	5.4
S3a	03/04/99	Hail	SMB	6.03	0.45	41.1	1,990	4.8	1,100	21.7
S4a	03/04/99	Gansberg	DI	6.54	0.42	37.5	1,410	3.8	540	14.5
S5a	03/04/99	Gansberg	HRB	6.28	0.30	33.4	1,300	6.2	780	24.9
S6a	03/04/99	Neddenriep	DWB	6.06	0.19	47.4	1,860		710	52.6
S7a	03/04/99	Bruns	JaC	6.20	0.11	43.2	1,800	1.5	800	7.3
S8a	03/04/99	Dressler	SOD	6.42	0.12	15.5	222	0.4	360	8.7

Site	Date	Cl mg/L	SO4 mg/Kg	CEC meq/100g	Cu mg/Kg	Mo mg/Kg	Ca mg/L	Mg mg/L	Na mg/L	SAR	% Na
S2a	03/04/99		37		17.0	< 1.0	53.2	27.0	174.0	4.84	5.4
S3a	03/04/99		4		24.0	< 1.0	8.0	2.1	21.3	1.73	1.2
S4a	03/04/99		1		39.0	< 1.0	26.8	6.1	47.9	2.17	1.9
S5a	03/04/99		3		26.0	< 1.0	27.1	5.2	20.7	0.95	< 1.0
S6a	03/04/99		3		31.0	< 1.0	7.1	1.8	24.3	2.12	1.8
S7a	03/04/99	<	1		140.0	< 1.0	9.6	2.0	8.1	0.62	< 1.0
S8a	03/04/99	<	1		20.0	< 1.0	7.3	3.1	13.5	1.05	< 1.0

Wastewater Reclamation Permit Compliance

The District is monitoring under the revisions approved by the Regional Board (letter dated November 30, 1998). The revisions provide for: quarterly monitoring of soils; discontinue testing for Oil & Grease on surfacewaters; and discontinue surfacewater monitoring, except SW-01 and SW-05, during the months of December, January and February. The West Fork, Carson River Water Quality Objectives and East Fork, Carson River limitations were exceeded as follows (a ✓ indicates objective exceeded):

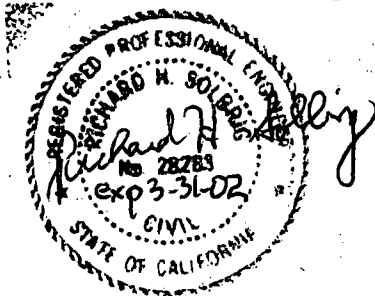
Site	Location	TDS		Cl ⁻		TKN		NO ₃ -N		Total N		Total P		SO ₄		Boron		Exch Na %	
		Limit	Exceedance	Limit	Exceedance	Limit	Exceedance	Limit	Exceedance	Limit	Exceedance	Limit	Exceedance	Limit	Exceedance	Limit	Exceedance	Limit	Exceedance
SW-01	Carson River, Woodfords	55		1.0		0.13	✓	0.02		0.15	✓	0.02	✓	2.0	✓	0.02		20	
SW-06	Carson River, Stateline	70		2.5		0.22	✓	0.03		0.25	✓	0.03	✓	2.0	✓	0.02		20	✓
SW-02	Indian Creek, Upper	100		6.0						0.30		0.03		8.0		0.25		30	
SW-03	Indian Creek, Mid	100		6.0						0.30	✓	0.03	✓	8.0		0.25		30	
SW-04	Indian Creek, Lower	100		6.0						0.30	✓	0.03	✓	8.0		0.25		30	
SW-10	Indian Creek, Stateline	100		6.0						0.30		0.03		8.0		0.25		30	

The Blue Green Algae tests for May and the March soils results are included in this report.

Certification

I hereby certify that the enclosed monitoring report was prepared under my direct supervision and that I am a duly Registered Engineer under the laws of the State of California.

Sincerely,



Richard Solbrig,
Assistant Manager/Engineer

Enclosures:

1.

June Monthly Report	Pages
Wastewater Treatment plant	2
Permit Compliance Record	1
Export pipeline inspection	1
Sample site locations	2
Monitoring wells (ERB) and Heavenly Valley Creek (HVC)	1
Alpine County Surfacewaters, Groundwaters and HPR	5
Indian Creek Reservoir	1
Alpine County soils -March 1999	1
Total number of pages:	14

- cc: Calif. Dept. of Health Services, ODW - Jess Morehouse
El Dorado Co. Dept. of Environmental Health - Virginia Huber
Nevada Division of Environmental Protection - Wendel McCurry
Alpine County Health Department - Dr. Richard Botto
Alpine County Health Department - Jim Goodloe
Alpine County Board of Supervisors
Desert Research Group (Alpine County Consultants) - Bill Albright
STPUD Board of Directors
STPUD General Manager / District Engineer - Robert G. Baer
STPUD Manager of Operations - Ross Johnson
STPUD Operations Chief Plant Operator - Jeff Lee
STPUD Laboratory Director - Terry Powers
STPUD Manager of Alpine County Operations - Hal Bird

**SOUTH TAHOE PUBLIC UTILITY DISTRICT
WASTEWATER TREATMENT PLANT MONTHLY REPORT**

07/12/99
14:02:30

JUNE 1999

Date	Day	2-Hr Peak		FLOW MGD			PRECIP		D.O.	COD		BOD		SS	
		Inf	Inf	Eff	Pond Return	Pond Inf	Inch	Type	mg/L Fin	Raw	Fin	Raw	Fin	Raw	Fin
06/01/99	Tue	4.60	5.8	4.61					5.97	382					
06/02/99	Wed	4.47	5.5	4.57			0.35	Rain	5.50	451	33.0	165	5.3	181	2.5
06/03/99	Thu	4.41	5.8	4.51			0.05	Rain	5.94	303					
06/04/99	Fri	4.55	5.8	4.53			0.02	Rain	5.15	472					
06/05/99	Sat	5.18	6.7	5.32					5.83	808	37.6	331	5.7	388	3.0
06/06/99	Sun	4.86	6.8	4.55					5.62	490					
06/07/99	Mon	4.38	6.0	4.29					5.19	550					
06/08/99	Tue	4.89	6.0	5.17					5.72	405					
06/09/99	Wed	4.23	5.8	4.42					6.77	380	34.2	152	5.0	134	2.6
06/10/99	Thu	4.52	5.1	4.51					6.99	319					
06/11/99	Fri	4.98	6.4	4.71	0.41	0.41			5.07	352					
06/12/99	Sat	5.10	7.8	5.24					4.25	370	41.6	155	6.5	147	4.1
06/13/99	Sun	4.99	6.6	5.33					4.06	421					
06/14/99	Mon	4.64	5.8	4.67					4.54	368	36.1	130	6.4	132	2.6
06/15/99	Tue	4.59	6.0	4.63					4.55	405					
06/16/99	Wed	4.57	6.0	4.74					4.73	527					
06/17/99	Thu	4.48	5.3	4.89					3.30	379					
06/18/99	Fri	4.79	6.8	4.46					4.93	439					
06/19/99	Sat	5.32	7.0	5.37					5.01	348	28.0	169	8.2	139	2.8
06/20/99	Sun	4.94	7.8	4.93					4.72	370					
06/21/99	Mon	4.68	6.1	4.59					4.14	379					
06/22/99	Tue	4.63	6.2	4.49					3.69	347					
06/23/99	Wed	4.62	8.0	4.97					2.95	392	35.4	163	4.2	162	1.8
06/24/99	Thu	4.92	6.2	4.92					4.15	391					
06/25/99	Fri	4.73	6.9	4.56					4.49	442					
06/26/99	Sat	5.13	7.6	5.21					3.40	391	32.2	162	6.7	153	2.5
06/27/99	Sun	4.84	7.3	5.01					4.41	382					
06/28/99	Mon	4.55	6.5	4.10					4.71	375					
06/29/99	Tue	4.69	6.0	5.31					3.02	423					
06/30/99	Wed	4.76	6.5	4.69					4.08	413	32.9			166	3.4
PERMIT MAX		7.7									300		45		60
PERMIT MIN															
PERMIT AVE											60		30		30
TOTAL		142.05	192.1	143.30	0.41	0.41	0.42		142.88	12474	311.0	1427	47.9	1602	25.3
MAXIMUM		5.32	8.0	5.37	0.41	0.41	0.35		6.99	808	41.6	331	8.2	388	4.1
MINIMUM		4.23	5.1	4.10	0.41	0.41	0.02		2.95	303	28.0	130	4.2	132	1.8
AVERAGE		4.73	6.4	4.78	0.41	0.41	0.14		4.76	416	34.6	178	6.0	178	2.8
# Tests		30	30	30	1	1	3		30	30	9	8	8	9	9

**SOUTH TAHOE PUBLIC UTILITY DISTRICT
WASTEWATER TREATMENT PLANT MONTHLY REPORT**

07/12/99

14:02:30

JUNE 1999

Date	Day	SETTLEABLE SOLIDS mL/L		MBAS mg/L		pH Units		TURBIDITY NTU		Cl2 mg/L	FINAL COLIFORMS MPN/100 mL			TDS mg/L		ALKALINITY mg/L	
		Raw	Fin	Raw	Fin	Raw	Fin	Fin	Fin		Total	7day-	Median	Raw	Fin	Raw	Fin
06/01/99	Tue	9.5	< 0.1			7.46	7.54	2.30	4.76	<	2	<	2			147	136
06/02/99	Wed	11.0	< 0.1			7.38	7.55	2.00	3.98	<	2	<	2	222	214	151	136
06/03/99	Thu	9.0	< 0.1			7.41	7.36	1.90	3.69	<	2	<	2			141	130
06/04/99	Fri	15.5	< 0.1			7.56	7.52	2.00	5.63	<	2	<	2			149	128
06/05/99	Sat	29.0	< 0.1			7.47	7.68	2.30	4.27	<	2	<	2			163	136
06/06/99	Sun	16.5	< 0.1			7.59	7.62	3.20	3.79	<	2	<	2			156	143
06/07/99	Mon	15.0	< 0.1			7.33	7.51	2.50	6.02	<	2	<	2			153	139
06/08/99	Tue	13.0	< 0.1	2.16	0.059	7.39	7.50	2.20	3.98	<	2	<	2			150	139
06/09/99	Wed	10.0	< 0.1			7.46	7.70	2.10	4.27	<	2	<	2	232	216	147	134
06/10/99	Thu	9.5	< 0.1			7.55	7.63	2.30	3.89	<	2	<	2			147	135
06/11/99	Fri	11.5	< 0.1			7.39	7.50	2.60	4.08	<	2	<	2			149	135
06/12/99	Sat	12.0	< 0.1			7.41	7.59	2.60	4.76	<	2	<	2			154	138
06/13/99	Sun	12.0	< 0.1			7.38	7.48	2.40	3.50	<	2	<	2			158	142
06/14/99	Mon	10.0	< 0.1			7.43	7.56	2.20	3.30	<	2	<	2	225	224	155	144
06/15/99	Tue	10.0	< 0.1			7.35	7.55	2.05	2.43	<	2	<	2			150	140
06/16/99	Wed	15.5	< 0.1			7.51	7.56	2.00	3.11	<	2	<	2			147	135
06/17/99	Thu	10.0	< 0.1			7.57	7.56	2.00	3.21	<	2	<	2			149	135
06/18/99	Fri	9.5	< 0.1			7.37	7.44	2.10	3.11	<	2	<	2			153	138
06/19/99	Sat	10.0	< 0.1			7.37	7.62	2.40	3.98	<	2	<	2			156	140
06/20/99	Sun	11.5	< 0.1			7.40	7.44	2.05	3.01	<	2	<	2			155	142
06/21/99	Mon	10.0	< 0.1			7.46	7.46	1.60	2.62	<	2	<	2			154	140
06/22/99	Tue	9.5	< 0.1			7.41	7.45	1.50	3.40	<	2	<	2			152	139
06/23/99	Wed	10.0	< 0.1			7.41	7.56	1.50	2.23	<	2	<	2	223	216	151	138
06/24/99	Thu	10.0	< 0.1			7.38	7.50	1.70	3.30	<	2	<	2			153	139
06/25/99	Fri	11.0	< 0.1			7.43	7.48	1.80	3.11	<	2	<	2			154	141
06/26/99	Sat	10.0	< 0.1			7.42	7.68	2.10	2.82	<	2	<	2			163	147
06/27/99	Sun	12.0	< 0.1			7.41	7.45	2.20	2.53	<	2	<	2			163	147
06/28/99	Mon	11.0	< 0.1			7.60	7.60	2.00	4.86	<	2	<	2			157	144
06/29/99	Tue	11.0	< 0.1			7.42	7.38	2.00	1.94	<	2	<	2			157	144
06/30/99	Wed	12.0	< 0.1			7.36	7.61	2.20	3.30	<	2	<	2	247	220	153	140
PERMIT MAX			0.1		2.0		8.5	20			240		23				
PERMIT MIN							6.5										
PERMIT AVE					1.0			10									
TOTAL		356.5	3.0	2.16	0.059	223.08	226.08	63.80	108.88		60		60	1149	1090	4587	4164
MAXIMUM		29.0	0.1	2.16	0.059	7.60	7.70	3.20	6.02		2		2	247	224	163	147
MINIMUM		9.0	0	2.16	0.059	7.33	7.36	1.50	1.94		2		2	222	214	141	128
AVERAGE		11.9	0.1	2.16	0.059	7.44	7.54	2.13	3.63		2		2	230	218	153	139
# Tests		30	30	1	1	30	30	30	30		30		30	5	5	30	30

SOUTH TAHOE
PUBLIC UTILITY DISTRICT
MEMORANDUM



Date: June 30, 1999
To: Bob Baer, Diane Noble
From: Tim Rieger
Topic: Export Line Check

On June 29, & 30, 1999, Greg Schrempp and I conducted our check of the District's export line from the treatment plant to station 564+06 near the Harvey Place reservoir. Also checked was the Luther pass surge line.

Several wet spots were checked. However, nothing positive was found. No damage to the pipe was found.

CC: Terry Powers

SAMPLE LOCATIONS

TAHOE BASIN MONITORING WELLS

<u>Site</u>	<u>Location</u>
ERB	Emergency Retention Basin
CONTROL	North of Post Office
MW02-25, -50	Emergency Retention Basin, S side
MW03-25, -50	Emergency Retention Basin, S side
MW04-25, -50	Emergency Retention Basin, W side
MW07-25, -50	Emergency Retention Basin, N side
MW08-25, -50	Pond #1, SW corner
MW11	S.E. corner of wastewater treatment plant grounds
MW12	South of Emergency Pump Building, for buried sludge
MW13	Pond 2, along Heavenly Valley Creek, for buried sludge

HEAVENLY VALLEY CREEK

HVC-1	At Pioneer Trail
HVC-2	250 ft upstream of Pond #2
HVC-3	25 ft downstream of Johnson Blvd.
HVC-4	Effluent of drain pipe from Lower Shop area
HVC-5	Effluent of drainage pipe along Johnson Blvd, 10 feet upstream of Johnson Blvd.

ALPINE COUNTY MONITORING WELLS

<u>Site</u>	<u>Location</u>
ACMW-01AW	Below main dam at Harvey Place Reservoir
ACMW-01BE	Below auxiliary dam at Harvey Place Reservoir
ACMW-02, N&S	On dam access road at Diamond Valley Road
ACMW-03	Bruns ranch, east side of Highway 88
ACMW-04W	Gansberg ranch, west side of Highway 88
ACMW-05	Dressler ranch
ACMW-06, N&S	Celio ranch, on Diamond Valley Road

ALPINE SOILS

<u>Site</u>	<u>Ranch</u>
S2	Celio
S3	Hall
S4	Gansberg
S5	Gansberg
S6	Neddenriep
S7	Bruns
S8	Dressler

ALPINE GROUNDWATERS

<u>Site</u>	<u>Homeowner</u>
GW-01	Sagues
GW-03	Smith/Springmeyer
GW-04	Celio
GW-05	Neddenriep
GW-07	Gansberg, Jr.
GW-08	Arant
GW-11	Diamond Valley School
GW-14	Sierra Pines Store

ALPINE SURFACEWATERS

<u>Site</u>	<u>Location</u>
SW-01	Carson River, Woodfords
SW-02	Indian Creek, @ HWY 89
SW-03	Indian Creek, @ upper bridge
SW-04	Indian Creek, @ lower bridge
SW-05	Carson River, Paynesville
SW-06	Carson River, Stateline
SW-07	Fredericksberg Ditch, Stateline
SW-08	Irrigation Ditch along Carson River Road
SW-09	Carson River, Dressler Lane
SW-10	Indian Creek, @ Smith-Springmeyer Ranch

TAHOE BASIN MONITORING

07/14/99

Site	Date	ID	Location	Depth msl	Temp C	pH	EC umhos	Cl mg/L	COD mg/L	NO3-N mg/L	Comment
Buried Sludge Monitoring											
MW11	06/15/99	990615-14	Sludge Pond	6270.5	9.2	6.61	83	1.0	< 5.0	0.124	
MW12	06/15/99	990615-15	Sludge Pond	6267.3	8.7	6.29	162	2.5	14.5	0.144	
MW13	06/15/99	990615-16	Sludge Pond	6258.3	8.6	7.01	904	4.8	25.7	4.940	
ERB Monitoring											
CONTROL	06/15/99	990615-07	At Post Office	6284.9	9.3	6.73	174	6.9	< 5.0	2.470	
MW01.5	06/15/99	990615-08	SW corner of ERB	6269.8	9.7	6.90	166	3.8	< 5.0	0.670	
MW02-50	06/15/99	990615-09	Black Bart side of ERB	6269.7	10.5	6.27	449	42.5	< 5.0	9.580	
MW03-50	06/15/99	990615-10	Black Bart side of ERB	6269.7	10.6	6.10	400	39.4	< 5.0	4.080	
MW04-50	06/15/99	990615-11	Hank Monk side of ERB	6272.3	9.2	6.06	78	6.0	< 5.0	0.050	
MW07-50	06/15/99	990615-12	North side of ERB	6281.0	8.2	6.30	266	25.4	5.6	0.570	
Heavenly Valley Creek											
HVC-1	06/01/99	990601-23	Downstream of Pioneer		7.5	7.19	31	0.5	8.7	0.049	
HVC-2	06/01/99	990601-24	250' upstream of Pond #2		10.0	7.01	31	0.6	< 5.0	0.011	
HVC-3	06/01/99	990601-25	25' downstream of Johnson Blvd		9.7	6.84	34	0.6	6.6	< 0.010	
HVC-4	06/01/99	990601-26	Effluent of drain from Lower Sho		10.7	6.69	105	0.5	< 5.0	0.053	
HVC-5	06/01/99	90601-HVC	Effluent of drainage pipe along J								
HVC-5	06/02/99	90602-HVC	Effluent of drainage pipe along J								
Treatment Plant Monitoring											
MW08-25	06/15/99	990615-13	SW side of Pond #1	6248.8	9.4	6.35	1010	49.2	76.5	< 0.010	

ALPINE COUNTY MONITORING

07/14/99

Site	Date	ID	Location	Temp C	pH	EC umhos	DO mg/L	Alk mg/L	TDS mg/L	SS mg/L	Turb NTU	Cl mg/L	SO4 mg/L
Alpine Monitoring Wells													
ACMW-01AW	06/22/99	990622-20	Main Dam	9.8	6.72	104		49	81			1.1	
ACMW-01BE	06/22/99	990622-21	Secondary Dam	10.6	6.55	150		72	104			1.5	
ACMW-02N	06/22/99	990622-22	Access Gate	12.1	6.87	127		58	89			3.0	
ACMW-02S	06/22/99	990622-23	Access Gate	12.3	6.60	85		39	67			1.2	
ACMW-03	06/22/99	990622-24	HWY 88	11.2	6.64	120		51	97			2.8	
ACMW-04W	06/22/99	990622-25	Gansberg	12.7	6.25	195		51	134			12.2	
ACMW-06N	06/22/99	990622-26	Celio	11.1	7.20	690		261	422			53.3	
ACMW-06S	06/22/99	990622-27	Celio	12.3	7.22	700		245	421			75.7	

Groundwaters

GW-03	06/01/99	990601-15	Smith/Springmeyer	16.0	7.44	310		127	224			1.4	
GW-04	06/01/99	990601-16	Celio	14.8	7.48	267		114	201			3.0	
GW-05	06/01/99	990601-17	Neddenriep	14.1	6.29	282		60	197			27.2	
GW-07	06/01/99	990601-18	Gansberg	11.8	6.21	125		54	101			1.3	
GW-08	06/01/99	990601-19	Arant	13.1	6.32	235		49	149			23.0	
GW-11	06/01/99	990601-20	Diamond Val. School	21.2	6.18	98		45	89			0.9	
GW-14	06/01/99	990601-21	Sierra Pines	12.9	6.36	112		51	108			1.1	

Reservoirs

HPR	06/08/99	990608-17	Harvey Place Reservoir	16.5	7.18	431	5.90	101	200	2.29	2.7	46.7	17.6
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Surfacewaters: Carson R

SW-01	06/08/99	990608-10	Carson R Woodfords	4.2	6.77	44	10.90	21	38	8.30	1.6	0.5	2.6
SW-05	06/08/99	990608-14	Carson R Paynesville	10.2	6.83	47	10.20	23	39	9.20	2	0.7	2.6
SW-06	06/08/99	990608-15	Carson R Stateline	9.1	6.77	59	9.85	23	42	30.50	2.5	0.7	2.6
SW-08	06/08/99	990608-16	Irrigation Ditch	16.5	7.06	109	7.70	46	83	17.30	3.1	1.2	3.3

Surfacewaters: Indian Cr

SW-02	06/08/99	990608-11	Indian Cr Upper	7.4	6.65	72	9.60	37	60	2.25	1.9	0.5	3.1
SW-03	06/08/99	990608-12	Indian Cr Mid	10.0	6.60	89	9.35	39	68	3.61	2.8	2.1	3.0
SW-04	06/08/99	990608-13	Indian Cr Lower	10.4	7.02	88	8.70	45	69	5.22	2.7	1.1	2.9

ALPINE COUNTY MONITORING

07/14/99

Site	Date	TotalP mg/L	PO4-P mg/L	TKN mg/L	NH3-N mg/L	NO2-N mg/L	NO3-N mg/L	Total N mg/L	MBAS mg/L
Alpine Monitoring Wells									
ACMW-01A	06/22/99		<	0.100	< 0.020	< 0.010	0.212	0.322	
ACMW-01B	06/22/99		<	0.100	< 0.020	< 0.010	0.317	0.427	
ACMW-02N	06/22/99		<	0.100	< 0.020	< 0.010	0.116	0.226	
ACMW-02S	06/22/99		<	0.100	< 0.020	< 0.010	0.125	0.235	
ACMW-03	06/22/99			0.278	0.014	< 0.010	0.525	0.813	
ACMW-04W	06/22/99			0.423	0.034	< 0.010	2.670	3.103	
ACMW-06N	06/22/99			0.300	0.041	< 0.010	< 0.100	0.410	
ACMW-06S	06/22/99			0.137	0.043	< 0.010	0.054	0.201	
Groundwaters									
GW-03	06/01/99		<	0.100	< 0.020	< 0.010	0.650	0.760	
GW-04	06/01/99		<	0.100	< 0.020	< 0.010	0.753	0.863	
GW-05	06/01/99			0.110	< 0.020	< 0.010	3.120	3.240	
GW-07	06/01/99		<	0.100	< 0.020	< 0.010	0.754	0.864	
GW-08	06/01/99		<	0.100	< 0.020	< 0.010	4.150	4.260	
GW-11	06/01/99		<	0.100	< 0.020	< 0.010	0.385	0.495	
GW-14	06/01/99		<	0.100	< 0.020	< 0.010	0.412	0.522	
Reservoirs									
HPR	06/08/99	1.950	1.950	16.500	14.100	0.161	1.350	18.011	
Surfacewaters: Carson R									
SW-01	06/08/99	< 0.010	< 0.010	0.231	< 0.020	< 0.010	< 0.010	0.251	
SW-05	06/08/99	0.014	0.014	0.249	< 0.020	< 0.010	< 0.010	0.269	
SW-06	06/08/99	< 0.010	< 0.010	0.276	< 0.020	< 0.010	0.011	0.297	
SW-08	06/08/99	0.014	0.014	0.489	0.022	< 0.010	0.195	0.694	
Surfacewaters: Indian Cr									
SW-02	06/08/99	< 0.010	< 0.010	0.294	< 0.020	< 0.010	< 0.010	0.314	
SW-03	06/08/99	0.020	0.020	0.292	< 0.020	< 0.010	0.014	0.316	
SW-04	06/08/99	0.036	0.036	0.228	< 0.020	< 0.010	< 0.010	0.248	

ALPINE COUNTY MONITORING

07/14/99

Site	Date	COD mg/L	BOD mg/L	O & G mg/L	Boron mg/L	Ca mg/L	Mg mg/L	Na mg/L	K mg/L	SAR	Exch Na %	Hardness mg/L	Water Level MSL or Ft
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Alpine Monitoring Wells

ACMW-01A	06/22/99												5482.9
ACMW-01B	06/22/99												5495.9
ACMW-02N	06/22/99												5460.0
ACMW-02S	06/22/99												5462.8
ACMW-03	06/22/99												5042.0
ACMW-04W	06/22/99												4906.9
ACMW-06N	06/22/99												5214.9
ACMW-06S	06/22/99												5203.9

Groundwaters

GW-03	06/01/99												
GW-04	06/01/99												
GW-05	06/01/99												
GW-07	06/01/99												
GW-08	06/01/99												
GW-11	06/01/99												
GW-14	06/01/99												

Reservoirs

HPR	06/08/99	15	3		0.16	12.8	3.3	42.9	8.0	2.77	62.7		53.0
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Surfacewaters: Carson R

SW-01	06/08/99		1		0.01	4.3	1.3	2.0	0.8	0.22	20.3		
SW-05	06/08/99		1	<	0.01	4.0	1.4	2.1	0.8	0.23	21.3		
SW-06	06/08/99		1	<	0.01	4.3	1.5	2.2	0.9	0.24	21.3		
SW-08	06/08/99		1	<	0.01	8.5	2.3	7.7	1.7	0.60	33.6		

Surfacewaters: Indian Cr

SW-02	06/08/99		1	<	0.01	7.0	1.8	4.4	1.0	0.38	26.8		
SW-03	06/08/99		1	<	0.01	7.5	2.2	5.0	1.2	0.42	27.4		
SW-04	06/08/99		1	<	0.01	8.0	2.4	4.9	1.1	0.39	25.7		

**ALPINE COUNTY
BACTERIOLOGICAL MONITORING**

07/13/99

Alpine Monitoring Wells

Site	Date	Total Coliform MPN/100mL	Fecal Coliform MPN/100mL	Fecal Streptococci MPN/100mLL
ACMW-01A	06/22/99	1.1	<	1.1
ACMW-01B	06/22/99	<	1.1	<
ACMW-02N	06/22/99	<	1.1	<
ACMW-02S	06/22/99	1.1	<	1.1
ACMW-03	06/22/99	<	1.1	<
ACMW-04W	06/22/99	2.2	<	1.1
ACMW-06N	06/22/99	<	1.1	<
ACMW-06S	06/22/99	<	1.1	<

Groundwaters

Site	Date	Total Coliform MPN/100mL	Fecal Coliform MPN/100mL	Fecal Streptococci MPN/100mLL
GW-03	06/01/99	<	1.1	<
GW-04	06/01/99	1.1	<	1.1
GW-05	06/01/99	<	1.1	<
GW-07	06/01/99	<	1.1	<
GW-08	06/01/99	<	1.1	<
GW-11	06/01/99	<	1.1	<
GW-14	06/01/99	<	1.1	<

Reservoirs

Site	Date	Total Coliform MPN/100mL	Fecal Coliform MPN/100mL	Fecal Streptococci MPN/100mLL
HPR	06/08/99	8	2	12

Surfacewaters: Carson R

Site	Date	Total Coliform MPN/100mL	Fecal Coliform MPN/100mL	Fecal Streptococci MPN/100mLL
SW-01	06/08/99	90	<	30
SW-05	06/08/99	<	30	<
SW-06	06/08/99	230	90	
SW-08	06/08/99	2400	930	

Surfacewaters: Indian Cr

Site	Date	Total Coliform MPN/100mL	Fecal Coliform MPN/100mL	Fecal Streptococci MPN/100mLL
SW-02	06/08/99	2400	40	
SW-03	06/08/99	430	430	
SW-04	06/08/99	930	90	

**ALPINE COUNTY
BLUE GREEN ALGAE**

ID#	Site	Location	Date	Colonies #	Colony # Cells	Filaments #	Filaments # Cells	Filaments #	Filament Length	Single Cells, #
May, 1999										
990504-14	SW-01	Carson R Woodfords	05/04/99	0	0	0	0	0	0	0
990504-15	SW-02	Indian Cr Upper	05/04/99	0	0	0	0	0	0	0
990504-16	SW-03	Indian Cr Mid	05/04/99	0	0	0	0	0	0	0
990504-17	SW-04	Indian Cr Lower	05/04/99	0	0	0	0	0	0	0
990504-18	SW-05	Carson R Paynesville	05/04/99	0	0	0	0	0	0	0
990504-19	SW-06	Carson R Stateline	05/04/99	0	0	0	0	0	0	0
990504-20	SW-08	Irrigation Ditch	05/04/99	0	0	0	0	0	0	0
990504-21	SW-09	Carson R Dressler Ln	05/04/99	0	0	0	0	0	0	0
990504-22	SW-10	Indian Cr at Bruns	05/04/99	0	0	0	0	0	0	0
990504-23	HPR	Harvey Place Reservoir	05/04/99	0	0	0	0	0	0	0
990504-24	ICR	Indian Creek Reservoir	05/04/99	0	0	0	0	0	0	0

Indian Creek Reservoir

ID: 990608-18

Date: 06/08/99
Hour: 10:12

Sampler: Trebotich and Kunibe

Minerals

Temp, C	16.6	SS, mg/L	3.32	Calcium, mg/L	9.19
pH	8.13	Turbidity, NTU	5.9	Magnesium, mg/L	1.87
EC, umhos/cm	108	Alkalinity, mg/L	41.2	Potassium, mg/L	1.94
DO, mg/L	6.10	Sulfate, mg/L	4.43	Sodium, mg/L	5.29
Chloride, mg/L	1.31	Boron:	.02	SAR, Calculated	.42
TDS, mg/L	75			Exch Na, %	25.78

Nutrients

TKN, mg/L	0.794	NO ₂ -N, mg/L	< 0.010	Total P, mg/L	0.023
NH ₃ -N, mg/L	< 0.020	NO ₃ -N, mg/L	< 0.010	PO ₄ -P, mg/L	< 0.010
FreeNH ₃ -N:	< 0.001	Total N, mg/L	0.814		(Total P and PO ₄ -P filtered through 0.45um filter)

Organics

BOD, mg/L	1.68
COD, mg/L	19.9
MBAS, mg/L	0.004

Site Conditions

Water Level, ft		Algae:	Yes
Air Temp:	20.8	Weeds:	Yes
Ice%:	0	Floaters:	Yes
WaterColor:	Green		

Microbiological

Total Coliform:	30
Fecal Coliform:	< 2
Fecal Strep:	8

(Results reported as MPN/100 mL)

ALPINE COUNTY SOILS

07/14/99

Site	Date	Location	Type	pH	EC mmho	%Sat	TKN mg/Kg	NO3-N mg/L	Total P mg/Kg	Exch P mg/L
S2a	03/04/99	Celio	KT	8.23	1.31	59.3	1,820	9.3	790	5.4
S3a	03/04/99	Hall	SMB	6.03	0.45	41.1	1,990	4.8	1,100	21.7
S4a	03/04/99	Gansberg	DI	6.54	0.42	37.5	1,410	3.8	540	14.5
S5a	03/04/99	Gansberg	HRB	6.28	0.30	33.4	1,300	6.2	780	24.9
S6a	03/04/99	Neddenriep	DWB	6.06	0.19	47.4	1,860		710	52.6
S7a	03/04/99	Bruns	JaC	6.20	0.11	43.2	1,800	1.5	800	7.3
S8a	03/04/99	Dressler	SOD	6.42	0.12	15.5	222	0.4	360	8.7

Site	Date	Cl mg/L	SO4 mg/Kg	CEC meq/100g	Cu mg/Kg	Mo mg/Kg	Ca mg/L	Mg mg/L	Na mg/L	SAR	% Na
S2a	03/04/99		37		17.0	< 1.0	53.2	27.0	174.0	4.84	5.4
S3a	03/04/99		4		24.0	< 1.0	8.0	2.1	21.3	1.73	1.2
S4a	03/04/99		1		39.0	< 1.0	26.8	6.1	47.9	2.17	1.9
S5a	03/04/99		3		26.0	< 1.0	27.1	5.2	20.7	0.95	< 1.0
S6a	03/04/99		3		31.0	< 1.0	7.1	1.8	24.3	2.12	1.8
S7a	03/04/99	<	1		140.0	< 1.0	9.6	2.0	8.1	0.62	< 1.0
S8a	03/04/99	<	1		20.0	< 1.0	7.3	3.1	13.5	1.05	< 1.0

limitations were exceeded as follows (a ✓ indicates objective exceeded):

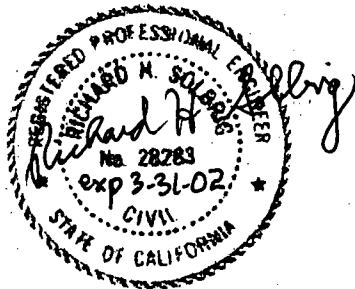
Site	Location	TDS		Cl ⁻		TKN		NO ₃ -N		Total N		Total P		SO ₄		Boron		Exch Na %	
		Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence
SW-01	Carson River, Woodfords	55		1.0	✓	0.13	✓	0.02	✓	0.15	✓	0.02		2.0	✓	0.02		20	
SW-06	Carson River, Stateline	70		2.5		0.22	✓	0.03		0.25	✓	0.03		2.0	✓	0.02	✓	20	✓
SW-02	Indian Creek, Upper	100		6.0						0.30		0.03		8.0		0.25		30	✓
SW-03	Indian Creek, Mid	100		6.0						0.30		0.03		8.0		0.25		30	
SW-04	Indian Creek, Lower	100		6.0						0.30	✓	0.03		8.0		0.25		30	
SW-10	Indian Creek, Stateline	100		6.0						0.30	✓	0.03		8.0		0.25		30	

The Blue Green Algae tests for April are included. March Soils results are not yet available; they will be sent to you with the June report.

Certification

I hereby certify that the enclosed monitoring report was prepared under my direct supervision and that I am a duly Registered Engineer under the laws of the State of California.

Sincerely,



Richard Solbrig,
Assistant Manager/Engineer

Enclosures:

1.

May Monthly Report	Pages
Wastewater Treatment plant	2
Permit Compliance Record	1
Export pipeline inspection	1
Sample site locations	2
Monitoring wells (ERB) and Heavenly Valley Creek (HVC)	1
Alpine County Surfacewaters, Groundwaters and HPR	5
Indian Creek Reservoir	1
Alpine County soils -	0
Total number of pages:	13

cc: Calif. Dept. of Health Services, ODW - Jess Morehouse
El Dorado Co. Dept. of Environmental Health - Virginia Huber
Nevada Division of Environmental Protection - Wendel McCurry
Alpine County Health Department - Dr. Richard Botto
Alpine County Health Department - Jim Goodloe
Alpine County Board of Supervisors
U.S. EPA, Region 9, WTR-7, NPDES/DMR
Desert Research Group (Alpine County Consultants) - Bill Albright
STPUD Board of Directors
STPUD General Manager / District Engineer - Robert G. Baer
STPUD Manager of Operations - Ross Johnson
STPUD Laboratory Director - Terry Powers
STPUD Manager of Alpine County Operations - Hal Bird

**SOUTH TAHOE PUBLIC UTILITY DISTRICT
WASTEWATER TREATMENT PLANT MONTHLY REPORT**

06/08/99
10:31:41

MAY 1999

Date	Day	2-Hr Peak		FLOW MGD		PRECIP		D.O. mg/L Fin	COD mg/L		BOD mg/L		SS mg/L		
		Inf	Inf	Eff	Pond Return	Pond Inf	Inch		Type	Raw	Fin	Raw	Fin	Raw	Fin
05/01/99	Sat	5.68	7.6	5.16				4.23	350	37.0	154	5.5	129	2.2	
05/02/99	Sun	5.37	7.4	5.47			0.05	Snow	3.92	306					
05/03/99	Mon	5.15	6.1	4.72			0.08	Snow	4.80	310					
05/04/99	Tue	4.85	6.2	4.87					4.78	25.7		5.8		2.4	
05/05/99	Wed	5.16	6.4	3.98					5.73	288	25.0				
05/06/99	Thu	5.04	6.2	4.51					4.24	310					
05/07/99	Fri	5.07	7.2	5.13					4.37	283					
05/08/99	Sat	5.64	7.5	5.59					4.50	310	37.6		113	1.9	
05/09/99	Sun	4.90	7.2	4.66					4.82	368					
05/10/99	Mon	4.94	6.1	4.53					5.30	349					
05/11/99	Tue	4.94	5.9	4.62					4.93	326					
05/12/99	Wed	4.95	6.3	4.29					5.20	320	34.9	122	4.0	118	1.6
05/13/99	Thu	4.83	6.5	4.67					5.40	333					
05/14/99	Fri	4.88	6.2	4.62					5.24	322					
05/15/99	Sat	5.30	7.4	4.54					7.88	334	38.0	163	5.8	124	2.1
05/16/99	Sun	5.32	7.6	5.71					4.74	317					
05/17/99	Mon	4.92	6.2	4.75					5.97	336					
05/18/99	Tue	5.26	7.4	5.14					3.95	317					
05/19/99	Wed	4.91	7.0	4.89					4.96	414	36.6	150	5.0	146	3.8
05/20/99	Thu	5.09	6.7	4.64					5.84	322					
05/21/99	Fri	5.05	6.8	4.96					5.83	361					
05/22/99	Sat	5.35	7.6	4.67					6.66	380	29.2	129	4.4	123	2.1
05/23/99	Sun	5.48	7.4	5.20					5.32	409					
05/24/99	Mon	4.86	6.4	4.88			0.23	Rain	6.07	329					
05/25/99	Tue	5.09	6.5	4.55					7.03	407					
05/26/99	Wed	5.22	7.0	4.85					4.85	342	34.0	123	4.3	121	1.6
05/27/99	Thu	5.35	6.6	5.08					5.25	345					
05/28/99	Fri	5.25	7.2	5.21					6.14	359					
05/29/99	Sat	5.58	7.2	5.39					5.29	432	38.7	164	9.9	165	4.4
05/30/99	Sun	5.70	8.0	5.56					7.65	379					
05/31/99	Mon	5.28	7.7	5.14					5.29	271					
PERMIT MAX		7.7								300		45		60	
PERMIT MIN															
PERMIT AVE										60		30		30	
TOTAL		160.41	213.5	151.98			0.36		166.18	10229	336.7	1005	44.7	1039	22.0
MAXIMUM		5.70	8.0	5.71			0.23		7.88	432	38.7	164	9.9	165	4.4
MINIMUM		4.83	5.9	3.98			0.05		3.92	271	25.0	122	4.0	113	1.6
AVERAGE		5.17	6.9	4.90			0.12		5.36	341	33.7	144	5.6	130	2.4
# Tests		31	31	31	0	0	3		31	30	10	7	8	8	9

**SOUTH TAHOE PUBLIC UTILITY DISTRICT
WASTEWATER TREATMENT PLANT MONTHLY REPORT**

06/08/99
10:31:41

MAY 1999

Date	Day	SETTLEABLE SOLIDS mL/L		MBAS mg/L		pH Units		TURBIDITY NTU		Cl2 mg/L		FINAL COLIFORMS MPN/100 mL			TDS mg/L		ALKALINITY mg/L	
		Raw	Fin	Raw	Fin	Raw	Fin	Fin	Fin	Fin	Total	7day-	Median	Raw	Fin	Raw	Fin	
05/01/99	Sat	8.5	< 0.1			7.33	7.51	2.00	4.76	<	2	<	2			136	122	
05/02/99	Sun	8.5	< 0.1			7.43	7.26	2.60	4.57	<	2	<	2			143	126	
05/03/99	Mon	8.0	< 0.1			7.50	7.32	2.30	5.15	<	2	<	2			132	118	
05/04/99	Tue		< 0.1		0.068		7.35	1.80	4.27	<	2	<	2		198		117	
05/05/99	Wed	8.5	< 0.1			7.30	7.44	1.50	4.37	<	2	<	2	203		130	118	
05/06/99	Thu	9.0	< 0.1			7.34	7.36	1.40	4.37	<	2	<	2			140	116	
05/07/99	Fri	8.5	< 0.1			7.61	7.41	1.50	5.15	<	2	<	2			135	116	
05/08/99	Sat	9.5	< 0.1			7.42	7.47	1.70	3.89	<	2	<	2			140	119	
05/09/99	Sun	10.5	< 0.1			7.50	7.40	1.80	5.34	<	2	<	2			148	121	
05/10/99	Mon	9.5	< 0.1			7.35	7.34	1.90	4.27	<	2	<	2			140	121	
05/11/99	Tue	8.5	< 0.1			7.47	7.48	1.60	3.59	<	2	<	2			136	121	
05/12/99	Wed	8.5	< 0.1			7.49	7.60	1.50	3.30	<	2	<	2	225	212	136	121	
05/13/99	Thu	9.5	< 0.1			7.56	7.49	1.50	2.33	<	2	<	2			136	120	
05/14/99	Fri	8.5	< 0.1			7.38	7.20	1.80	5.73	<	2	<	2			137	116	
05/15/99	Sat	8.0	< 0.1			7.35	7.48	1.90	3.21	<	2	<	2			143	126	
05/16/99	Sun	9.0	< 0.1			7.36	7.28	2.00	5.25	<	2	<	2			146	124	
05/17/99	Mon	9.5	< 0.1			7.38	7.72	1.90	3.50	<	2	<	2			140	126	
05/18/99	Tue	9.0	< 0.1			7.39	7.80	2.40	3.79	<	2	<	2			140	124	
05/19/99	Wed	10.5	< 0.1			7.50	7.52	2.40	3.69	<	2	<	2	231	208	138	124	
05/20/99	Thu	9.5	< 0.1			7.58	7.43	1.70	4.27		2	<	2			136	121	
05/21/99	Fri	10.0	< 0.1			7.34	7.37	1.50	4.08	<	2	<	2			140	124	
05/22/99	Sat	10.0	< 0.1			7.47	7.55	1.60	3.88	<	2	<	2			143	126	
05/23/99	Sun	9.0	< 0.1			7.31	7.35	1.60	3.98		2	<	2			144	126	
05/24/99	Mon	8.0	< 0.1			7.34	7.36	1.60	4.18	<	2	<	2			140	124	
05/25/99	Tue	10.5	< 0.1			7.50	7.62	1.60	3.89	<	2	<	2			137	121	
05/26/99	Wed	8.5	< 0.1			7.43	7.65	1.70	4.86	<	2	<	2	217	200	132	121	
05/27/99	Thu	8.0	< 0.1			7.55	7.52	2.00	5.05	<	2	<	2			133	120	
05/28/99	Fri	9.0	< 0.1			7.34	7.46	2.20	4.57	<	2	<	2			137	126	
05/29/99	Sat	10.5	< 0.1			7.33	7.69	3.30	3.59	<	2	<	2			149	135	
05/30/99	Sun	11.0	< 0.1			7.43	7.52	3.30	3.79	<	2	<	2			157	140	
05/31/99	Mon	10.5	< 0.1			7.60	7.72	3.20	3.98	<	2	<	2			154	142	
PERMIT MAX			0.1		2.0		8.5	20			240		23					
PERMIT MIN							6.5											
PERMIT AVE					1.0			10										
TOTAL		276.0	3.1	0.00	0.068	222.88	231.67	60.80	130.65		62		62	876	818	4198	3822	
MAXIMUM		11.0	0.1	ERR	0.068	7.61	7.80	3.30	5.73		2		2	231	212	157	142	
MINIMUM		8.0	0	ERR	0.068	7.30	7.20	1.40	2.33		2		2	203	198	130	116	
AVERAGE		9.2	0.1	ERR	0.068	7.43	7.47	1.96	4.21		2		2	219	205	140	123	
# Tests		30	31	0	1	30	31	31	31		31		31	4	4	30	31	

SOUTH TAHOE PUBLIC UTILITY DISTRICT
MEMORANDUM

Date: May 25, 1999

To: Bob Baer, Diane Noble, Terry Powers

From: Greg Schrempp

Topic: Export Line Inspection

On May 18 and 20 1999, Tim Rieger and I conducted our check of the District's export line from the treatment plant to where the "C" line daylights at Harvey Place at Station 564+04. Numerous wet spots were checked, however no leaks were found.

SAMPLE LOCATIONS

TAHOE BASIN MONITORING WELLS

<u>Site</u>	<u>Location</u>
ERB	Emergency Retention Basin
CONTROL	North of Post Office
MW02-25, -50	Emergency Retention Basin, S side
MW03-25, -50	Emergency Retention Basin, S side
MW04-25, -50	Emergency Retention Basin, W side
MW07-25, -50	Emergency Retention Basin, N side
MW08-25, -50	Pond #1, SW corner
MW11	S.E. corner of wastewater treatment plant grounds
MW12	South of Emergency Pump Building, for buried sludge
MW13	Pond 2, along Heavenly Valley Creek, for buried sludge

HEAVENLY VALLEY CREEK

HVC-1	At Pioneer Trail
HVC-2	250 ft upstream of Pond #2
HVC-3	25 ft downstream of Johnson Blvd.
HVC-4	Effluent of drain pipe from Lower Shop area
HVC-5	Effluent of drainage pipe along Johnson Blvd, 10 feet upstream of Johnson Blvd.

ALPINE COUNTY MONITORING WELLS

<u>Site</u>	<u>Location</u>
ACMW-01AW	Below main dam at Harvey Place Reservoir
ACMW-01BE	Below auxiliary dam at Harvey Place Reservoir
ACMW-02, N&S	On dam access road at Diamond Valley Road
ACMW-03	Bruns ranch, east side of Highway 88
ACMW-04W	Gansberg ranch, west side of Highway 88
ACMW-05	Dressler ranch
ACMW-06, N&S	Celio ranch, on Diamond Valley Road

ALPINE SOILS

<u>Site</u>	<u>Ranch</u>
S2	Celio
S3	Hall
S4	Gansberg
S5	Gansberg
S6	Neddenriep
S7	Bruns
S8	Dressler

ALPINE GROUNDWATERS

<u>Site</u>	<u>Homeowner</u>
GW-01	Sagues
GW-03	Smith/Springmeyer
GW-04	Celio
GW-05	Neddenriep
GW-07	Gansberg, Jr.
GW-08	Arant
GW-11	Diamond Valley School
GW-14	Sierra Pines Store

ALPINE SURFACEWATERS

<u>Site</u>	<u>Location</u>
SW-01	Carson River, Woodfords
SW-02	Indian Creek, @ HWY 89
SW-03	Indian Creek, @ upper bridge
SW-04	Indian Creek, @ lower bridge
SW-05	Carson River, Paynesville
SW-06	Carson River, Stateline
SW-07	Fredericksberg Ditch, Stateline
SW-08	Irrigation Ditch along Carson River Road
SW-09	Carson River, Dressler Lane
SW-10	Indian Creek, @ Smith-Springmeyer Ranch

TAHOE BASIN MONITORING

06/10/99

Site	Date	ID	Location	Depth msl	Temp C	pH	EC umhos	Cl mg/L	COD mg/L	NO3-N mg/L	Comment
Buried Sludge Monitoring											
MW11	05/25/99	990525-14	Sludge Pond	6270.1	8.6	6.43	81	0.9	< 5.0	0.152	
MW12	05/25/99	990525-15	Sludge Pond	6267.5	8.3	6.17	179	2.2	< 5.0	0.106	
MW13	05/25/99	990525-16	Sludge Pond	6258.6	7.7	6.93	937	5.0	30.8	6.840	
ERB Monitoring											
CONTROL	05/25/99	990525-07	At Post Office	6284.4	11.0	6.84	176	6.8	< 5.0	2.460	
MW01.5	05/25/99	990525-08	SW corner of ERB	6269.8	10.5	7.27	176	3.6	< 5.0	0.739	
MW02-50	05/25/99	990525-09	Black Bart side of ERB	6269.6	12.1	6.47	444	43.4	< 5.0	9.880	
MW03-50	05/25/99	990525-10	Black Bart side of ERB	6269.7	11.0	6.07	415	42.2	< 5.0	5.110	
MW04-50	05/25/99	990525-11	Hank Monk side of ERB	6272.9	10.3	6.10	78	6.2	< 5.0	0.031	
MW07-50	05/25/99	990525-12	North side of ERB	6280.9	9.4	6.25	266	26.4	5.3	0.600	
Heavenly Valley Creek											
HVC-1	05/11/99	990511-15	Downstream of Pioneer		3.5	7.13	42	0.8	< 5.0	0.054	
HVC-2	05/11/99	990511-16	250' upstream of Pond #2		2.8	6.88	43	0.5	< 5.0	< 0.010	
HVC-3	05/11/99	990511-17	25' downstream of Johnson Blvd		3.2	6.78	46	1.3	< 5.0	< 0.010	
HVC-4	05/11/99	990511-18	Effluent of drain from Lower Sho		5.8	6.80	105	0.7	6.3	0.033	
HVC-5	05/11/99	90511-HVC	Effluent of drainage pipe along J								Dry
Treatment Plant Monitoring											
MW08-25	05/25/99	990525-13	SW side of Pond #1	6249.1	9.4	6.30	991	51.0	75.6	< 0.010	

ALPINE COUNTY MONITORING

05/10/99

Site	Date	ID	Location	Temp C	pH	EC umhos	DO mg/L	Alk mg/L	TDS mg/L	SS mg/L	Turb NTU	Cl mg/L	SO4 mg/L
Alpine Monitoring Wells													
ACMW-01AW	05/18/99	990518-12	Main Dam	10.4	6.33	104		46	78		.95	1.5	2.8
ACMW-01BE	05/18/99	990518-13	Secondary Dam	11.5	6.10	168		77	111		.85	2.1	2.5
ACMW-02N	05/18/99	990518-14	Access Gate	12.0	6.40	134		58	90		.26	3.0	3.2
ACMW-02S	05/18/99	990518-15	Access Gate	10.6	6.37	92		40	70		1	1.5	2.6
ACMW-03	05/18/99	990518-16	HWY 88	9.6	6.21	159		29	112		5.4	13.8	11.7
ACMW-04W	05/18/99	990518-17	Gansberg	12.0	5.89	197		52	139		7.4	11.9	11.4
ACMW-06N	05/18/99	990518-18	Celio	11.1	6.78	684		256	425		14	52.6	23.2
ACMW-06S	05/18/99	990518-19	Celio	12.4	6.78	661		208	404		1.6	74.8	28.2
Groundwaters													
GW-01	05/11/99	990511-06	Cohen	10.4	6.92	176		65	101		79	10.0	
GW-03	05/11/99	990511-07	Smith/Springmeyer	13.8	7.38	312		124	223		.06	1.5	
GW-04	05/11/99	990511-08	Celio	14.0	7.50	266		113	196		.19	3.0	
GW-05	05/11/99	990511-09	Neddenriep	11.9	6.48	291		60	183		.06	27.5	
GW-07	05/11/99	990511-10	Gansberg	10.6	6.28	131		53	96		.09	1.6	
GW-08	05/11/99	990511-11	Arant	11.0	6.43	227		51	143		.68	19.5	
GW-11	05/11/99	990511-12	Diamond Val. School	15.7	6.08	102		44	79		.07	1.0	
GW-14	05/11/99	990511-13	Sierra Pines	10.0	6.44	111		50	85		.08	1.2	
Reservoirs													
HPR	05/04/99	990504-23	Harvey Place Reservoir	10.7	7.53	449	5.40	103	205	1.66	1.1	45.8	18.7
Surfacewaters: Carson R													
SW-01	05/04/99	990504-14	Carson R Woodfords	2.3	7.32	55	12.10	24	45	5.34	1.4	1.2	2.5
SW-05	05/04/99	990504-18	Carson R Paynesville	5.5	7.34	56	10.80	25	49	5.30	1.4	1.4	2.5
SW-06	05/04/99	990504-19	Carson R Stateline	6.3	7.40	69	10.60	26	50	8.96	1.5	1.3	2.5
SW-08	05/04/99	990504-20	Irrigation Ditch	14.4	7.25	83	8.20	38	72	12.70	1.9	1.4	3.0
SW-09	05/04/99	990504-21	Carson R Dressler Ln	6.2	7.39	65	10.80	29	55	6.18	1.8	1.8	2.6
Surfacewaters: Indian Cr													
SW-02	05/04/99	990504-15	Indian Cr Upper	5.4	7.45	83	8.60	42	69	5.44	2.2	0.7	2.6
SW-03	05/04/99	990504-16	Indian Cr Mid	6.1	7.25	101	10.00	48	77	6.56	3.7	1.3	2.8
SW-04	05/04/99	990504-17	Indian Cr Lower	6.9	7.21	79	9.90	37	66	13.60	3.7	1.4	3.2
SW-10	05/04/99	990504-22	Indian Cr at Bruns	7.2	7.20	81	10.10	37	65	18.30	5.5	1.4	3.5

ALPINE COUNTY MONITORING

06/09/99

Site	Date	TotalP mg/L	PO4-P mg/L	TKN mg/L	NH3-N mg/L	NO2-N mg/L	NO3-N mg/L	Total N mg/L	MBAS mg/L
Alpine Monitoring Wells									
ACMW-01A	05/18/99		<	0.100	< 0.020	< 0.010	0.345	0.455	
ACMW-01B	05/18/99		<	0.100	< 0.020	< 0.010	0.461	0.571	
ACMW-02N	05/18/99		<	0.100	< 0.020	< 0.010	0.124	0.234	
ACMW-02S	05/18/99			0.136	< 0.020	< 0.010	0.142	0.288	
ACMW-03	05/18/99			0.316	< 0.020	< 0.010	2.620	2.946	
ACMW-04W	05/18/99			0.608	0.020	< 0.010	2.480	3.098	
ACMW-06N	05/18/99			0.385	0.037	< 0.010	< 0.010	0.405	
ACMW-06S	05/18/99			0.162	< 0.020	< 0.010	0.069	0.241	
Groundwaters									
GW-01	05/11/99			0.377	0.028	< 0.010	0.016	0.403	
GW-03	05/11/99			0.283	0.022	< 0.010	0.668	0.961	
GW-04	05/11/99			0.180	< 0.020	< 0.010	0.767	0.957	
GW-05	05/11/99			0.212	< 0.020	< 0.010	3.370	3.592	
GW-07	05/11/99			0.116	< 0.020	< 0.010	0.883	1.009	
GW-08	05/11/99			0.072	0.020	< 0.010	3.560	3.642	
GW-11	05/11/99			0.096	< 0.020	< 0.010	0.440	0.546	
GW-14	05/11/99			0.248	< 0.020	< 0.010	0.420	0.778	
Reservoirs									
HPR	05/04/99	1.830	1.830	16.000	16.300	0.067	1.140	17.207	0.073
Surfacewaters: Carson R									
SW-01	05/04/99	< 0.010	< 0.010	0.202	< 0.020	< 0.010	0.029	0.241	
SW-05	05/04/99	< 0.010	< 0.010	0.304	< 0.020	< 0.010	0.020	0.334	
SW-06	05/04/99	< 0.010	< 0.010	0.238	0.020	< 0.010	0.015	0.263	
SW-08	05/04/99	0.012	0.012	0.355	< 0.020	< 0.010	0.122	0.487	
SW-09	05/04/99	< 0.010	< 0.010	0.263	0.026	< 0.010	0.026	0.299	
Surfacewaters: Indian Cr									
SW-02	05/04/99	< 0.010	< 0.010	0.272	< 0.020	< 0.010	< 0.010	0.292	
SW-03	05/04/99	0.022	0.022	0.235	< 0.020	< 0.010	< 0.010	0.255	
SW-04	05/04/99	0.024	0.024	0.357	< 0.020	< 0.010	0.023	0.390	
SW-10	05/04/99	0.026	0.026	0.358	< 0.020	< 0.010	0.025	0.393	

ALPINE COUNTY MONITORING

06/10/99

Site	Date	COD mg/L	BOD mg/L	O & G mg/L	Boron mg/L	Ca mg/L	Mg mg/L	Na mg/L	K mg/L	SAR	Exch Na %	Hardness mg/L	Water Level MSL or Ft
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Alpine Monitoring Wells

ACMW-01A	05/18/99	<	5									43	5482.4
ACMW-01B	05/18/99	<	5									70.1	5495.1
ACMW-02N	05/18/99	<	5									45.9	5459.7
ACMW-02S	05/18/99	<	5									35.3	5461.7
ACMW-03	05/18/99	<	5									24.4	5039.5
ACMW-04W	05/18/99		6									49.1	4904.1
ACMW-06N	05/18/99	<	5									249	5216.2
ACMW-06S	05/18/99	<	5									265	5205.2

Groundwaters

GW-01	05/11/99	<	5									53.3	
GW-03	05/11/99	<	5									123	
GW-04	05/11/99	<	5									99.4	
GW-05	05/11/99	<	5									94.3	
GW-07	05/11/99	<	5									49.2	
GW-08	05/11/99	<	5									40	
GW-11	05/11/99	<	5									41	
GW-14	05/11/99	<	5									33.8	

Reservoirs

HPR	05/04/99		14	3	0.17	15.0	3.2	38.1	7.6	2.33	57.8		58.1
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Surfacewaters: Carson R

SW-01	05/04/99	<	5	1	0.02	5.7	1.6	2.5	0.9	0.24	20.0		
SW-05	05/04/99	<	5	1	< 0.01	6.1	1.6	2.6	1.0	0.24	19.5		
SW-06	05/04/99	<	5	1	0.03	6.0	1.7	2.8	1.1	0.26	21.0		
SW-08	05/04/99		9	1	0.02	8.7	2.1	5.4	1.8	0.43	26.5		
SW-09	05/04/99	<	5	1	0.01	6.6	1.9	3.2	1.2	0.28	21.0		

Surfacewaters: Indian Cr

SW-02	05/04/99		6	1	0.04	8.0	2.0	5.0	1.1	0.41	26.9		
SW-03	05/04/99	<	5	1	< 0.01	10.2	2.5	6.3	1.4	0.45	26.6		
SW-04	05/04/99		7	1	0.02	7.6	2.3	4.4	1.8	0.36	23.8		
SW-10	05/04/99	<	5	1	< 0.01	8.0	2.4	4.2	1.8	0.33	22.0		

**ALPINE COUNTY
BACTERIOLOGICAL MONITORING**

06/09/99

Alpine Monitoring Wells

Site	Date		Total Coliform MPN/100mL		Fecal Coliform MPN/100mL		Fecal Streptococci MPN/100mLL
ACMW-01A	05/18/99		2.2	<	1.1		
ACMW-01B	05/18/99		1.1	<	1.1		
ACMW-02N	05/18/99	<	1.1	<	1.1		
ACMW-02S	05/18/99		2.2	<	1.1		
ACMW-03	05/18/99		5.1	<	1.1		
ACMW-04W	05/18/99	>	23	<	1.1		
ACMW-06N	05/18/99	<	1.1	<	1.1		
ACMW-06S	05/18/99		12	<	1.1		

Groundwaters

Site	Date		Total Coliform MPN/100mL		Fecal Coliform MPN/100mL		Fecal Streptococci MPN/100mLL
GW-01	05/11/99	<	1.1	<	1.1		
GW-03	05/11/99	<	1.1	<	1.1		
GW-04	05/11/99	<	1.1	<	1.1		
GW-05	05/11/99	<	1.1	<	1.1		
GW-07	05/11/99	<	1.1	<	1.1		
GW-08	05/11/99	<	1.1	<	1.1		
GW-11	05/11/99	<	1.1	<	1.1		
GW-14	05/11/99	<	1.1	<	1.1		

Reservoirs

Site	Date		Total Coliform MPN/100mL		Fecal Coliform MPN/100mL		Fecal Streptococci MPN/100mLL
HPR	05/04/99		2		2	<	2

Surfacewaters: Carson R

Site	Date		Total Coliform MPN/100mL		Fecal Coliform MPN/100mL		Fecal Streptococci MPN/100mLL
SW-01	05/04/99		40	<	30	<	30
SW-05	05/04/99		40	<	30	<	30
SW-06	05/04/99	<	30	<	30	<	30
SW-08	05/04/99		230		90		90
SW-09	05/04/99		330		430	<	30

Surfacewaters: Indian Cr

Site	Date		Total Coliform MPN/100mL		Fecal Coliform MPN/100mL		Fecal Streptococci MPN/100mLL
SW-02	05/04/99		210		90	<	30
SW-03	05/04/99		230		230		930
SW-04	05/04/99		430		430	<	30
SW-10	05/04/99		930		930	<	30

**ALPINE COUNTY
BLUE GREEN ALGAE**

ID#	Site	Location	Date	Colonies #	Colony # Cells	Filaments #	Filaments # Cells	Filaments #	Filament Length	Single Cells, #
April, 1999										
990407-06	SW-01	Carson R Woodfords	04/07/99	0	0	0	0	0	0	0
990407-07	SW-02	Indian Cr Upper	04/07/99	0	0	0	0	0	0	0
990407-08	SW-03	Indian Cr Mid	04/07/99	0	0	0	0	0	0	0
990407-09	SW-04	Indian Cr Lower	04/07/99	0	0	0	0	0	0	0
990407-10	SW-05	Carson R Paynesville	04/07/99	0	0	0	0	0	0	0
990407-11	SW-06	Carson R Stateline	04/07/99	0	0	0	0	0	0	0
990407-12	SW-08	Irrigation Ditch	04/07/99	0	0	0	0	0	0	0
990407-13	HPR	Harvey Place Reservoir	04/07/99	0	0	0	0	0	0	0
990407-14	ICR	Indian Creek Reservoir	04/07/99	0	0	0	0	0	0	0
May, 1999										
990504-14	SW-01	Carson R Woodfords	05/04/99	0	0	0	0	0	0	0
990504-15	SW-02	Indian Cr Upper	05/04/99	0	0	0	0	0	0	0
990504-16	SW-03	Indian Cr Mid	05/04/99	0	0	0	0	0	0	0
990504-17	SW-04	Indian Cr Lower	05/04/99	0	0	0	0	0	0	0
990504-18	SW-05	Carson R Paynesville	05/04/99	0	0	0	0	0	0	0
990504-19	SW-06	Carson R Stateline	05/04/99	0	0	0	0	0	0	0
990504-20	SW-08	Irrigation Ditch	05/04/99	0	0	0	0	0	0	0
990504-21	SW-09	Carson R Dressler Ln	05/04/99	0	0	0	0	0	0	0
990504-22	SW-10	Indian Cr at Bruns	05/04/99	0	0	0	0	0	0	0
990504-23	HPR	Harvey Place Reservoir	05/04/99	0	0	0	0	0	0	0
990504-24	ICR	Indian Creek Reservoir	05/04/99	0	0	0	0	0	0	0

Indian Creek Reservoir

ID: 990504-24

Date: 05/04/99
Hour: 09:53

Sampler: Arce and Chernago

Minerals

Temp, C	11.6	SS, mg/L	9.34	Calcium, mg/L	9.99
pH	8.06	Turbidity, NTU	17	Magnesium, mg/L	1.8
EC, umhos/cm	89	Alkalinity, mg/L	39.2	Potassium, mg/L	1.89
DO, mg/L	9.20	Sulfate, mg/L	5.88	Sodium, mg/L	4.85
Chloride, mg/L	1.36	Boron:	< .01	SAR, Calculated	.37
TDS, mg/L	82			Exch Na, %	23.28

Nutrients

TKN, mg/L	0.812	NO ₂ -N, mg/L	< 0.010	Total P, mg/L	0.026
NH ₃ -N, mg/L	< 0.020	NO ₃ -N, mg/L	< 0.010	PO ₄ -P, mg/L	< 0.010
FreeNH ₃ -N:	< 0.001	Total N, mg/L	0.832		(Total P and PO ₄ -P filtered through 0.45um filter)

Organics

BOD, mg/L	1.54
COD, mg/L	10.0
MBAS, mg/L	

Site Conditions

Water Level, ft		Algae:	No
Air Temp:	11.1	Weeds:	Yes
Ice%:	0	Floaters:	No
WaterColor:	Green		

Microbiological

Total Coliform:	< 2
Fecal Coliform:	< 2
Fecal Strep:	13

(Results reported as MPN/100 mL)

The West Fork, Carson River Water Quality Objectives and East Fork, Carson River limitations were exceeded as follows (a ✓ indicates objective exceeded):

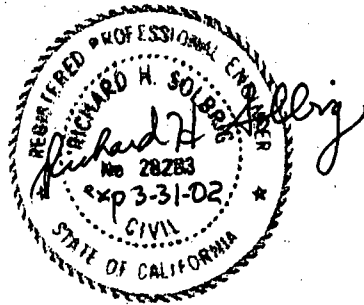
Site	Location	TDS		Cl		TKN		NO ₃ -N		Total N		Total P		SO ₄		Boron		Exch Na %	
		Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence
SW-01	Carson River, Woodfords	55	✓	1.0	✓	0.13	✓	0.02		0.15	✓	0.02		2.0	✓	0.02		20	✓
SW-06	Carson River, Stateline	70		2.5		0.22		0.03		0.25	✓	0.03		2.0	✓	0.02		20	✓
SW-02	Indian Creek, Upper	100		6.0						0.30		0.03		8.0		0.25		30	✓
SW-03	Indian Creek, Mid	100		6.0						0.30	✓	0.03	✓	8.0		0.25		30	
SW-04	Indian Creek, Lower	100		6.0						0.30	✓	0.03	✓	8.0		0.25		30	
SW-10	Indian Creek, Stateline	100		6.0						0.30		0.03		8.0		0.25		30	

The Blue Green Algae tests for April have not yet been completed. The results will be sent to you as soon as they are available. March Soils results are not yet available; they will be sent to you with the May report.

Certification

I hereby certify that the enclosed monitoring report was prepared under my direct supervision and that I am a duly Registered Engineer under the laws of the State of California.

Sincerely,



Richard Solbrig,
Assistant Manager/Engineer

Enclosures:

1.

April Monthly Report	Pages
Wastewater Treatment plant	2
Permit Compliance Record	1
Export pipeline inspection	1
Sample site locations	2
Monitoring wells (ERB) and Heavenly Valley Creek (HVC)	1
Alpine County Surfacewaters, Groundwaters and Reservoirs	4
Alpine County soils - March, 1999	0
Total number of pages:	11

- cc: Calif. Dept. of Health Services, ODW - Jess Morehouse
El Dorado Co. Dept. of Environmental Health - Virginia Huber
Nevada Division of Environmental Protection - Wendel McCurry
Alpine County Health Department - Dr. Richard Botto
Alpine County Health Department - Jim Goodloe
Alpine County Board of Supervisors
EPA - Permit and Compliance Branch, W-5 - Bill Pierce
Desert Research Group (Alpine County Consultants) - Bill Albright
STPUD Board of Directors
STPUD General Manager / District Engineer - Robert G. Baer
STPUD Manager of Operations - Ross Johnson
STPUD Laboratory Director - Terry Powers
STPUD Manager of Alpine County Operations - Hal Bird

**SOUTH TAHOE PUBLIC UTILITY DISTRICT
WASTEWATER TREATMENT PLANT MONTHLY REPORT**

05/10/99

09:07:34

APRIL 1999

Date	Day	FLOW MGD			Pond Inf	PRECIP		D.O. mg/L Fin	COD mg/L		BOD mg/L		SS mg/L	
		Inf	2-Hr Peak Inf	Eff		Pond Return	Inch		Type	Raw	Fin	Raw	Fin	Raw
04/01/99	Thu	4.90	7.8	4.51				5.58	333					
04/02/99	Fri	5.65	7.4	5.74				3.77	375					
04/03/99	Sat	5.47	7.9	5.40		0.48	Snow	5.00	364	34.0	164	6.0	116	3.6
04/04/99	Sun	5.41	7.3	5.73				4.41	329					
04/05/99	Mon	5.25	6.8	5.21		0.74	Snow	8.78	339	35.6	151	6.6	133	3.6
04/06/99	Tue	5.09	6.6	4.50		0.30	Snow	5.50	338					
04/07/99	Wed	5.36	6.8	5.15		0.11	Snow	5.55	384					
04/08/99	Thu	5.28	6.5	4.98		0.59	Snow	5.88	375					
04/09/99	Fri	5.18	6.8	5.21				4.55	370					
04/10/99	Sat	5.66	7.8	4.71				6.56	384	18.2	178	5.7	126	2.1
04/11/99	Sun	5.55	7.8	5.33				4.79	329					
04/12/99	Mon	5.35	6.6	5.31				3.96	308					
04/13/99	Tue	5.54	6.4	5.19				4.92	285					
04/14/99	Wed	5.37	6.8	4.78				5.22	278	18.9	124	4.4	106	1.9
04/15/99	Thu	5.54	7.0	5.27				4.18	306					
04/16/99	Fri	5.74	7.4	5.52				3.91	331					
04/17/99	Sat	6.33	8.0	5.54				5.46	334	23.0	131	5.0	106	2.1
04/18/99	Sun	6.48	8.6	6.13				2.53	308					
04/19/99	Mon	5.70	7.2	5.72				2.41	285					
04/20/99	Tue	5.73	7.0	6.30				2.93	264					
04/21/99	Wed	5.50	7.2	5.73				3.79	342	28.6	149	3.7	134	2.2
04/22/99	Thu	5.40	7.0	5.31		0.06	Snow	4.85	306					
04/23/99	Fri	5.33	6.6	4.03				5.88	213					
04/24/99	Sat	5.84	7.6	5.67				4.52	308	21.8	142	3.4	110	1.4
04/25/99	Sun	5.90	8.0	5.94				4.99	319					
04/26/99	Mon	5.51	6.6	5.09				5.18	313					
04/27/99	Tue	5.28	6.4	5.14				4.91	294					
04/28/99	Wed	5.01	5.9	4.62		0.05	Snow	6.06	333	22.2	149	4.2	121	2.0
04/29/99	Thu	5.14	6.2	4.90				5.50	296					
04/30/99	Fri	5.19	6.5	5.15				5.73	354					
PERMIT MAX		7.7								300		45		60
PERMIT MIN														
PERMIT AVE										60		30		30
TOTAL		164.68	212.5	157.81				147.30	9697	202.3	1188	38.9	952	18.8
MAXIMUM		6.48	8.6	6.30				8.78	384	35.6	178	6.6	134	3.6
MINIMUM		4.90	5.9	4.03				2.41	213	18.2	124	3.4	106	1.4
AVERAGE		5.49	7.1	5.26				4.91	323	25.3	149	4.9	119	2.3
# Tests		30	30	30	0	0	7	30	30	8	8	8	8	8

**SOUTH TAHOE PUBLIC UTILITY DISTRICT
WASTEWATER TREATMENT PLANT MONTHLY REPORT**

05/10/99
09:07:34

APRIL 1999

Date	Day	SETTLEABLE SOLIDS mL/L		MBAS mg/L		pH Units		TURBIDITY NTU		Cl2	FINAL COLIFORMS MPN/100 mL			TDS mg/L		ALKALINITY mg/L	
		Raw	Fin	Raw	Fin	Raw	Fin	Fin	Fin	mg/L	Total	7day-	Median	Raw	Fin	Raw	Fin
04/01/99	Thu	9.0	< 0.1			7.42	7.34	2.20	6.22	<	2	<	2			122	122
04/02/99	Fri	10.0	< 0.1			7.29	7.22	1.90	5.54	<	2	<	2			122	122
04/03/99	Sat	8.5	< 0.1			7.41	7.64	2.20	4.95	<	2	<	2			132	128
04/04/99	Sun	10.0	< 0.1			7.35	7.30	1.90	4.47	<	2	<	2			126	131
04/05/99	Mon	9.5	< 0.1			7.30	7.60	2.20	4.66	<	2	<	2	223	213	129	126
04/06/99	Tue	10.0	< 0.1			7.50	7.55	1.90	6.12	<	2	<	2			122	125
04/07/99	Wed	11.0	< 0.1			7.43	7.38	2.00	6.61	<	2	<	2			133	125
04/08/99	Thu	8.5	< 0.1			7.61	7.44	2.00	6.41	<	2	<	2			139	126
04/09/99	Fri	8.5	< 0.1			7.49	7.41	2.00	5.05	<	2	<	2			137	126
04/10/99	Sat	10.0	< 0.1			7.43	7.59	1.60	6.22	<	2	<	2			147	128
04/11/99	Sun	10.0	< 0.1			7.37	7.22	1.60	6.02	<	2	<	2			142	128
04/12/99	Mon	8.0	< 0.1			7.40	7.25	1.70	5.93	<	2	<	2			131	122
04/13/99	Tue	7.0	< 0.1	2.53	0.036	7.30	7.38	1.70	5.25	<	2	<	2			128	117
04/14/99	Wed	7.0	< 0.1			7.30	7.50	1.50	5.34	<	2	<	2	223	210	127	111
04/15/99	Thu	7.0	< 0.1			7.42	7.37	1.50	5.73	<	2	<	2			125	111
04/16/99	Fri	9.0	< 0.1			7.42	7.30	1.70	5.83	<	2	<	2			124	108
04/17/99	Sat	9.0	< 0.1			7.54	7.45	1.60	5.73	<	2	<	2			132	114
04/18/99	Sun	8.5	< 0.1			7.30	7.17	1.70	4.95	<	2	<	2			134	118
04/19/99	Mon	8.0	< 0.1			7.27	7.21	1.50	3.98	<	2	<	2			119	114
04/20/99	Tue	8.0	< 0.1			7.29	7.32	1.50	6.70	<	2	<	2			122	104
04/21/99	Wed	8.5	< 0.1			7.29	7.38	1.60	7.77	<	2	<	2	221	196	119	102
04/22/99	Thu	7.0	< 0.1			7.49	7.32	1.40	7.58	<	2	<	2			120	105
04/23/99	Fri	9.5	< 0.1			7.32	7.36	1.10	4.86	<	2	<	2			125	109
04/24/99	Sat	8.5	< 0.1			7.37	7.42	1.30	6.51	<	2	<	2			131	116
04/25/99	Sun	9.5	< 0.1			7.35	7.26	1.20	5.44	<	2	<	2			134	122
04/26/99	Mon	9.5	< 0.1			7.42	7.29	1.30	3.89	<	2	<	2			131	121
04/27/99	Tue	9.0	< 0.1			7.38	7.63	1.50	5.54	<	2	<	2			131	117
04/28/99	Wed	10.0	< 0.1			7.40	7.51	1.60	4.86	<	2	<	2	211	198	130	118
04/29/99	Thu	9.0	< 0.1			7.60	7.47	1.20	4.47	<	2	<	2			127	116
04/30/99	Fri	8.5	< 0.1			7.37	7.23	1.30	5.44	<	2	<	2			131	118
PERMIT MAX			0.1		2.0		8.5	20			240	23					
PERMIT MIN							6.5										
PERMIT AVE					1.0			10									
TOTAL		265.5	3.0	2.53	0.036	221.83	221.51	49.40	168.07		60	60	878	817	3872	3550	
MAXIMUM		11.0	0.1	2.53	0.036	7.61	7.64	2.20	7.77		2	2	223	213	147	131	
MINIMUM		7.0	0	2.53	0.036	7.27	7.17	1.10	3.89		2	2	211	196	119	102	
AVERAGE		8.9	0.1	2.53	0.036	7.39	7.38	1.65	5.60		2	2	220	204	129	118	
# Tests		30	30	1	1	30	30	30	30		30	30	4	4	30	30	

SOUTH TAHOE
PUBLIC UTILITY DISTRICT
MEMORANDUM



Date: April 21, 1999
To: Bob Baer, Diane Noble
From: Tim Rieger
Topic: Export Line Check

On April 20, 1999, Greg Schrempp and I conducted a check of the District's export line from the treatment plant to station 564+06 near the Harvey Place reservoir.

Due to the heavy runoff many wet areas were checked. However, nothing positive was found.

CC Terry Powers

SAMPLE LOCATIONS

TAHOE BASIN MONITORING WELLS

<u>Site</u>	<u>Location</u>
ERB	Emergency Retention Basin
CONTROL	North of Post Office
MW02-25, -50	Emergency Retention Basin, S side
MW03-25, -50	Emergency Retention Basin, S side
MW04-25, -50	Emergency Retention Basin, W side
MW07-25, -50	Emergency Retention Basin, N side
MW08-25, -50	Pond #1, SW corner
MW11	S.E. corner of wastewater treatment plant grounds
MW12	South of Emergency Pump Building, for buried sludge
MW13	Pond 2, along Heavenly Valley Creek, for buried sludge

HEAVENLY VALLEY CREEK

HVC-1	At Pioneer Trail
HVC-2	250 ft upstream of Pond #2
HVC-3	25 ft downstream of Johnson Blvd.
HVC-4	Effluent of drain pipe from Lower Shop area
HVC-5	Effluent of drainage pipe along Johnson Blvd, 10 feet upstream of Johnson Blvd.

ALPINE COUNTY MONITORING WELLS

<u>Site</u>	<u>Location</u>
ACMW-01AW	Below main dam at Harvey Place Reservoir
ACMW-01BE	Below auxiliary dam at Harvey Place Reservoir
ACMW-02, N&S	On dam access road at Diamond Valley Road
ACMW-03	Bruns ranch, east side of Highway 88
ACMW-04W	Gansberg ranch, west side of Highway 88
ACMW-05	Dressler ranch
ACMW-06, N&S	Celio ranch, on Diamond Valley Road

ALPINE SOILS

<u>Site</u>	<u>Ranch</u>
S2	Celio
S3	Hall
S4	Gansberg
S5	Gansberg
S6	Neddenriep
S7	Bruns
S8	Dressler

ALPINE GROUNDWATERS

<u>Site</u>	<u>Homeowner</u>
GW-01	Sagues
GW-03	Smith/Springmeyer
GW-04	Celio
GW-05	Neddenriep
GW-07	Gansberg, Jr.
GW-08	Arant
GW-11	Diamond Valley School
GW-14	Sierra Pines Store

ALPINE SURFACEWATERS

<u>Site</u>	<u>Location</u>
SW-01	Carson River, Woodfords
SW-02	Indian Creek, @ HWY 89
SW-03	Indian Creek, @ upper bridge
SW-04	Indian Creek, @ lower bridge
SW-05	Carson River, Paynesville
SW-06	Carson River, Stateline
SW-07	Fredericksberg Ditch, Stateline
SW-08	Irrigation Ditch along Carson River Road
SW-09	Carson River, Dressler Lane
SW-10	Indian Creek, @ Smith-Springmeyer Ranch

TAHOE BASIN MONITORING

05/10/99

Site	Date	ID	Location	Depth msl	Temp C	pH	EC umhos	Cl mg/L	COD mg/L	NO3-N mg/L	Comment
Buried Sludge Monitoring											
MW11	04/27/99	990427-15	Sludge Pond	6269.2	8.6	6.61	86	1.2	< 5.0	0.210	
MW12	04/27/99	990427-16	Sludge Pond	6268.7	7.8	6.24	198	2.2	25.4	0.121	
MW13	04/27/99	990427-17	Sludge Pond	6259.3	6.7	6.87	929	6.1	14.8	4.120	
ERB Monitoring											
CONTROL	04/27/99	990427-08	At Post Office	6283.9	9.6	6.82	174	6.2	< 5.0	2.310	
MW01.5	04/27/99	990427-09	SW corner of ERB	6276.5	8.9	7.11	171	3.5	< 5.0	0.700	
MW02-50	04/27/99	990427-10	Black Bart side of ERB	6269.3	9.8	6.32	468	44.3	< 5.0	10.200	
MW03-50	04/27/99	990427-11	Black Bart side of ERB	6269.3	10.2	6.14	442	40.5	< 5.0	6.330	
MW04-50	04/27/99	990427-12	Hank Monk side of ERB	6271.7	8.5	6.14	81	5.6	< 5.0	0.088	
MW07-50	04/27/99	990427-13	North side of ERB	6280.9	7.9	6.35	260	25.6	< 5.0	0.559	
Heavenly Valley Creek											
HVC-1	04/13/99	990413-14	Downstream of Pioneer		5.0	7.11	53	0.8	< 5.0	0.046	
HVC-2	04/13/99	990413-15	250' upstream of Pond #2		10.1	6.75	52	2.1	< 5.0	0.012	
HVC-3	04/13/99	990413-16	25' downstream of Johnson Blvd		7.0	6.88	66	2.7	< 5.0	0.017	
HVC-4	04/13/99	90413-HVC	Effluent of drain from Lower Sho								No Flow
HVC-5	04/13/99	90413-HVC	Effluent of drainage pipe along J								No Flow
Treatment Plant Monitoring											
MW08-25	04/27/99	990427-14	SW side of Pond #1	6249.7	8.4	6.30	973	46.2	77.6	< 0.010	

ALPINE COUNTY MONITORING

05/02/99

Site	Date	ID	Location	Temp C	pH	EC umhos	DO mg/L	Alk mg/L	TDS mg/L	SS mg/L	Turb NTU	Cl mg/L	SO4 mg/L
Alpine Monitoring Wells													
ACMW-01AW	04/20/99	990420-07	Main Dam	10.4	6.24	153		43	74			1.7	
ACMW-01BE	04/20/99	990420-08	Secondary Dam	9.6	6.10	143		65	96			2.0	
ACMW-02N	04/20/99	990420-09	Access Gate	11.6	6.47	135		58	91			3.5	
ACMW-02S	04/20/99	990420-10	Access Gate	10.4	6.36	100		42	68			2.1	
ACMW-04W	04/20/99	990420-11	Gansberg	12.0	5.80	215		54	140			12.4	
ACMW-06N	04/20/99	990420-12	Celio	11.8	6.69	688		259	422			53.1	
ACMW-06S	04/20/99	990420-13	Celio	12.9	10.30	497		141	262			73.4	
Groundwaters													
GW-03	04/13/99	990413-06	Smith/Springmeyer	12.9	7.44	308		125	220			1.4	
GW-04	04/13/99	990413-07	Celio	14.0	7.46	266		115	191			3.0	
GW-05	04/13/99	990413-08	Neddenriep	10.3	6.35	288		61	180			28.1	
GW-07	04/13/99	990413-09	Gansberg	8.5	6.24	130		55	92			1.8	
GW-08	04/13/99	990413-10	Arant	9.6	6.42	222		52	136			18.6	
GW-11	04/13/99	990413-11	Diamond Val. School	10.3	6.27	98		44	69			1.0	
GW-14	04/13/99	990413-12	Sierra Pines	7.4	6.44	112		51	77			1.2	
Reservoirs													
HPR	04/07/99	990407-13	Harvey Place Reservoir	6.7	7.20	438	8.60	105	209	0.62	4	46.4	18.4
ICR	04/07/99	990407-14	Indian Creek Reservoir	5.7	7.22	86	10.00	38	83	3.88	15	1.3	6.5
Surfacewaters: Carson R													
SW-01	04/07/99	990407-06	Carson R Woodfords	2.8	7.53	108	11.00	30	61	3.31	.64	2.2	2.5
SW-05	04/07/99	990407-10	Carson R Paynesville	2.0	7.71	76	11.60	33	61	2.55	1.1	2.2	2.4
SW-06	04/07/99	990407-11	Carson R Stateline	2.7	6.76	78	11.70	32	61	2.71	1.3	2.2	2.3
SW-08	04/07/99	990407-12	Irrigation Ditch	6.9	7.63	122	9.80	51	96	18.20	3.2	2.2	5.0
Surfacewaters: Indian Cr													
SW-02	04/07/99	990407-07	Indian Cr Upper	2.5	6.66	79	11.00	39	66	1.26	2	0.9	2.8
SW-03	04/07/99	990407-08	Indian Cr Mid	2.2	6.90	93	11.30	44	76	1.13	2.7	1.3	2.8
SW-04	04/07/99	990407-09	Indian Cr Lower	2.4	7.04	108	11.20	51	81	52.80	8.3	1.8	2.8

ALPINE COUNTY MONITORING

05/02/99

Site	Date	TotalP mg/L	PO4-P mg/L	TKN mg/L	NH3-N mg/L	NO2-N mg/L	NO3-N mg/L	Total N mg/L	MBAS mg/L
Alpine Monitoring Wells									
ACMW-01A	04/20/99	0.024		0.115	< 0.020	< 0.010	0.187	0.312	
ACMW-01B	04/20/99	0.022	<	0.100	< 0.020	< 0.010	0.604	0.714	
ACMW-02N	04/20/99	0.028	<	0.100	< 0.020	< 0.010	0.145	0.255	
ACMW-02S	04/20/99	0.016	<	0.100	< 0.020	< 0.010	0.128	0.238	
ACMW-04W	04/20/99	0.028		0.235	0.023	< 0.010	2.770	3.015	
ACMW-06N	04/20/99	0.326		0.365	0.041	< 0.010	< 0.010	0.385	
ACMW-06S	04/20/99	0.036		0.569	0.123	< 0.010	0.155	0.734	
Groundwaters									
GW-03	04/13/99	0.038	<	0.100	< 0.020	< 0.010	0.671	0.781	
GW-04	04/13/99	0.064	<	0.100	< 0.020	< 0.010	0.767	0.877	
GW-05	04/13/99	0.032	<	0.100	< 0.020	< 0.010	3.250	3.360	
GW-07	04/13/99	0.108		0.104	< 0.020	< 0.010	1.030	1.144	
GW-08	04/13/99	0.068		0.165	< 0.020	< 0.010	3.300	3.475	
GW-11	04/13/99	0.022	<	0.010	< 0.020	< 0.010	0.427	0.447	
GW-14	04/13/99	0.054		0.138	< 0.020	< 0.010	0.416	0.564	
Reservoirs									
HPR	04/07/99	2.120	1.850	15.100	15.200	< 0.071	1.220	16.391	
ICR	04/07/99	0.068	0.010	0.651	0.091	< 0.010	0.011	0.672	
Surfacewaters: Carson R									
SW-01	04/07/99	0.018	< 0.010	0.180	< 0.020	< 0.010	0.023	0.213	
SW-05	04/07/99	0.020	< 0.010	0.288	< 0.020	< 0.010	0.026	0.324	
SW-06	04/07/99	0.020	< 0.010	0.220	< 0.020	< 0.010	0.027	0.257	
SW-08	04/07/99	0.078	0.024	0.354	0.020	< 0.010	0.413	0.777	
Surfacewaters: Indian Cr									
SW-02	04/07/99	0.024	< 0.010	0.184	< 0.020	< 0.010	< 0.100	0.294	
SW-03	04/07/99	0.044	0.020	0.274	< 0.020	< 0.010	< 0.100	0.384	
SW-04	04/07/99	0.064	0.016	0.317	< 0.020	< 0.010	0.022	0.349	

ALPINE COUNTY MONITORING

05/02/99

Site	Date	COD mg/L	BOD mg/L	O & G mg/L	Boron mg/L	Ca mg/L	Mg mg/L	Na mg/L	K mg/L	SAR	Exch Na %	Hardness mg/L	Water Level MSL or Ft
------	------	-------------	-------------	---------------	---------------	------------	------------	------------	-----------	-----	--------------	------------------	--------------------------

Alpine Monitoring Wells

ACMW-01A	04/20/99												5482.3
ACMW-01B	04/20/99												5493.6
ACMW-02N	04/20/99												5458.8
ACMW-02S	04/20/99												5459.9
ACMW-04W	04/20/99												4899.4
ACMW-06N	04/20/99												5216.0
ACMW-06S	04/20/99												5206.0

Groundwaters

GW-03	04/13/99												
GW-04	04/13/99												
GW-05	04/13/99												
GW-07	04/13/99												
GW-08	04/13/99												
GW-11	04/13/99												
GW-14	04/13/99												

Reservoirs

HPR	04/07/99		2		0.23	14.5	3.2	37.9	7.6	2.34	58.2		54.8
ICR	04/07/99		2		0.03	9.4	1.8	5.2	1.8	0.41	25.6		

Surfacewaters: Carson R

SW-01	04/07/99		1		0.01	7.6	1.9	3.7	1.2	0.31	22.0		
SW-05	04/07/99		1		0.01	7.7	1.9	4.3	1.4	0.36	24.3		
SW-06	04/07/99		1		0.01	7.7	2.0	4.2	1.4	0.35	23.8		
SW-08	04/07/99		1		0.01	11.0	2.7	10.0	2.3	0.70	34.4		

Surfacewaters: Indian Cr

SW-02	04/07/99		1		0.04	7.9	2.0	5.3	1.2	0.44	28.3		
SW-03	04/07/99		1		0.02	9.0	2.3	6.4	1.3	0.49	29.1		
SW-04	04/07/99		3		0.02	10.7	3.1	6.8	1.5	0.47	26.4		

**ALPINE COUNTY
BACTERIOLOGICAL MONITORING**

05/02/99

Alpine Monitoring Wells

Site	Date		Total Coliform MPN/100mL		Fecal Coliform MPN/100mL		Fecal Streptococci MPN/100mLL
ACMW-01A	04/20/99	<	1.1	<	1.1		
ACMW-01B	04/20/99		1.1	<	1.1		
ACMW-02N	04/20/99	<	1.1	<	1.1		
ACMW-02S	04/20/99	<	1.1	<	1.1		
ACMW-04W	04/20/99		9.2	<	1.1		
ACMW-06N	04/20/99	<	1.1	<	1.1		
ACMW-06S	04/20/99		1.1	<	1.1		

Groundwaters

Site	Date		Total Coliform MPN/100mL		Fecal Coliform MPN/100mL		Fecal Streptococci MPN/100mLL
GW-03	04/13/99	<	1.1	<	1.1		
GW-04	04/13/99		1.1	<	1.1		
GW-05	04/13/99	<	1.1	<	1.1		
GW-07	04/13/99		1.1	<	1.1		
GW-08	04/13/99	<	1.1	<	1.1		
GW-11	04/13/99	<	1.1	<	1.1		
GW-14	04/13/99	<	1.1	<	1.1		

Reservoirs

Site	Date		Total Coliform MPN/100mL		Fecal Coliform MPN/100mL		Fecal Streptococci MPN/100mLL
HPR	04/07/99		2	<	2		2
ICR	04/07/99	<	2	<	2		2

Surfacewaters: Carson R

Site	Date		Total Coliform MPN/100mL		Fecal Coliform MPN/100mL		Fecal Streptococci MPN/100mLL
SW-01	04/07/99	<	30	<	30		
SW-05	04/07/99	<	30	<	30		
SW-06	04/07/99		30	<	30		
SW-08	04/07/99		230		230		

Surfacewaters: Indian Cr

Site	Date		Total Coliform MPN/100mL		Fecal Coliform MPN/100mL		Fecal Streptococci MPN/100mLL
SW-02	04/07/99		40	<	30		
SW-03	04/07/99	<	30	<	30		
SW-04	04/07/99	<	30	<	30		



SOUTH TAHOE PUBLIC UTILITY DISTRICT

"Basic Services for a Complex World"

SEWER • 1950 • WATER

A PUBLIC AGENCY

1275 Meadow Crest Drive • South Lake Tahoe, California 96150
Phone (916) 544-6474 • Fax (916) 541-0614

6-16
183
General Manager
ROBERT G. BAER

Directors
JAMES R. JONES
ROBERT MASON
MARY LOU MOSBACHER
CHRIS STROHM
DUANE WALLACE

March 11, 1998

Harold Singer
California Regional Water Quality
Control Board - Lahontan Region
2501 Lake Tahoe Boulevard
South Lake Tahoe, CA 96150

Subject: Monitoring Report - February, 1998

Dear Mr. Singer,

Enclosed is the South Tahoe Public Utility District's self-monitoring report for February, 1998. The District is reporting as required by the Wastewater Reclamation Permit (Board Order 6-95-65, WDID No. 6A095900700).

Wastewater Reclamation Permit (Board Order 6-95-65).

The effluent met all the requirements set forth in the Board Order for the month of February.

Emergency Retention Basin (ERB)

6.32 MG of wastewater were pumped to the ERB during the month of February. There was no wastewater remaining in the ERB on February 28, 1998.

Export Pipeline

The District's Final effluent export pipeline route was visually inspected during the month of February from the treatment plant to station 507+13A, in Woodfords. No leaks or problems were detected.

Wastewater Reclamation Permit Compliance

The West Fork, Carson River Water Quality Objectives and East Fork, Carson River limitations were exceeded as follows (a ✓ indicates objective exceeded):

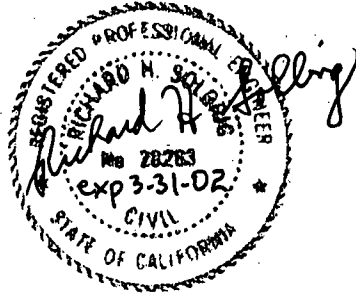
Site	Location	TDS		Cl ⁻		TKN		NO ₃ -N		Total N		Total P		SO ₄		Boron		Exch Na %	
		Limit	Exceedance	Limit	Exceedance	Limit	Exceedance	Limit	Exceedance	Limit	Exceedance	Limit	Exceedance	Limit	Exceedance	Limit	Exceedance	Limit	Exceedance
SW-01	Carson River, Woodfords	55		1.0	✓	0.13		0.02		0.15		0.02		2.0	✓	0.02		20	✓
SW-06	Carson River, Stateline	70	✓	2.5	✓	0.22		0.03	✓	0.25		0.03		2.0	✓	0.02		20	✓
SW-02	Indian Creek, Upper	100		6.0						0.30		0.03		8.0		0.25		30	
SW-03	Indian Creek, Mid	100		6.0						0.30		0.03		8.0		0.25		30	
SW-04	Indian Creek, Lower	100		6.0						0.30		0.03	✓	8.0		0.25		30	

Soil analysis for January and February have not yet been completed; the results will be sent to you as soon as they are available. January and February blue-green algae results are included in this package.

Certification

I hereby certify that the enclosed monitoring report was prepared under my direct supervision and that I am a duly Registered Engineer under the laws of the State of California.

Sincerely,



Richard Solbrig,
Assistant Manager/Engineer

Enclosures:

1.

February Monthly Report	Pages
Wastewater Treatment plant	2
Permit Compliance Record	1
Export pipeline inspection	1
Sample site locations	2
Monitoring wells (ERB)	1
Heavenly Valley Creek	1
Alpine County Surfacewaters, Groundwaters and Reservoirs	4
Alpine County Blue-green algae, January and February	2
Total number of pages:	14

- cc: Calif. Dept. of Health Services, ODW - Jess Morehouse
El Dorado Co. Dept. of Environmental Health - Virginia Huber
Nevada Division of Environmental Protection - Wendel McCurry
Alpine County Health Department - Dr. Richard Botto
Alpine County Health Department - Jim Goodloe
Alpine County Board of Supervisors
EPA - Permit and Compliance Branch, W-5 - Bill Pierce
Desert Research Group (Alpine County Consultants) - Bill Albright
STPUD Board of Directors
STPUD General Manager / District Engineer - Robert G. Baer
STPUD Manager of Operations - Ross Johnson
STPUD Laboratory Director - Terry Powers
STPUD Manager of Alpine County Operations - Hal Bird

**SOUTH TAHOE PUBLIC UTILITY DISTRICT
WASTEWATER TREATMENT PLANT MONTHLY REPORT**

03/09/98
13:58:50

FEBRUARY, 1998

Date	Day	FLOW MGD			Pond Inf	PRECIP Inch	Type	D.O. mg/L Fin	COD mg/L		BOD mg/L		SS mg/L	
		2-Hr Peak Inf	2-Hr Peak Inf	Eff					Pond Return	Raw	Fin	Raw	Fin	Raw
02/01/98	Sun	4.62	7.0	4.49				7.26	402					
02/02/98	Mon	5.04	6.8	4.89				7.04	339	41.0	153	7.3	136	4.3
02/03/98	Tue	4.75	6.8	5.00				6.98	308					
02/04/98	Wed	4.41	5.8	4.28				6.80	315					
02/05/98	Thu	4.36	6.4	4.13		2.45	0.17	6.77	230					
02/06/98	Fri	4.72	6.9	5.34	2.32	3.87	0.23	7.79	407					
02/07/98	Sat	4.70	7.0	5.84	1.14		0.91	7.36	502	34.9	166	6.6	194	3.9
02/08/98	Sun	4.45	6.6	5.80	1.20		0.41	7.67	356					
02/09/98	Mon	4.20	6.0	5.06	0.84			7.58	331					
02/10/98	Tue	4.13	5.9	5.05	0.82		0.42	7.30	310					
02/11/98	Wed	4.15	5.3	3.60				7.47	340	33.4	122	6.5	136	3.3
02/12/98	Thu	4.24	6.1	4.48			0.08	6.80	386					
02/13/98	Fri	4.65	6.0	4.77			0.02	6.79	398					
02/14/98	Sat	5.51	8.0	5.18			0.52	6.94	401	62.8	179	18.2	145	7.4
02/15/98	Sun	5.34	7.9	5.45				6.30	398					
02/16/98	Mon	4.66	8.2	5.00			0.15	6.73	401	48.4			153	5.0
02/17/98	Tue	4.28	6.6	3.99				7.07	315					
02/18/98	Wed	4.29	6.0	4.45				6.70	317					
02/19/98	Thu	4.41	5.7	4.26			0.25	6.39	373					
02/20/98	Fri	4.61	6.2	4.66				6.45	391					
02/21/98	Sat	4.79	6.8	4.98			0.74	6.69	310	30.2	143	5.6	107	4.1
02/22/98	Sun	4.80	6.6	4.64			0.01	6.97	389					
02/23/98	Mon	4.18	6.4	4.20			0.58	8.11	349					
02/24/98	Tue	4.11	6.0	4.27				6.86	398					
02/25/98	Wed	4.22	5.8	4.09				6.95	374	29.3	139	4.7	160	2.7
02/26/98	Thu	4.20	5.8	4.16				6.49	366					
02/27/98	Fri	4.59	6.2	4.22				6.72	467					
02/28/98	Sat	5.33	7.1	5.46				6.26	438	37.1			164	3.5
PERMIT MAX		7.7								300		45		60
PERMIT MIN														
PERMIT AVE										60		30		30
TOTAL		127.74	181.9	131.74	6.32	6.32	5.84	195.24	10311	317.1	902	48.9	1195	34.1
MAXIMUM		5.51	8.2	5.84	2.32	3.87	0.91	8.11	502	62.8	179	18.2	194	7.4
MINIMUM		4.11	5.3	3.60	0.82	2.45	0.01	6.26	230	29.3	122	4.7	107	2.7
AVERAGE		4.56	6.5	4.71	1.26	3.16	0.37	6.97	368	39.6	150	8.2	149	4.3
# Tests		28	28	28	5	2	16	28	28	8	6	6	8	8

**SOUTH TAHOE PUBLIC UTILITY DISTRICT
WASTEWATER TREATMENT PLANT MONTHLY REPORT**

13:58:50

13:58:50

FEBRUARY, 1998

Date	Day	SETTLEABLE SOLIDS mL/L		MBAS mg/L		pH Units		TURBIDITY NTU		Cl2 mg/L	FINAL COLIFORMS MPN/100 mL			TDS mg/L		ALKALINITY mg/L	
		Raw	Fin	Raw	Fin	Raw	Fin	Raw	Fin		Total	7day-	Median	Raw	Fin	Raw	Fin
02/01/98	Sun	11.0	< 0.1			7.30	7.58	3.10	5.69	<	2	<	2			162	150
02/02/98	Mon	8.0	< 0.1			7.53	7.73	2.65	5.89	<	2	<	2	229	224	138	142
02/03/98	Tue	8.5	< 0.1			7.33	7.38	2.40	4.67	<	2	<	2			123	119
02/04/98	Wed	8.0	< 0.1			7.32	7.53	2.00	5.99	<	2	<	2			137	120
02/05/98	Thu	8.5	< 0.1			7.70	7.59	2.50	6.20	<	2	<	2			127	129
02/06/98	Fri	8.5	< 0.1			7.57	7.64	2.10	4.77	<	2	<	2			140	130
02/07/98	Sat	11.0	< 0.1			7.40	7.68	2.10	5.99	<	2	<	2			148	129
02/08/98	Sun	10.0	< 0.1			7.31	7.45	2.60	5.18	<	2	<	2			151	136
02/09/98	Mon	9.5	< 0.1	2.38	0.10	7.36	7.52	2.65	5.28	<	2	<	2			145	132
02/10/98	Tue	8.5	< 0.1			7.38	7.46	2.05	5.48	<	2	<	2			148	132
02/11/98	Wed	8.0	< 0.1			7.37	7.72	2.20	6.09	<	2	<	2	242	226	146	135
02/12/98	Thu	10.0	< 0.1			7.44	7.67	2.80	5.48	<	2	<	2			144	136
02/13/98	Fri	10.0	< 0.1			7.31	7.40	2.90	4.37	<	2	<	2			146	138
02/14/98	Sat	11.0	< 0.1			7.85	7.62	5.50	3.15	<	2	<	2			160	150
02/15/98	Sun	11.5	< 0.1			7.47	7.42	4.30	5.69	<	2	<	2			160	144
02/16/98	Mon	11.0	< 0.1			7.37	7.67	3.40	7.01	<	2	<	2	248	226	164	144
02/17/98	Tue	10.0	< 0.1			7.30	7.51	2.40	5.69	<	2	<	2			148	140
02/18/98	Wed	14.5	< 0.1			7.46	7.65	1.75	5.38	<	2	<	2			148	137
02/19/98	Thu	9.5	< 0.1			7.39	7.50	1.80	6.20	<	2	<	2			151	136
02/20/98	Fri	12.0	< 0.1			7.31	7.45	1.70	5.79	<	2	<	2			149	138
02/21/98	Sat	11.0	< 0.1			7.38	7.52	2.50	4.98	<	2	<	2			157	144
02/22/98	Sun	10.5	< 0.1			7.49	7.59	2.40	5.28	<	2	<	2			153	146
02/23/98	Mon	10.0	< 0.1			7.60	7.61	2.40	5.38	<	2	<	2			150	141
02/24/98	Tue	10.0	< 0.1			7.36	7.57	2.20	4.16	<	2	<	2			154	140
02/25/98	Wed	11.0	< 0.1			7.39	7.66	1.60	2.54	<	2	<	2			152	142
02/26/98	Thu	10.5	< 0.1			7.52	7.85	1.60	5.59	<	2	<	2	236	226	146	137
02/27/98	Fri	10.0	< 0.1			7.43	7.58	1.50	4.47	<	2	<	2			153	144
02/28/98	Sat	11.5	< 0.1			7.36	7.60	2.00	3.96	<	2	<	2			162	150
PERMIT MAX			0.1		2.0		8.5	20			240	23					
PERMIT MIN							6.5										
PERMIT AVE					1.0			10									
TOTAL		283.5	2.8	2.38	0.10	208.00	212.15	69.10	146.35		56	56	955	902	4162	3861	
MAXIMUM		14.5	0.1	2.38	0.10	7.85	7.85	5.50	7.01		2	2	248	226	164	150	
MINIMUM		8.0	0	2.38	0.10	7.30	7.38	1.50	2.54		2	2	229	224	123	119	
AVERAGE		10.1	0.1	2.38	0.10	7.43	7.58	2.47	5.23		2	2	239	226	149	138	
# Tests		28	28	1	1	28	28	28	28		28	28	4	4	28	28	

**SOUTH TAHOE PUBLIC UTILITY DISTRICT
MEMORANDUM**

Date: February 20, 1998
To: Bob Baer, Diane Noble
From: Tim Rieger
Topic: Export Line Check



On February 10, & 11, 1998, and Greg Schrempp and I conducted our monthly check of the District's export line from the treatment plant to it's end at station 564+06 near the Harvey Place reservoir.

Several wet spots were checked, however nothing positive was found. No damage to the pipe was found.

CC Terry Powers

SAMPLE LOCATIONS

TAHOE BASIN MONITORING WELLS

<u>Site</u>	<u>Location</u>
ERB	Emergency Retention Basin
CONTROL	North of Post Office
MW02-25, -50	Emergency Retention Basin, S side
MW03-25, -50	Emergency Retention Basin, S side
MW04-25, -50	Emergency Retention Basin, W side
MW07-25, -50	Emergency Retention Basin, N side
MW08-25, -50	Pond #1, SW corner
MW11	S.E. corner of wastewater treatment plant grounds
MW12	South of Emergency Pump Building, for buried sludge
MW13	Pond 2, along Heavenly Valley Creek, for buried sludge

HEAVENLY VALLEY CREEK

HVC-1	At Pioneer Trail
HVC-2	250 ft upstream of Pond #2
HVC-3	25 ft downstream of Johnson Blvd.
HVC-4	Effluent of drain pipe from Lower Shop area
HVC-5	Effluent of drainage pipe along Johnson Blvd, 10 feet upstream of Johnson Blvd.

ALPINE COUNTY MONITORING WELLS

<u>Site</u>	<u>Location</u>
ACMW-01AW	Below main dam at Harvey Place Reservoir
ACMW-01BE	Below auxiliary dam at Harvey Place Reservoir
ACMW-02, N&S	On dam access road at Diamond Valley Road
ACMW-03	Bruns ranch, east side of Highway 88
ACMW-04W	Gansberg ranch, west side of Highway 88
ACMW-05	Dressler ranch
ACMW-06, N&S	Celio ranch, on Diamond Valley Road

ALPINE SOILS

<u>Site</u>	<u>Ranch</u>
S2	Celio
S3	Hall
S4	Gansberg
S5	Gansberg
S6	Neddenriep
S7	Bruns
S8	Dressler

ALPINE GROUNDWATERS

<u>Site</u>	<u>Homeowner</u>
GW-01	Sagues
GW-03	Smith/Springmeyer
GW-04	Celio
GW-05	Neddenriep
GW-07	Gansberg, Jr.
GW-08	Arant
GW-11	Diamond Valley School
GW-14	Sierra Pines Store

ALPINE SURFACEWATERS

<u>Site</u>	<u>Location</u>
SW-01	Carson River, Woodfords
SW-02	Indian Creek, @ HWY 89
SW-03	Indian Creek, @ upper bridge
SW-04	Indian Creek, @ lower bridge
SW-05	Carson River, Paynesville
SW-06	Carson River, Stateline
SW-07	Fredericksberg Ditch, Stateline
SW-08	Irrigation Ditch along Carson River Road
SW-09	Carson River, Dressler Lane
SW-10	Indian Creek, @ Smith-Springmeyer Ranch

SOUTH TAHOE PUBLIC UTILITY DISTRICT
WATER QUALITY DATA
of

03/10/98

MONITORING WELLS

WELL	DATE	WATER LEVEL (MSL ft)	TEMP C	pH	EC umhos/cm	Cl mg/L	NO3-N mg/L	PO4-P mg/L	COD mg/L
CONTROL	02/24/98	6283.9	9.2	6.71	167	5.2	2.36		< 5
MW01.5	02/24/98	6269.5	7.5	6.92	167	4.7	.74		< 5
MW02-50	02/24/98	6269.2	8.6	6.51	605	60.9	14.70		< 5
MW03-50	02/24/98	6269.3	9.0	5.92	536	47.9	15.90		< 5
MW04-50	02/24/98	6270.1	7.4	5.75	82	6.7	.06		< 5
MW07-50	02/24/98	6279.9	7.0	6.17	275	28.4	.58		< 5
MW08-25	02/24/98	6249.2	7.9	6.18	984	47.5	< .01		85
MW11	02/25/98	6267.7	7.7	6.24	90	1.2	.44		
MW12	02/25/98	6266.1	9.0	6.46	202	2.8	.51		
MW13	02/25/98	6258.2	4.5	6.71	613	3.1	.68		

Note: Samples filtered through 0.45 u filter before analysis

SOUTH TAHOE PUBLIC UTILITY DISTRICT
 WATER QUALITY DATA
 of
 HEAVENLY VALLEY CREEK

03/10/98

Sample Date: 02/03/98

SITE	TEMP C	pH	EC umhos/cm	Cl mg/L	COD mg/L	NO3-N mg/L	SS mg/L	O&G mg/L	COMMENTS
HVC-1	1.9	6.75	40	1.8	< 5	.07	1	1	
HVC-2	.1	6.51	53	2.8	12	.01	6	1	
HVC-3	.7	6.27	54	3.2	11	.06	5	1	
HVC-4	.9	6.75	70	.6	17	.04	11	1	Dry
HVC-5	.7	6.50	133	5.2	27	1.78	28	1	Dry

=====

HVC-1: 15 feet downstream of Pioneer Trail
 HVC-2: 250 feet upstream of Pond #2
 HVC-3: 25 feet downstream of Johnson Blvd crossing
 HVC-4: Effluent of drainpipe from Lower Shop area
 HVC-5: Effluent of drainpipe along Johnson Blvd, 10 feet upstream of Johnson Blvd

ALPINE COUNTY MONITORING

03/02/98

Site	Date	ID	Location	Temp C	pH	EC umhos	DO mg/L	Alk mg/L	TDS mg/L	SS mg/L	Turb NTU	Cl mg/L	SO4 mg/L
Alpine Monitoring Wells													
ACMW-01AW	02/18/98	980218-06	Main Dam	9.7	6.21	80		35	73			2.1	
ACMW-01BE	02/18/98	980218-07	Secondary Dam	9.7	6.02	114		54	78			1.5	
ACMW-02N	02/18/98	980218-08	Access Gate	11.6	6.49	164		74	99			3.9	
ACMW-02S	02/18/98	980218-09	Access Gate	10.7	6.11	133		61	85			3.0	
ACMW-04W	02/18/98	980218-10	Gansberg	11.6	5.67	219		54	149			16.4	
ACMW-06N	02/18/98	980218-11	Celio	10.2	6.68	735		269	450			59.9	
ACMW-06S	02/18/98	980218-12	Celio	10.3	10.70	508		153	235			82.0	
Groundwaters													
GW-03	02/04/98	980204-06	Smith/Springmeyer	6.1	7.27	304		131	217			1.6	
GW-04	02/04/98	980204-07	Celio	12.4	7.01	268		120	201			3.1	
GW-05	02/04/98	980204-08	Neddenriep	7.5	6.20	300		62	188			32.5	
GW-07	02/04/98	980204-09	Gansberg	5.7	6.26	122		55	86			1.4	
GW-08	02/04/98	980204-10	Arant	6.9	6.40	271		59	172			26.1	
GW-11	02/04/98	980204-11	Diamond Val. School	9.2	6.14	94		47	79			1.0	
GW-14	02/04/98	980204-12	Sierra Pines	5.8	6.40	107		53	98			1.1	
Reservoirs													
HPR	02/09/98	980209-15	Harvey Place Reservoir	3.9	7.42	480	7.30 ?	118	220	10.70	3.8	49.8	17.9
ICR	02/18/98	980218-13	Indian Creek Reservoir	4.8	7.80	99	7.30 ?	43	67	10.90	7	1.8	
Surfacewaters: Carson R													
SW-01	02/09/98	980209-08	Carson R Woodfords	2.6	7.20	75	9.00	33	55	0.89	.51	2.1	2.3
SW-05	02/09/98	980209-12	Carson R Paynesville	2.8	7.42	91	10.60	39	65	1.64	.84	2.4	3.3
SW-06	02/09/98	980209-13	Carson R Stateline	4.5	7.67	96	11.00	40	71	1.49	.77	3.3	4.0
SW-08	02/09/98	980209-14	Irrigation Ditch	8.3	7.37	125	9.30	53	97	31.00	5.6	3.0	4.5
Surfacewaters: Indian Cr													
SW-02	02/09/98	980209-09	Indian Cr Upper	1.4	7.33	85	10.60	42	67	0.62	2.2	1.4	2.8
SW-03	02/09/98	980209-10	Indian Cr Mid	1.4	7.39	84	11.60	36	64	3.37	3.3	2.6	2.8
SW-04	02/09/98	980209-11	Indian Cr Lower	2.9	7.17	84	11.00	38	64	4.43	2.4	2.8	2.7

ALPINE COUNTY MONITORING

03/02/98

Site	Date	TotalP mg/L	PO4-P mg/L	TKN mg/L	NH3-N mg/L	NO2-N mg/L	NO3-N mg/L	Total N mg/L
Alpine Monitoring Wells								
ACMW-01A	02/18/98	0.036	<	0.100	< 0.020	< 0.010	0.076	0.186
ACMW-01B	02/18/98	0.030	<	0.100	< 0.020	< 0.010	0.230	0.340
ACMW-02N	02/18/98	0.022	<	0.100	< 0.020	< 0.010	0.071	0.181
ACMW-02S	02/18/98	0.022		0.106	< 0.020	< 0.010	0.220	0.336
ACMW-04W	02/18/98	0.022		0.100	< 0.020	< 0.010	3.370	3.480
ACMW-06N	02/18/98	0.424		0.309	0.045	< 0.010	< 0.010	0.329
ACMW-06S	02/18/98	0.048		0.654	< 0.020	0.039	0.052	0.745
Groundwaters								
GW-03	02/04/98	0.044		0.100	< 0.020	< 0.010	0.712	0.822
GW-04	02/04/98	0.062		0.100	< 0.020	< 0.010	0.827	0.937
GW-05	02/04/98	0.030		0.119	< 0.020	< 0.010	3.220	3.349
GW-07	02/04/98	0.070		0.100	< 0.020	< 0.010	0.879	0.989
GW-08	02/04/98	0.067		0.141	< 0.020	< 0.010	5.230	5.381
GW-11	02/04/98	0.036		0.180	< 0.020	< 0.010	0.475	0.665
GW-14	02/04/98	0.062		0.112	< 0.020	< 0.010	0.434	0.556
Reservoirs								
HPR	02/09/98	2.250	2.320	16.500	16.500	0.134	1.370	18.004
ICR	02/18/98	0.050	< 0.010	0.818	0.080	0.010	0.626	1.454
Surfacewaters: Carson R								
SW-01	02/09/98	0.018	0.010	0.112	< 0.020	< 0.010	0.023	0.145
SW-05	02/09/98	0.024	0.010	0.113	< 0.020	< 0.010	0.096	0.219
SW-06	02/09/98	0.024	0.010	0.158	< 0.020	< 0.010	0.084	0.252
SW-08	02/09/98	0.128	0.036	0.570	0.021	< 0.010	0.360	0.940
Surfacewaters: Indian Cr								
SW-02	02/09/98	0.022	0.010	0.178	< 0.020	< 0.010	0.010	0.198
SW-03	02/09/98	0.034	0.016	0.126	< 0.020	< 0.010	0.023	0.159
SW-04	02/09/98	0.038	0.014	0.174	< 0.020	< 0.010	0.020	0.204

ALPINE COUNTY MONITORING

03/02/98

Site	Date	COD mg/L	BOD mg/L	O & G mg/L	Boron mg/L	Ca mg/L	Mg mg/L	Na mg/L	K mg/L	SAR	Exch Na %	Hardness mg/L	Water Level MSL or Ft
Alpine Monitoring Wells													
ACMW-01A	02/18/98												5482.5
ACMW-01B	02/18/98												5493.4
ACMW-02N	02/18/98												5459.3
ACMW-02S	02/18/98												5461.3
ACMW-04W	02/18/98												4898.2
ACMW-06N	02/18/98												5217.2
ACMW-06S	02/18/98												5206.0

Groundwaters

GW-03	02/04/98												
GW-04	02/04/98												
GW-05	02/04/98												
GW-07	02/04/98												
GW-08	02/04/98												
GW-11	02/04/98												
GW-14	02/04/98												

Reservoirs

HPR	02/09/98	16	3		0.22	14.4	3.4	41.3	8.4	2.54	59.6		46.3
ICR	02/18/98	13			0.02	9.9	1.9	5.8	1.9	0.44	26.6		

Surfacewaters: Carson R

SW-01	02/09/98		1	<	1	<	0.01	7.6	2.0	3.8	1.3	0.32	22.4
SW-05	02/09/98		1	<	1	<	0.01	8.5	2.3	5.1	1.8	0.40	25.2
SW-06	02/09/98		1	<	1	<	0.01	8.8	2.5	5.4	1.8	0.41	25.2
SW-08	02/09/98		2	<	1	<	0.01	10.4	2.8	9.9	2.6	0.70	34.5

Surfacewaters: Indian Cr

SW-02	02/09/98		1	<	1	<	0.01	7.9	2.1	5.7	1.2	0.46	29.3
SW-03	02/09/98		1	<	1	<	0.01	7.7	2.1	4.6	1.4	0.37	25.0
SW-04	02/09/98		1	<	1	<	0.01	7.8	2.3	4.7	1.4	0.38	25.0

**ALPINE COUNTY
BACTERIOLOGICAL MONITORING**

03/02/98

Alpine Monitoring Wells

Site	Date		Total Coliform MPN/100mL		Fecal Coliform MPN/100mL		Fecal Streptococci MPN/100mLL
ACMW-01A	02/18/98	<	1.1	<	1.1		
ACMW-01B	02/18/98	<	1.1	<	1.1		
ACMW-02N	02/18/98	<	1.1	<	1.1		
ACMW-02S	02/18/98		5.1	<	1.1		
ACMW-04W	02/18/98	<	1.1	<	1.1		
ACMW-06N	02/18/98	>	23	<	1.1		
ACMW-06S	02/18/98	>	23	<	1.1		

Groundwaters

Site	Date		Total Coliform MPN/100mL		Fecal Coliform MPN/100mL		Fecal Streptococci MPN/100mLL
GW-03	02/04/98	<	1.1	<	1.1		
GW-04	02/04/98		1.1	<	1.1		
GW-05	02/04/98	<	1.1	<	1.1		
GW-07	02/04/98	<	1.1	<	1.1		
GW-08	02/04/98		1.1	<	1.1		
GW-11	02/04/98	<	1.1	<	1.1		
GW-14	02/04/98	<	1.1	<	1.1		

Reservoirs

Site	Date		Total Coliform MPN/100mL		Fecal Coliform MPN/100mL		Fecal Streptococci MPN/100mLL
HPR	02/09/98		300		2		7
ICR	02/18/98		50		2		13

Surfacewaters: Carson R

Site	Date		Total Coliform MPN/100mL		Fecal Coliform MPN/100mL		Fecal Streptococci MPN/100mLL
SW-01	02/09/98		90	<	30		
SW-05	02/09/98		430		430		
SW-06	02/09/98	<	40	<	30		
SW-08	02/09/98		230		90		

Surfacewaters: Indian Cr

Site	Date		Total Coliform MPN/100mL		Fecal Coliform MPN/100mL		Fecal Streptococci MPN/100mLL
SW-02	02/09/98		230	<	30		
SW-03	02/09/98		90	<	30		
SW-04	02/09/98		230	<	30		

SOUTH TAHOE PUBLIC UTILITY DISTRICT
ALPINE COUNTY SURFACE WATERS
WATER QUALITY DATA

03/11/98

BLUE GREEN ALGAE

SYSTEM: CARSON RIVER

SITE	SAMPLE DATE	STREAM	COLONIES		FILAMENTS		FILAMENTS		SINGLE CELLS
			#	# OF CELLS	#	# OF CELLS	#	LENGTH (um)	
SW-01	01/06/98	Carson R Woodfords	0	0	0	0	0	0	0
SW-05	01/06/98	Carson R Paynesville	0	0	0	0	0	0	0
SW-06	01/06/98	Carson R Stateline	0	0	0	0	0	0	0
SW-08	01/06/98	Irrigation Ditch	0	0	0	0	0	0	0

=====

SYSTEM: INDIAN CREEK

SITE	SAMPLE DATE	STREAM	COLONIES		FILAMENTS		FILAMENTS		SINGLE CELLS
			#	# OF CELLS	#	# OF CELLS	#	LENGTH (um)	
SW-02	01/06/98	Indian Cr Upper	0	0	0	0	0	0	0
SW-03	01/06/98	Indian Cr Mid	0	0	0	0	0	0	0
SW-04	01/06/98	Indian Cr Lower	0	0	0	0	0	0	0

=====

Note: Results are per 5 ml

SOUTH TAHOE PUBLIC UTILITY DISTRICT
ALPINE COUNTY SURFACE WATERS
WATER QUALITY DATA

03/11/98

BLUE GREEN ALGAE

SYSTEM: CARSON RIVER

SITE	SAMPLE DATE	STREAM	COLONIES		FILAMENTS		FILAMENTS		SINGLE CELLS
			#	# OF CELLS	#	# OF CELLS	#	LENGTH (um)	
SW-01	02/09/98	Carson R Woodfords	0	0	0	0	0	0	0
SW-05	02/09/98	Carson R Paynesville	0	0	0	0	0	0	0
SW-06	02/09/98	Carson R Stateline	0	0	0	0	0	0	0
SW-08	02/09/98	Irrigation Ditch	0	0	0	0	0	0	0

SYSTEM: INDIAN CREEK

SITE	SAMPLE DATE	STREAM	COLONIES		FILAMENTS		FILAMENTS		SINGLE CELLS
			#	# OF CELLS	#	# OF CELLS	#	LENGTH (um)	
SW-02	02/09/98	Indian Cr Upper	0	0	0	0	0	0	0
SW-03	02/09/98	Indian Cr Mid	0	0	0	0	0	0	0
SW-04	02/09/98	Indian Cr Lower	0	0	0	0	0	0	0

Note: Results are per 5 ml

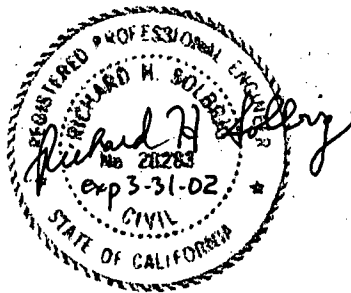
Site	Location	TDS		Cl ⁻		TKN		NO ₃ -N		Total N		Total P		SO ₄		Boron		Exch Na %	
		Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence
SW-01	Carson River, Woodfords	55		1.0	✓	0.13	✓	0.02	✓	0.15	✓	0.02		2.0	✓	0.02	✓	20	✓

December Blue Green Algae results are included.

Certification

I hereby certify that the enclosed monitoring report was prepared under my direct supervision and that I am a duly Registered Engineer under the laws of the State of California.

Sincerely,



Richard Solbrig,
Assistant Manager/Engineer

Enclosures:

1.

December Monthly Report	Pages
Wastewater Treatment plant	2
Permit Compliance Record	1
Export pipeline inspection	1
Sample site locations	2
Monitoring wells (ERB) and Heavenly Valley Creek (HVC)	2
Alpine County Surfacewaters, Groundwaters and Reservoirs	5
Alpine County soils -	0
Total number of pages:	13

- cc: Calif. Dept. of Health Services, ODW - Jess Morehouse
El Dorado Co. Dept. of Environmental Health - Virginia Huber
Nevada Division of Environmental Protection - Wendel McCurry
Alpine County Health Department - Dr. Richard Botto
Alpine County Health Department - Jim Goodloe
Alpine County Board of Supervisors
EPA - Permit and Compliance Branch, W-5 - Bill Pierce
Desert Research Group (Alpine County Consultants) - Bill Albright
STPUD Board of Directors
STPUD General Manager / District Engineer - Robert G. Baer
STPUD Manager of Operations - Ross Johnson
STPUD Laboratory Director - Terry Powers
STPUD Manager of Alpine County Operations - Hal Bird

**SOUTH TAHOE PUBLIC UTILITY DISTRICT
WASTEWATER TREATMENT PLANT MONTHLY REPORT**

01/08/99
10:15:48

DECEMBER 1998

Date	Day	FLOW MGD			Pond Inf	PRECIP		D.O. mg/L Fin	COD mg/L		BOD mg/L		SS mg/L	
		2-Hr Peak Inf	2-Hr Peak Inf	Eff		Pond Return	Inch		Type	Raw	Fin	Raw	Fin	Raw
12/01/98	Tue	3.80	5.2	3.74				7.20	352					
12/02/98	Wed	4.21	5.6	4.17				4.24	386					
12/03/98	Thu	3.98	5.8	3.87		0.53	Snow	5.17	483					
12/04/98	Fri	3.94	7.2	4.41				5.02	366					
12/05/98	Sat	4.29	5.7	4.24		0.29	Snow	4.76	423	21.8	182	6.3	148	2.5
12/06/98	Sun	4.26	5.5	4.29				5.14	423					
12/07/98	Mon	4.26	5.4	4.12		0.01	Snow	5.25	359					
12/08/98	Tue	3.88	5.4	3.70				4.95	373					
12/09/98	Wed	4.07	4.8	3.91				4.59	386	24.0	172	4.6	134	2.0
12/10/98	Thu	4.08	5.6	3.83				5.05	389					
12/11/98	Fri	4.13	6.0	4.41				3.57	525					
12/12/98	Sat	4.24	6.0	4.28				5.01	388	26.0	174	4.9	132	2.2
12/13/98	Sun	4.35	6.1	4.11		0.07	Snow	5.47	373					
12/14/98	Mon	3.88	4.9	3.62				4.85	352					
12/15/98	Tue	4.17	5.5	4.03				4.52	347					
12/16/98	Wed	3.99	5.0	3.93				4.43	384	26.0	147	5.2	149	1.9
12/17/98	Thu	4.14	5.6	3.85				4.73	497					
12/18/98	Fri	4.42	5.6	3.93				4.45	612					
12/19/98	Sat	4.61	6.4	4.49		0.10	Snow	5.57	702	27.6	266	7.4	285	2.7
12/20/98	Sun	4.88	5.8	4.55		0.20	Snow	4.26	423					
12/21/98	Mon	4.71	5.8	4.81				3.14						
12/22/98	Tue	4.83	6.2	4.56				4.28	396					
12/23/98	Wed	4.76	6.7	5.10				3.93	424	42.6			138	3.1
12/24/98	Thu	5.44	7.0	4.39				3.56	527					
12/25/98	Fri	5.34	7.0	5.47				3.24	520					
12/26/98	Sat	5.79	8.4	5.47				4.52	502	40.2	211	9.4	152	3.9
12/27/98	Sun	5.53	7.8	5.32				4.83	340					
12/28/98	Mon	5.44	7.5	5.14				5.88	439					
12/29/98	Tue	5.98	7.8	6.12				4.32	398					
12/30/98	Wed	5.31	7.3	5.26				5.94	442	28.1	211	7.2	171	4.1
12/31/98	Thu	6.44	9.4	6.22				4.94	479					
PERMIT MAX		7.7								300		45		60
PERMIT MIN														
PERMIT AVE										60		30		30
TOTAL		143.15	194.0	139.34			1.20	146.81	13010	236.3	1363	44.9	1309	22.4
MAXIMUM		6.44	9.4	6.22			0.53	7.20	702	42.6	266	9.4	285	4.1
MINIMUM		3.80	4.8	3.62			0.01	3.14	340	21.8	147	4.6	132	1.9
AVERAGE		4.62	6.3	4.49			0.20	4.74	434	29.5	195	6.4	164	2.8
# Tests		31	31	31	0	0	6	31	30	8	7	7	8	8

**SOUTH TAHOE PUBLIC UTILITY DISTRICT
WASTEWATER TREATMENT PLANT MONTHLY REPORT**

01/08/99

10:15:48

DECEMBER 1998

Date	Day	SETTLEABLE SOLIDS mL/L		MBAS mg/L		pH Units		TURBIDITY NTU		Cl2 mg/L	FINAL COLIFORMS MPN/100 mL			TDS mg/L		ALKALINITY mg/L	
		Raw	Fin	Raw	Fin	Raw	Fin	Fin	Fin		Total	7day-	Median	Raw	Fin	Raw	Fin
12/01/98	Tue	10.0	< 0.1			7.31	7.29	2.30	6.22		2	<	2			137	113
12/02/98	Wed	10.0	< 0.1	3.41	0.096	7.45	7.53	2.00	4.08	<	2	<	2			144	121
12/03/98	Thu	9.0	< 0.1			7.52	7.50	2.20	4.89	<	2	<	2			133	123
12/04/98	Fri	10.5	< 0.1			7.48	7.40	2.25	5.20	<	2	<	2			144	119
12/05/98	Sat	11.0	< 0.1			7.32	7.63	1.90	4.79	<	2	<	2			115	120
12/06/98	Sun	10.0	< 0.1			7.29	7.35	1.70	3.87	<	2	<	2			145	110
12/07/98	Mon	10.0	< 0.1			7.36	7.47	1.55	4.99	<	2	<	2			145	117
12/08/98	Tue	8.5	< 0.1			7.44	7.46	1.50	5.30	<	2	<	2			133	122
12/09/98	Wed	9.5	< 0.1			7.36	7.54	1.50	3.95	<	2	<	2	237	217	133	120
12/10/98	Thu	9.0	< 0.1			7.29	7.37	1.45	4.67	<	2	<	2			138	121
12/11/98	Fri	9.5	< 0.1			7.30	7.36	1.30	4.58	<	2	<	2			139	122
12/12/98	Sat	9.5	< 0.1			7.26	7.58	1.60	3.68	<	2	<	2			146	128
12/13/98	Sun	9.5	< 0.1			7.49	7.42	2.10	4.49	<	2	<	2			155	134
12/14/98	Mon	8.0	< 0.1			7.46	7.40	2.10	5.30	<	2	<	2			148	136
12/15/98	Tue	9.5	< 0.1			7.42	7.44	2.00	4.49	<	2	<	2			149	133
12/16/98	Wed	11.5	< 0.1			7.26	7.43	1.40	4.67	<	2	<	2	243	233	145	130
12/17/98	Thu	13.0	< 0.1			7.46	7.54	1.60	4.13	<	2	<	2			150	132
12/18/98	Fri	18.5	< 0.1			7.47	7.54	1.80	4.13	<	2	<	2			147	136
12/19/98	Sat	20.0	< 0.1			7.43	7.50	2.60	4.49	<	2	<	2			157	140
12/20/98	Sun	12.0	< 0.1			7.60	7.49	3.10	4.40	<	2	<	2			161	144
12/21/98	Mon		< 0.1				7.42	2.80	6.02		2	<	2				140
12/22/98	Tue	10.5	< 0.1			7.35	7.48	2.60	5.75		2		2			157	134
12/23/98	Wed	10.0	< 0.1			7.61	7.68	2.60	5.03		2		2	254	235	168	137
12/24/98	Thu	10.5	< 0.1			7.49	7.30	2.85	5.30	<	2		2			157	130
12/25/98	Fri	10.0	< 0.1			7.40	7.44	2.95	5.39		2		2			163	134
12/26/98	Sat	9.5	< 0.1			7.45	7.73	2.90	5.21		2	<	2			175	146
12/27/98	Sun	10.5	< 0.1			7.50	7.40	2.00	2.61	<	2	<	2			172	154
12/28/98	Mon	11.0	< 0.1			7.58	7.63	1.80	4.40	<	2	<	2			167	154
12/29/98	Tue	11.0	< 0.1			7.60	7.62	2.10	4.76	<	2	<	2			169	154
12/30/98	Wed	13.0	< 0.1			7.41	7.61	2.20	2.70		4	<	2	253	226	173	162
12/31/98	Thu	10.5	< 0.1			7.51	7.57	2.75	2.70	<	2	<	2			173	165
PERMIT MAX			0.1		2.0		8.5	20			240		23				
PERMIT MIN							6.5										
PERMIT AVE					1.0			10									
TOTAL		325.0	3.1	3.41	0.096	222.87	232.12	65.50	142.19		64		62	987	911	4538	4131
MAXIMUM		20.0	0.1	3.41	0.096	7.61	7.73	3.10	6.22		4		2	254	235	175	165
MINIMUM		8.0	0	3.41	0.096	7.26	7.29	1.30	2.61		2		2	237	217	115	110
AVERAGE		10.8	0.1	3.41	0.096	7.43	7.49	2.11	4.59		2		2	247	228	151	133
# Tests		30	31	1	1	30	31	31	31		31		31	4	4	30	31

SOUTH TAHOE PUBLIC UTILITY DISTRICT
MEMORANDUM

Date: December 22, 1998

To: Bob Baer, Diane Noble, Terry Powers

From: Greg Schrempp

Topic: Export Line Inspection

On December 22 1998, Tim Rieger and I conducted our check of the District's export line from the treatment plant to where the "C" line daylights at Harvey Place at Station 564+04. Three wet spots were checked, however no leaks were found.

SAMPLE LOCATIONS

TAHOE BASIN MONITORING WELLS

<u>Site</u>	<u>Location</u>
ERB	Emergency Retention Basin
CONTROL	North of Post Office
MW02-25, -50	Emergency Retention Basin, S side
MW03-25, -50	Emergency Retention Basin, S side
MW04-25, -50	Emergency Retention Basin, W side
MW07-25, -50	Emergency Retention Basin, N side
MW08-25, -50	Pond #1, SW corner
MW11	S.E. corner of wastewater treatment plant grounds
MW12	South of Emergency Pump Building, for buried sludge
MW13	Pond 2, along Heavenly Valley Creek, for buried sludge

HEAVENLY VALLEY CREEK

HVC-1	At Pioneer Trail
HVC-2	250 ft upstream of Pond #2
HVC-3	25 ft downstream of Johnson Blvd.
HVC-4	Effluent of drain pipe from Lower Shop area
HVC-5	Effluent of drainage pipe along Johnson Blvd, 10 feet upstream of Johnson Blvd.

ALPINE COUNTY MONITORING WELLS

<u>Site</u>	<u>Location</u>
ACMW-01AW	Below main dam at Harvey Place Reservoir
ACMW-01BE	Below auxiliary dam at Harvey Place Reservoir
ACMW-02, N&S	On dam access road at Diamond Valley Road
ACMW-03	Bruns ranch, east side of Highway 88
ACMW-04W	Gansberg ranch, west side of Highway 88
ACMW-05	Dressler ranch
ACMW-06, N&S	Celio ranch, on Diamond Valley Road

ALPINE SOILS

<u>Site</u>	<u>Ranch</u>
S2	Celio
S3	Hall
S4	Gansberg
S5	Gansberg
S6	Neddenriep
S7	Bruns
S8	Dressler

ALPINE GROUNDWATERS

<u>Site</u>	<u>Homeowner</u>
GW-01	Sagues
GW-03	Smith/Springmeyer
GW-04	Celio
GW-05	Neddenriep
GW-07	Gansberg, Jr.
GW-08	Arant
GW-11	Diamond Valley School
GW-14	Sierra Pines Store

ALPINE SURFACEWATERS

<u>Site</u>	<u>Location</u>
SW-01	Carson River, Woodfords
SW-02	Indian Creek, @ HWY 89
SW-03	Indian Creek, @ upper bridge
SW-04	Indian Creek, @ lower bridge
SW-05	Carson River, Paynesville
SW-06	Carson River, Stateline
SW-07	Fredericksberg Ditch, Stateline
SW-08	Irrigation Ditch along Carson River Road
SW-09	Carson River, Dressler Lane
SW-10	Indian Creek, @ Smith-Springmeyer Ranch

TAHOE BASIN MONITORING

01/12/99

Site	Date	ID	Location	Depth msl	Temp C	pH	EC umhos	Cl mg/L	COD mg/L	Comment
Buried Sludge Monitoring										
MW11	12/16/98	981216-18	Sludge Pond	6267.8	10.6	6.57	83	1.1	< 5.0	
MW12	12/16/98	981216-19	Sludge Pond	6265.2	10.7	6.17	166	2.7	< 5.0	
MW13	12/16/98	981216-20	Sludge Pond	6257.8	6.8	6.76	723	3.7	18.2	
ERB Monitoring										
CONTROL	12/16/98	981216-11	At Post Office	6283.5	9.1	6.65	173	6.3	< 5.0	
MW01.5	12/16/98	981216-12	SW corner of ERB	6269.1	9.2	6.72	169	3.6	< 5.0	
MW02-50	12/16/98	981216-13	Black Bart side of ERB	6268.9	9.6	6.57	500	48.0	< 5.0	
MW03-50	12/16/98	981216-14	Black Bart side of ERB	6268.9	9.6	6.13	453	45.9	< 5.0	
MW04-50	12/16/98	981216-15	Hank Monk side of ERB	6269.2	8.2	6.21	80	5.8	< 5.0	
MW07-50	12/16/98	981216-16	North side of ERB	6279.7	8.0	6.48	271	27.2	< 5.0	
Heavenly Valley Creek										
HVC-1	12/08/98	981208-15	Downstream of Pioneer		2.7	6.60	48	0.9	< 5.0	
HVC-2	12/08/98	981208-16	250' upstream of Pond #2		2.6	7.43	51	1.4	< 5.0	
HVC-3	12/08/98	981208-17	25' downstream of Johnson Blvd		1.7	6.85	54	1.6	< 5.0	
HVC-4	12/08/98	981208-18	Effluent of drain from Lower Sho		1.9	6.61	101	1.0	13.4	
HVC-5	12/08/98	81208-HVC	Effluent of drainage pipe along J							Dry
Treatment Plant Monitoring										
MW08-25	12/16/98	981216-17	SW side of Pond #1	6247.8	11.1	6.23	1035	50.8	81.6	

TAHOE BASIN MONITORING

01/12/99

Site	Date	TotalP mg/L	PO4-P mg/L	TKN mg/L	NH3-N mg/L	NO2-N mg/L	NO3-N mg/L	Total N mg/L
Buried Sludge Monitoring								
MW11	12/16/98				0.024	< 0.010	0.135	0.145
MW12	12/16/98				0.023	< 0.010	0.248	0.258
MW13	12/16/98				0.020	0.030	5.180	5.210
ERB Monitoring								
CONTROL	12/16/98				0.060	< 0.010	2.280	2.290
MW01.5	12/16/98			<	0.020	< 0.010	0.673	0.683
MW02-50	12/16/98			<	0.020	< 0.010	11.100	11.110
MW03-50	12/16/98			<	0.020	< 0.010	7.040	7.050
MW04-50	12/16/98			<	0.020	< 0.010	0.042	0.052
MW07-50	12/16/98			<	0.020	< 0.010	0.611	0.621
Heavenly Valley Creek								
HVC-1	12/08/98			0.163	0.022	< 0.010	0.069	0.242
HVC-2	12/08/98			0.226	< 0.020	< 0.010	0.011	0.247
HVC-3	12/08/98			0.381	0.020	< 0.010	0.011	0.402
HVC-4	12/08/98			0.570	0.037	< 0.010	0.089	0.669
HVC-5	12/08/98							0.000
Treatment Plant Monitoring								
MW08-25	12/16/98				9.760	0.057	< 0.010	0.067

ALPINE COUNTY MONITORING

01/12/99

Site	Date	ID	Location	Temp C	pH	EC umhos	DO mg/L	Alk mg/L	TDS mg/L	SS mg/L	Turb NTU	Cl mg/L	SO4 mg/L
Alpine Monitoring Wells													
ACMW-01AW	12/22/98	981222-12	Main Dam	11.5	6.34	98		47	83			1.3	
ACMW-01BE	12/22/98	981222-13	Secondary Dam	9.7	6.36	113		50	86			1.4	
ACMW-02N	12/22/98	981222-14	Access Gate	10.5	6.56	143		63	101			4.4	
ACMW-02S	12/22/98	981222-15	Access Gate	11.8	6.50	98		46	77			2.0	
ACMW-04W	12/22/98	981222-16	Gansberg	11.2	6.06	204		54	144			12.8	
ACMW-06N	12/22/98	981222-17	Celio	11.0	6.88	683		259	434			52.1	
Groundwaters													
GW-03	12/08/98	981208-07	Smith/Springmeyer	11.8	7.33	316		131	226			1.5	
GW-04	12/08/98	981208-08	Celio	13.2	7.38	266		119	193			3.1	
GW-05	12/08/98	981208-09	Neddenriep	8.0	6.39	281		63	180			27.3	
GW-07	12/08/98	981208-10	Gansberg	6.4	6.35	126		54	97			1.8	
GW-08	12/08/98	981208-11	Arant	10.3	6.43	216		53	137			18.1	
GW-11	12/08/98	981208-12	Diamond Val. School	8.6	6.20	104		46	80			1.0	
GW-14	12/08/98	981208-13	Sierra Pines	8.9	6.58	112		53	99			1.3	
Reservoirs													
HPR	12/02/98	981202-13	Harvey Place Reservoir	6.9	7.44	472	9.40	99	232	3.80	3.7	52.2	23.2
ICR	12/02/98	981202-14	Indian Creek Reservoir	5.6	6.99	104	11.00	46	66	29.60	6.8	1.5	3.4
Surfacewaters: Carson R													
SW-01	12/02/98	981202-11	Carson R Woodfords	1.8	6.27	69	11.40	31	51	1.36	.58	1.4	2.2
SW-05	12/02/98	981202-12	Carson R Paynesville	3.6	6.85	76	11.20	34	62	2.46	.53	1.5	2.2

ALPINE COUNTY MONITORING

01/12/99

Site	Date	TotalP mg/L	PO4-P mg/L	TKN mg/L	NH3-N mg/L	NO2-N mg/L	NO3-N mg/L	Total N mg/L	MBAS mg/L
Alpine Monitoring Wells									
ACMW-01A	12/22/98	0.026		0.105	< 0.020	< 0.010	0.066	0.181	
ACMW-01B	12/22/98	0.022	<	0.100	< 0.020	< 0.010	0.066	1.080	
ACMW-02N	12/22/98	0.022	<	0.100	< 0.020	< 0.010	0.130	0.240	
ACMW-02S	12/22/98	0.016		0.105	< 0.020	< 0.010	< 0.010	0.125	
ACMW-04W	12/22/98	0.026		0.143	< 0.020	< 0.010	2.600	2.753	
ACMW-06N	12/22/98	0.407		0.320	0.032	< 0.010	< 0.010	0.340	
Groundwaters									
GW-03	12/08/98	0.040		0.093	0.022	< 0.010	0.708	0.811	
GW-04	12/08/98	0.056		0.113	< 0.020	< 0.010	0.807	0.930	
GW-05	12/08/98	0.032		0.153	< 0.020	< 0.010	3.020	3.183	
GW-07	12/08/98	0.092		0.165	< 0.020	< 0.010	1.030	1.205	
GW-08	12/08/98	0.040		0.144	< 0.020	< 0.010	3.410	3.564	
GW-11	12/08/98	0.016		0.176	< 0.020	< 0.010	0.491	0.677	
GW-14	12/08/98	0.054		0.336	< 0.020	< 0.010	0.447	0.793	
Reservoirs									
HPR	12/02/98	2.400	2.320	11.800	11.600	0.322	3.210	15.332	0.094
ICR	12/02/98	0.082	< 0.010	< 0.100	0.081	< 0.010	0.015	0.125	
Surfacewaters: Carson R									
SW-01	12/02/98	0.016	< 0.010	0.155	0.025	< 0.010	0.033	0.198	
SW-05	12/02/98	0.020	< 0.010	0.216	< 0.020	< 0.010	0.043	0.269	

ALPINE COUNTY MONITORING

01/12/99

Site	Date	COD mg/L	BOD mg/L	O & G mg/L	Boron mg/L	Ca mg/L	Mg mg/L	Na mg/L	K mg/L	SAR	Exch Na %	Hardness mg/L	Water Level MSL or Ft
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Alpine Monitoring Wells

ACMW-01A	12/22/98												5480.6
ACMW-01B	12/22/98												5486.5
ACMW-02N	12/22/98												5458.1
ACMW-02S	12/22/98												5458.4
ACMW-04W	12/22/98												4898.3
ACMW-06N	12/22/98												5216.3

Groundwaters

GW-03	12/08/98												
GW-04	12/08/98												
GW-05	12/08/98												
GW-07	12/08/98												
GW-08	12/08/98												
GW-11	12/08/98												
GW-14	12/08/98												

Reservoirs

HPR	12/02/98	18	2		0.22	16.0	3.1	45.9	9.3	2.75	60.7		32.0
ICR	12/02/98	19	3		0.02	10.3	1.8	6.5	2.2	0.49	28.2		

Surfacewaters: Carson R

SW-01	12/02/98		1		0.03	6.3	1.7	3.7	1.4	0.34	24.8		
SW-05	12/02/98		1		0.02	6.6	2.1	4.2	1.6	0.36	25.1		

**ALPINE COUNTY
BACTERIOLOGICAL MONITORING**

01/12/99

Alpine Monitoring Wells

Site	Date		Total Coliform MPN/100mL	<	Fecal Coliform MPN/100mL		Fecal Streptococci MPN/100mLL
ACMW-01A	12/22/98		1.1	<	1.1		
ACMW-01B	12/22/98	<	1.1	<	1.1		
ACMW-02N	12/22/98	<	1.1	<	1.1		
ACMW-02S	12/22/98		1.1	<	1.1		
ACMW-04W	12/22/98	>	23	<	1.1		
ACMW-06N	12/22/98	<	1.1	<	1.1		

Groundwaters

Site	Date		Total Coliform MPN/100mL	<	Fecal Coliform MPN/100mL		Fecal Streptococci MPN/100mLL
GW-03	12/08/98	<	1.1	<	1.1		
GW-04	12/08/98	<	1.1	<	1.1		
GW-05	12/08/98	<	1.1	<	1.1		
GW-07	12/08/98	<	1.1	<	1.1		
GW-08	12/08/98	<	1.1	<	1.1		
GW-11	12/08/98	<	1.1	<	1.1		
GW-14	12/08/98	<	1.1	<	1.1		

Reservoirs

Site	Date		Total Coliform MPN/100mL	<	Fecal Coliform MPN/100mL		Fecal Streptococci MPN/100mLL
HPR	12/02/98		500	<	2		50
ICR	12/02/98	>	1600	<	2	>	1600

Surfacewaters: Carson R

Site	Date		Total Coliform MPN/100mL	<	Fecal Coliform MPN/100mL		Fecal Streptococci MPN/100mLL
SW-01	12/02/98		70	<	30		
SW-05	12/02/98	<	30	<	30		

**ALPINE COUNTY
BLUE GREEN ALGAE**

ID#	Site	Location	Date	Colonies #	Colony # Cells	Filaments #	Filaments # Cells	Filaments #	Filament Length	Single Cells, #
981202-11	SW-01	Carson R Woodfords	12/02/98	0	0	0	0	0	0	0
981202-12	SW-05	Carson R Paynesville	12/02/98	0	0	35	282	0	0	0
981202-13	HPR	Harvey Place Reservoir	12/02/98	0	0	0	0	0	0	0
981202-14	ICR	Indian Creek Reservoir	12/02/98	0	0	35	704	0	0	0

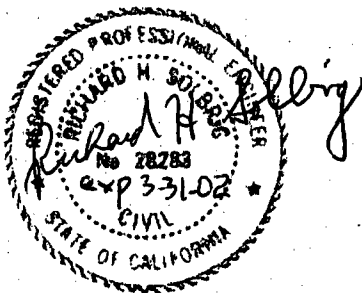
Site	Location	TDS		Cl ⁻		TKN		NO ₃ -N		Total N		Total P		SO ₄		Boron		Exch Na %	
		Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence
SW-01	Carson River, Woodfords	55		1.0	✓	0.13	✓	0.02		0.15	✓	0.02		2.0	✓	0.02		20	✓
SW-06	Carson River, Stateline	70		2.5		0.22		0.03		0.25		0.03		2.0	✓	0.02		20	✓
SW-02	Indian Creek, Upper	100		6.0						0.30		0.03		8.0		0.25		30	
SW-03	Indian Creek, Mid	100	✓	6.0	✓					0.30		0.03	✓	8.0		0.25		30	✓
SW-04	Indian Creek, Lower	100		6.0						0.30	✓	0.03	✓	8.0		0.25		30	
SW-10	Indian Creek, Stateline	100		6.0						0.30	✓	0.03	✓	8.0		0.25		30	

August, September, October and November Blue Green Algae results are included.

Certification

I hereby certify that the enclosed monitoring report was prepared under my direct supervision and that I am a duly Registered Engineer under the laws of the State of California.

Sincerely,



Richard Solbrig,
Assistant Manager/Engineer

Enclosures:

1.

November Monthly Report	Pages
Wastewater Treatment plant	2
Permit Compliance Record	1
Export pipeline inspection	1
Sample site locations	2
Monitoring wells (ERB) and Heavenly Valley Creek (HVC)	2
Alpine County Surfacewaters, Groundwaters and Reservoirs	4
Alpine County Blue Green Algae, Aug, Sept, Oct, and Nov	4
Alpine County soils -	0
Total number of pages:	16

cc: Calif. Dept. of Health Services, ODW - Jess Morehouse
El Dorado Co. Dept. of Environmental Health - Virginia Huber
Nevada Division of Environmental Protection - Wendel McCurry
Alpine County Health Department - Dr. Richard Botto
Alpine County Health Department - Jim Goodloe
Alpine County Board of Supervisors
EPA - Permit and Compliance Branch, W-5 - Bill Pierce
Desert Research Group (Alpine County Consultants) - Bill Albright
STPUD Board of Directors
STPUD General Manager / District Engineer - Robert G. Baer
STPUD Manager of Operations - Ross Johnson
STPUD Laboratory Director - Terry Powers
STPUD Manager of Alpine County Operations - Hal Bird

**SOUTH TAHOE PUBLIC UTILITY DISTRICT
WASTEWATER TREATMENT PLANT MONTHLY REPORT**

12/08/98
18:28:34

NOVEMBER 1998

Date	Day	FLOW MGD			Pond Inf	PRECIP Inch	Type	D.O. mg/L Fin	COD mg/L		BOD mg/L		SS mg/L	
		Inf	2-Hr Peak Inf	Pond Return Eff					Raw	Fin	Raw	Fin	Raw	Fin
11/01/98	Sun	4.10	6.2	4.02				5.37	405					
11/02/98	Mon	3.94	5.4	3.29				5.61	377					
11/03/98	Tue	3.80	5.0	4.07				5.49	384					
11/04/98	Wed	3.77	5.0	3.10				5.59		23.8		4.9		1.8
11/05/98	Thu	3.79	5.1	4.46				5.57	400					
11/06/98	Fri	3.67	5.0	3.52		0.14	Snow	6.02	377					
11/07/98	Sat	4.22	6.4	3.41		0.09	Snow	5.88	406	31.6	158	9.0	191	3.5
11/08/98	Sun	4.08	5.9	4.47		0.05	Snow	4.86	352					
11/09/98	Mon	3.75	4.8	4.24		0.14	Snow	6.04	340					
11/10/98	Tue	3.93	5.5	4.12				5.69	343					
11/11/98	Wed	3.81	5.3	3.71				5.07	375	36.8	170	4.8	134	3.7
11/12/98	Thu	3.60	4.9	3.77				5.22	391					
11/13/98	Fri	3.70	5.0	3.69				5.27	396					
11/14/98	Sat	4.07	5.8	3.99				5.42	406	33.4	170	5.9	138	3.8
11/15/98	Sun	4.15	5.4	4.03				6.49	426					
11/16/98	Mon	3.61	4.9	3.56		0.10	Snow	7.08	354	41.8	158	5.4	144	3.3
11/17/98	Tue	3.48	4.6	3.61		0.19	Snow	5.19	375					
11/18/98	Wed	3.57	4.3	4.26		0.01	Snow	5.04	366					
11/19/98	Thu	3.44	5.8	3.18				7.15	430					
11/20/98	Fri	3.70	5.2	3.38				5.99	462					
11/21/98	Sat	4.06	6.0	4.10		0.40	Snow	5.25	437	25.9	175	4.4	133	1.4
11/22/98	Sun	4.16	5.3	4.05		0.01	Rain	4.74	391					
11/23/98	Mon	4.14	5.3	4.33		0.59	Rain	4.80	356					
11/24/98	Tue	4.04	5.0	3.74				5.14	375					
11/25/98	Wed	3.96	5.2	3.66				4.32	397	26.4	193	5.0	152	1.7
11/26/98	Thu	4.58	6.0	4.58				4.19	472					
11/27/98	Fri	4.88	7.4	5.22		0.07	Snow	4.32	561					
11/28/98	Sat	4.95	7.8	5.04		0.02	Snow	6.36	467	22.4	232	5.7	162	2.3
11/29/98	Sun	4.73	6.7	4.85		0.74	Snow	5.71	347					
11/30/98	Mon	4.44	5.5	4.92		1.51	Snow	4.70	366	29.8	170	5.9	127	2.9
PERMIT MAX		7.7								300		45		60
PERMIT MIN														
PERMIT AVE										60		30		30
TOTAL		120.12	165.7	120.37		4.09		163.57	11534	271.9	1426	50.9	1181	24.4
MAXIMUM		4.95	7.8	5.22		1.51		7.15	561	41.8	232	9.0	191	3.8
MINIMUM		3.44	4.3	3.10		0.01		4.19	340	22.4	158	4.4	127	1.4
AVERAGE		4.00	5.5	4.01		0.27		5.45	398	30.2	178	5.7	148	2.7
# Tests		30	30	30	0	0	15	30	29	9	8	9	8	9

**SOUTH TAHOE PUBLIC UTILITY DISTRICT
WASTEWATER TREATMENT PLANT MONTHLY REPORT**

12/08/98

18:28:34

NOVEMBER 1998

Date	Day	SETTLEABLE SOLIDS mL/L		MBAS mg/L		pH Units		TURBIDITY NTU		Cl2 mg/L	FINAL COLIFORMS MPN/100 mL			TDS mg/L		ALKALINITY mg/L	
		Raw	Fin	Raw	Fin	Raw	Fin	Raw	Fin		Total	7day-	Median	Raw	Fin	Raw	Fin
11/01/98	Sun	10.0	< 0.1			7.55	7.41	1.95	5.40	<	2	<	2			154	102
11/02/98	Mon	10.0	< 0.1			7.49	7.18	1.65	5.91	<	2	<	2			154	96
11/03/98	Tue	10.0	< 0.1	2.82	0.070	7.45	7.17	1.50	6.01	<	2	<	2			152	92
11/04/98	Wed		< 0.1				7.54	1.50	5.81	<	2	<	2	233			89
11/05/98	Thu	8.5	< 0.1			7.43	7.27	1.70	9.27	<	2	<	2			156	83
11/06/98	Fri	10.0	< 0.1			7.40	7.31	1.80	6.22	<	2	<	2			152	89
11/07/98	Sat	11.0	< 0.1			7.52	7.26	2.90	8.56	<	2	<	2			159	91
11/08/98	Sun	10.5	< 0.1			7.54	7.29	3.20	8.46	<	2	<	2			159	108
11/09/98	Mon	9.5	< 0.1			7.66	7.51	2.50	6.42	<	2	<	2			150	117
11/10/98	Tue	11.0	< 0.1			7.37	7.46	2.60	4.89	<	2	<	2			149	122
11/11/98	Wed	10.0	< 0.1			7.35	7.47	2.40	5.10	<	2	<	2	258	229	150	122
11/12/98	Thu	10.5	< 0.1			7.62	7.48	2.30	5.10	<	2	<	2			147	122
11/13/98	Fri	11.0	< 0.1			7.47	7.26	2.35	6.32	<	2	<	2			150	119
11/14/98	Sat	9.0	< 0.1			7.48	7.62	2.60	3.95	<	2	<	2			175	130
11/15/98	Sun	11.0	< 0.1			7.43	7.44	2.85	3.36	<	2	<	2			162	129
11/16/98	Mon	11.0	< 0.1			7.26	7.38	2.40	5.40	<	2	<	2	246	240	155	120
11/17/98	Tue	10.0	< 0.1			7.54	7.55	1.90	3.67	<	2	<	2			152	127
11/18/98	Wed	12.0	< 0.1			7.32	7.42	1.65	3.87	<	2	<	2			147	130
11/19/98	Thu	10.0	< 0.1			7.62	7.49	1.95								150	121
11/20/98	Fri	10.5	< 0.1			7.46	7.44	1.70	7.85	<	2	<	2			148	128
11/21/98	Sat	11.0	< 0.1			7.51	7.35	1.70	4.18	<	2	<	2			157	126
11/22/98	Sun	11.0	< 0.1			7.30	7.22	1.80	4.99	<	2	<	2			154	126
11/23/98	Mon	8.0	< 0.1			7.25	7.16	2.05	4.79	<	2	<	2			144	122
11/24/98	Tue	9.5	< 0.1			7.37	7.48	2.00	4.89	<	2	<	2			146	122
11/25/98	Wed	11.0	< 0.1			7.38	7.38	1.25	4.79	<	2	<	2			151	122
11/26/98	Thu	11.0	< 0.1			7.20	7.28	1.65	4.18	<	2	<	2	241	224	156	124
11/27/98	Fri	14.0	< 0.1			7.40	7.08	1.60	3.67	<	2	<	2			170	130
11/28/98	Sat	12.5	< 0.1			7.40	7.48	1.90	2.96	<	2	<	2			171	141
11/29/98	Sun	11.5	< 0.1			7.29	7.32	1.80	2.96	<	2	<	2			153	130
11/30/98	Mon	9.0	< 0.1			7.58	7.50	2.60	6.93	<	2	<	2	233	213	135	113
PERMIT MAX			0.1		2.0		8.5	20			240		23				
PERMIT MIN							6.5										
PERMIT AVE					1.0			10									
TOTAL		304.0	3.0	2.82	0.070	215.64	221.20	61.75	155.91		58		58	978	1139	4458	3493
MAXIMUM		14.0	0.1	2.82	0.070	7.66	7.62	3.20	9.27		2		2	258	240	175	141
MINIMUM		8.0	0	2.82	0.070	7.20	7.08	1.25	2.96		2		2	233	213	135	83
AVERAGE		10.5	0.1	2.82	0.070	7.44	7.37	2.06	5.38		2		2	245	228	154	116
# Tests		29	30	1	1	29	30	30	29		29		29	4	5	29	30

**SOUTH TAHOE PUBLIC UTILITY DISTRICT
MEMORANDUM**

Date: November 19, 1998
To: Bob Baer, Diane Noble
From: Tim Rieger
Topic: Export Line Check



On November 18 & 19, 1998, Greg Schrempp and I conducted our check of the District's export line from the treatment plant to station 564 + 06 near the Harvey Place reservoir.

Areas of the C-line at stations 131 + 00 & 205 + 00 were closely checked for possible erosion around the export line, leading to possible damage this coming winter. No exposed portions on the line were detected however the concrete cap at station 205 + 00 is fractured in a few spots and may have moved from it's original position. I do not believe the above information poses an immediate threat to the pipe.

Several wet areas were checked. However, nothing positive was found.

CC Richard Solbrig
Terry Powers

SAMPLE LOCATIONS

TAHOE BASIN MONITORING WELLS

<u>Site</u>	<u>Location</u>
ERB	Emergency Retention Basin
CONTROL	North of Post Office
MW02-25, -50	Emergency Retention Basin, S side
MW03-25, -50	Emergency Retention Basin, S side
MW04-25, -50	Emergency Retention Basin, W side
MW07-25, -50	Emergency Retention Basin, N side
MW08-25, -50	Pond #1, SW corner
MW11	S.E. corner of wastewater treatment plant grounds
MW12	South of Emergency Pump Building, for buried sludge
MW13	Pond 2, along Heavenly Valley Creek, for buried sludge

HEAVENLY VALLEY CREEK

HVC-1	At Pioneer Trail
HVC-2	250 ft upstream of Pond #2
HVC-3	25 ft downstream of Johnson Blvd.
HVC-4	Effluent of drain pipe from Lower Shop area
HVC-5	Effluent of drainage pipe along Johnson Blvd, 10 feet upstream of Johnson Blvd.

ALPINE COUNTY MONITORING WELLS

<u>Site</u>	<u>Location</u>
ACMW-01AW	Below main dam at Harvey Place Reservoir
ACMW-01BE	Below auxiliary dam at Harvey Place Reservoir
ACMW-02, N&S	On dam access road at Diamond Valley Road
ACMW-03	Bruns ranch, east side of Highway 88
ACMW-04W	Gansberg ranch, west side of Highway 88
ACMW-05	Dressler ranch
ACMW-06, N&S	Celio ranch, on Diamond Valley Road

ALPINE SOILS

<u>Site</u>	<u>Ranch</u>
S2	Celio
S3	Hall
S4	Gansberg
S5	Gansberg
S6	Neddenriep
S7	Bruns
S8	Dressler

ALPINE GROUNDWATERS

<u>Site</u>	<u>Homeowner</u>
GW-01	Sagues
GW-03	Smith/Springmeyer
GW-04	Celio
GW-05	Neddenriep
GW-07	Gansberg, Jr.
GW-08	Arant
GW-11	Diamond Valley School
GW-14	Sierra Pines Store

ALPINE SURFACEWATERS

<u>Site</u>	<u>Location</u>
SW-01	Carson River, Woodfords
SW-02	Indian Creek, @ HWY 89
SW-03	Indian Creek, @ upper bridge
SW-04	Indian Creek, @ lower bridge
SW-05	Carson River, Paynesville
SW-06	Carson River, Stateline
SW-07	Fredericksberg Ditch, Stateline
SW-08	Irrigation Ditch along Carson River Road
SW-09	Carson River, Dressler Lane
SW-10	Indian Creek, @ Smith-Springmeyer Ranch

TAHOE BASIN MONITORING

12/09/98

Site	Date	ID	Location	Depth msl	Temp C	pH	EC umhos	Cl mg/L	COD mg/L	Comment
Buried Sludge Monitoring										
MW11	11/24/98	981124-14	Sludge Pond	6268.1	7.3	6.49	82	1.2	<	5.0
MW12	11/24/98	981124-15	Sludge Pond	6265.0	9.0	6.23	165	2.8	<	5.0
MW13	11/24/98	981124-16	Sludge Pond	6257.9	6.0	6.60	579	2.1		6.4
ERB Monitoring										
CONTROL	11/24/98	981124-07	At Post Office	6283.6	7.9	6.77	172	6.1	<	5.0
MW01-50	11/24/98	981124-08	SW corner of ERB	6271.9	7.6	7.03	170	3.5	<	5.0
MW02-50	11/24/98	981124-09	Black Bart side of ERB	6268.8	8.6	6.50	504	48.5	<	5.0
MW03-50	11/24/98	981124-10	Black Bart side of ERB	6268.8	8.8	6.21	452	45.5	<	5.0
MW04-50	11/24/98	981124-11	Hank Monk side of ERB	6269.2	7.3	6.22	79	5.8	<	5.0
MW07-50	11/24/98	981124-12	North side of ERB	6279.7	5.5	6.55	274	29.3		8.0
Heavenly Valley Creek										
HVC-1	11/18/98	981118-07	Downstream of Pioneer		0.8	7.08	49	1.0	<	5.0
HVC-2	11/18/98	981118-08	250' upstream of Pond #2		0.4	6.69	57	1.3		6.3
HVC-3	11/18/98	981118-09	25' downstream of Johnson Blvd		0.7	6.48	66	1.3		6.0
HVC-4	11/18/98	981118-10	Effluent of drain from Lower Sho		2.7	6.84	109	0.9		11.1
HVC-5	11/18/98	81118-HVC	Effluent of drainage pipe along J							No Flow
HVC-1	11/23/98	981123-07	Downstream of Pioneer		4.1	6.35	47	1.6	<	5.0
HVC-2	11/23/98	981123-08	250' upstream of Pond #2		2.4	6.78	52	1.5	<	5.0
HVC-3	11/23/98	981123-09	25' downstream of Johnson Blvd		2.4	6.61	54	1.6	<	5.0
HVC-4	11/23/98	981123-10	Effluent of drain from Lower Sho		3.2	6.78	84	0.8		64.2
HVC-5	11/23/98	81123-HVC	Effluent of drainage pipe along J							No Flow; 2" from overflow
Treatment Plant Monitoring										
MW08-50	11/24/98	981124-13	SW side of Pond #1	6247.8	9.8	6.24	1052	52.2		87.4

TAHOE BASIN MONITORING

12/09/98

Site	Date	TotalP mg/L	PO4-P mg/L	TKN mg/L	NH3-N mg/L	NO2-N mg/L	NO3-N mg/L	Total N mg/L
Buried Sludge Monitoring								
MW11	11/24/98				0.023	< 0.010	0.168	0.178
MW12	11/24/98			<	0.020	< 0.010	0.284	0.294
MW13	11/24/98			<	0.020	0.016	0.667	0.683
ERB Monitoring								
CONTROL	11/24/98				0.024	< 0.010	2.260	2.270
MW01-50	11/24/98			<	0.020	< 0.010	0.658	0.668
MW02-50	11/24/98			<	0.020	< 0.010	11.000	11.010
MW03-50	11/24/98			<	0.020	< 0.010	6.960	6.970
MW04-50	11/24/98				0.057	< 0.010	0.219	0.229
MW07-50	11/24/98				0.062	< 0.010	0.742	0.752
Heavenly Valley Creek								
HVC-1	11/18/98			0.173	0.078	< 0.010	0.044	0.227
HVC-2	11/18/98			0.166	0.032	< 0.010	< 0.010	0.186
HVC-3	11/18/98			0.255	< 0.020	< 0.010	< 0.010	0.275
HVC-4	11/18/98			0.314	0.032	0.014	0.080	0.408
HVC-5	11/18/98							0.000
HVC-1	11/23/98				0.035	< 0.010	0.035	0.045
HVC-2	11/23/98				0.035	< 0.010	0.015	0.025
HVC-3	11/23/98				0.029	< 0.010	0.010	0.020
HVC-4	11/23/98			<	0.020	< 0.010	0.010	0.020
HVC-5	11/23/98							0.000
Treatment Plant Monitoring								
MW08-50	11/24/98				8.440	0.075	< 0.010	0.085

ALPINE COUNTY MONITORING

12/09/98

Site	Date	ID	Location	Temp C	pH	EC umhos	DO mg/L	Alk mg/L	TDS mg/L	SS mg/L	Turb NTU	Cl mg/L	SO4 mg/L
Alpine Monitoring Wells													
ACMW-01AW	11/18/98	981118-15	Main Dam	12.0	6.18	113		52	84		.5	2.2	2.0
ACMW-01BE	11/18/98	981118-16	Secondary Dam	10.6	6.28	95		45	77		4.9	0.6	2.4
ACMW-02N	11/18/98	981118-17	Access Gate	11.5	6.47	142		62	97		4	4.3	3.8
ACMW-02S	11/18/98	981118-18	Access Gate	12.7	6.40	104		49	77		.45	2.1	1.9
ACMW-04W	11/18/98	981118-19	Gansberg	12.3	5.94	207		54	141		1.5	13.3	12.9
ACMW-06N	11/18/98	981118-20	Celio	12.0	6.79	694		252	429		5.4	53.2	25.7
ACMW-06S	11/18/98	981118-21	Celio	10.3	8.54	581		226	422		6.4	74.5	28.1
Groundwaters													
GW-01	11/10/98	981110-07	Cohen	9.1	6.51	136		62	91		78	6.0	
GW-03	11/10/98	981110-08	Smith/Springmeyer	11.3	7.40	308		131	227		.22	1.5	
GW-04	11/10/98	981110-09	Celio	13.2	7.25	264		119	195		.11	3.0	
GW-05	11/10/98	981110-10	Neddenriep	8.5	6.61	279		63	183		.32	27.6	
GW-07	11/10/98	981110-11	Gansberg	8.0	7.19	120		55	95		.07	1.2	
GW-08	11/10/98	981110-12	Arant	10.1	6.51	218		54	142		.72	17.1	
GW-11	11/10/98	981110-13	Diamond Val. School	12.4	6.15	105		47	81		.09	0.9	
GW-14	11/10/98	981110-14	Sierra Pines	8.9	6.21	111		54	95		.09	1.2	
Reservoirs													
HPR	11/03/98	981103-19	Harvey Place Reservoir	11.2	7.49	466	6.20	91	232	0.66	2.3	52.0	22.5
ICR	11/03/98	981103-20	Indian Creek Reservoir	9.8	7.91	100	7.40	46	64	4.22	2.7	1.9	3.6
Surfacewaters: Carson R													
SW-01	11/03/98	981103-10	Carson R Woodfords	3.7	7.14	72	10.80	34	49	0.69	.41	1.4	2.1
SW-05	11/03/98	981103-14	Carson R Paynesville	6.5	7.39	84	12.60	39	59	0.76	.45	1.7	2.0
SW-06	11/03/98	981103-15	Carson R Stateline	8.3	7.32	90	12.20	41	63	0.64	.38	2.1	2.1
SW-08	11/03/98	981103-16	Irrigation Ditch	12.1	7.33	122	8.60	55	87	14.70	3.7	2.0	4.5
SW-09	11/03/98	981103-17	Carson R Dressler Ln	7.5	7.36	126	17.20	52	82	0.59	.42	4.8	5.2
Surfacewaters: Indian Cr													
SW-02	11/03/98	981103-11	Indian Cr Upper	5.3	7.42	137	8.60	72	92	1.19	1.4	1.0	2.2
SW-03	11/03/98	981103-12	Indian Cr Mid	7.3	6.87	133	9.90	61	89	3.78	2.9	3.8	3.1
SW-04	11/03/98	981103-13	Indian Cr Lower	6.2	6.64	83	8.90	39	74	49.10	38	2.0	5.1
SW-10	11/03/98	981103-18	Indian Cr at Bruns	5.9	6.99	88	10.20	41	75	33.90	39	1.9	4.1

ALPINE COUNTY MONITORING

12/09/98

Site	Date	TotalP mg/L	PO4-P mg/L	TKN mg/L	NH3-N mg/L	NO2-N mg/L	NO3-N mg/L	Total N mg/L	MBAS mg/L
Alpine Monitoring Wells									
ACMW-01A	11/18/98	0.022	<	0.100	< 0.020	<	0.027	0.125	0.252
ACMW-01B	11/18/98	0.022	<	0.100	< 0.020	<	0.010	0.272	0.382
ACMW-02N	11/18/98	0.016	<	0.100	< 0.020	<	0.010	0.122	0.232
ACMW-02S	11/18/98	0.016	<	0.100	< 0.020	<	0.010	< 0.010	0.120
ACMW-04W	11/18/98	0.017		0.106	< 0.020	<	0.010	2.750	2.866
ACMW-06N	11/18/98	0.270		0.368	0.045		0.027	< 0.010	0.405
ACMW-06S	11/18/98	0.026		0.400	0.142		0.090	0.010	0.500
Groundwaters									
GW-01	11/10/98	0.026	<	0.100	< 0.020	<	0.010	< 0.010	0.120
GW-03	11/10/98	0.038	<	0.100	< 0.020	<	0.010	0.685	0.795
GW-04	11/10/98	0.056	<	0.100	< 0.020	<	0.010	0.790	0.900
GW-05	11/10/98	0.032	<	0.100	< 0.020	<	0.010	2.750	2.860
GW-07	11/10/98	0.071	<	0.100	< 0.020	<	0.010	0.635	0.745
GW-08	11/10/98	0.040	<	0.100	< 0.020	<	0.010	3.340	3.450
GW-11	11/10/98	0.022	<	0.100	< 0.020	<	0.010	0.461	0.571
GW-14	11/10/98	0.054		0.139	< 0.020	<	0.010	0.440	0.589
Reservoirs									
HPR	11/03/98	2.310	< 2.300	11.700	12.300	< 0.576		3.930	16.206
ICR	11/03/98	0.036	< 0.010	0.729	0.039	< 0.010		0.011	0.750
Surfacewaters: Carson R									
SW-01	11/03/98	0.014	< 0.010	0.157	< 0.020	<	0.010	0.012	0.179
SW-05	11/03/98	0.012	< 0.010	0.100	< 0.020	<	0.010	0.026	0.136
SW-06	11/03/98	0.018	< 0.010	0.100	< 0.020	<	0.010	0.024	0.134
SW-08	11/03/98	0.076	0.024	0.396	0.032	<	0.010	0.342	0.748
SW-09	11/03/98	0.028	0.018	0.192	< 0.020	<	0.010	0.041	0.243
Surfacewaters: Indian Cr									
SW-02	11/03/98	0.026	0.012	0.222	< 0.020	<	0.010	< 0.010	0.242
SW-03	11/03/98	0.084	0.052	0.178	< 0.020	<	0.010	0.015	0.203
SW-04	11/03/98	0.188	0.014	0.462	< 0.020	<	0.010	0.021	0.493
SW-10	11/03/98	0.122	0.014	0.317	< 0.020	<	0.010	0.033	0.360

ALPINE COUNTY MONITORING

12/09/98

Site	Date	COD mg/L	BOD mg/L	O & G mg/L	Boron mg/L	Ca mg/L	Mg mg/L	Na mg/L	K mg/L	SAR	Exch Na %	Hardness mg/L	Water Level MSL or Ft
------	------	-------------	-------------	---------------	---------------	------------	------------	------------	-----------	-----	--------------	------------------	--------------------------

Alpine Monitoring Wells

ACMW-01A	11/18/98	<	5									44.5	5481.4
ACMW-01B	11/18/98	<	5									36	5488.6
ACMW-02N	11/18/98	2	5									47	5458.3
ACMW-02S	11/18/98	<	5									40	5458.6
ACMW-04W	11/18/98	<	5									51	4900.8
ACMW-06N	11/18/98		7									239	5216.5
ACMW-06S	11/18/98		6									253	5205.1

Groundwaters

GW-01	11/10/98	<	5									50	
GW-03	11/10/98	<	5									122	
GW-04	11/10/98	<	5									101	
GW-05	11/10/98	<	5									90	
GW-07	11/10/98	<	5									47	
GW-08	11/10/98	<	5									39	
GW-11	11/10/98	<	5									40	
GW-14	11/10/98	<	5									34	

Reservoirs

HPR	11/03/98		17	2		0.02	14.3	3.1		9.3	0.00	0.0	24.0
ICR	11/03/98		17	2	<	0.01	10.6	1.6	6.3	2.1	0.48	27.8	

Surfacewaters: Carson R

SW-01	11/03/98	<	5	1		0.02	6.8	1.7	3.5	1.5	0.31	22.8	26
SW-05	11/03/98	<	5	1		0.01	7.5	2.0	4.5	1.7	0.37	25.0	31
SW-06	11/03/98	<	5	0		0.02	8.0	2.2	4.8	1.8	0.39	25.1	33
SW-08	11/03/98		6	1		0.01	10.0	2.3	9.3	2.3	0.69	35.0	40
SW-09	11/03/98	<	5	1		0.03	10.8	3.0	8.0	2.4	0.56	29.2	41

Surfacewaters: Indian Cr

SW-02	11/03/98	<	5	1		0.02	13.4	3.3	8.1	1.9	0.51	26.1	52
SW-03	11/03/98	<	5	1		0.03	8.9	2.5	7.1	1.5	0.54	31.2	47
SW-04	11/03/98		6	1		0.03	6.9	3.0	4.9	1.6	0.39	25.0	30
SW-10	11/03/98		6	1		0.03	8.0	2.7	5.1	2.1	0.40	24.9	32.5

**ALPINE COUNTY
BACTERIOLOGICAL MONITORING**

12/09/98

Alpine Monitoring Wells

Site	Date		Total Coliform MPN/100mL		Fecal Coliform MPN/100mL		Fecal Streptococci MPN/100mLL
ACMW-01A	11/18/98	<	1.1	<	1.1		
ACMW-01B	11/18/98	<	1.1	<	1.1		
ACMW-02N	11/18/98	<	1.1	<	1.1		
ACMW-02S	11/18/98	<	1.1	<	1.1		
ACMW-04W	11/18/98	>	23	<	1.1		
ACMW-06N	11/18/98	<	1.1	<	1.1		
ACMW-06S	11/18/98	>	23	<	1.1		

Groundwaters

Site	Date		Total Coliform MPN/100mL		Fecal Coliform MPN/100mL		Fecal Streptococci MPN/100mLL
GW-01	11/10/98	<	1.1	<	1.1		
GW-03	11/10/98	<	1.1	<	1.1		
GW-04	11/10/98	<	1.1	<	1.1		
GW-05	11/10/98	<	1.1	<	1.1		
GW-07	11/10/98	<	1.1	<	1.1		
GW-08	11/10/98	<	1.1	<	1.1		
GW-11	11/10/98	<	1.1	<	1.1		
GW-14	11/10/98	<	1.1	<	1.1		

Reservoirs

Site	Date		Total Coliform MPN/100mL		Fecal Coliform MPN/100mL		Fecal Streptococci MPN/100mLL
HPR	11/03/98		23		4		13
ICR	11/03/98	<	2	<	2		2

Surfacewaters: Carson R

Site	Date		Total Coliform MPN/100mL		Fecal Coliform MPN/100mL		Fecal Streptococci MPN/100mLL
SW-01	11/03/98	<	30	<	30	<	30
SW-05	11/03/98		40		40	<	30
SW-06	11/03/98		150		150	<	30
SW-08	11/03/98		750		750		30
SW-09	11/03/98		2400		70		40

Surfacewaters: Indian Cr

Site	Date		Total Coliform MPN/100mL		Fecal Coliform MPN/100mL		Fecal Streptococci MPN/100mLL
SW-02	11/03/98		40	<	30		90
SW-03	11/03/98		40		40		90
SW-04	11/03/98		430		230		430
SW-10	11/03/98		1500		930		150

**ALPINE COUNTY
BLUE GREEN ALGAE**

ID#	Site	Location	Date	Colonies #	Colony # Cells	Filaments #	Filaments # Cells	Filaments #	Filament Length	Single Cells, #
980804-09	SW-01	Carson R Woodfords	08/04/98	0	0	0	0	0	0	0
980804-10	SW-02	Indian Cr Upper	08/04/98	0	0	0	0	0	0	0
980804-11	SW-03	Indian Cr Mid	08/04/98	0	0	0	0	0	0	0
980804-12	SW-04	Indian Cr Lower	08/04/98	0	0	0	0	0	0	0
980804-13	SW-05	Carson R Paynesville	08/04/98	0	0	0	0	0	0	0
980804-14	SW-06	Carson R Stataline	08/04/98	0	0	0	0	0	0	0
980804-15	SW-08	Irrigation Ditch	08/04/98	0	0	0	0	0	0	0
980804-16	HPR	Harvey Place Reservoir	08/04/98	0	0	0	0	0	0	0
980804-17	ICR	Indian Creek Reservoir	08/04/98	176	25,300	176	9,820	141	4,220	

**ALPINE COUNTY
BLUE GREEN ALGAE**

ID#	Site	Location	Date	Colonies #	Colony # Cells	Filaments #	Filaments # Cells	Filaments #	Filament Length	Single Cells, #
980901-23	SW-01	Carson R Woodfords	09/01/98	0	0	0	0	0	0	0
980901-24	SW-02	Indian Cr Upper	09/01/98	0	0	0	0	0	0	0
980901-25	SW-03	Indian Cr Mid	09/01/98	0	0	0	0	0	0	0
980901-26	SW-04	Indian Cr Lower	09/01/98	0	0	0	0	0	0	0
980901-27	SW-05	Carson R Paynesville	09/01/98	0	0	0	0	0	0	0
980901-28	SW-06	Carson R Stateline	09/01/98	0	0	0	0	0	0	0
980901-29	SW-08	Irrigation Ditch	09/01/98	0	0	0	0	0	0	0
980901-30	HPR	Harvey Place Reservoir	09/01/98	1,760	33,500	0	0	0	0	0
980901-31	ICR	Indian Creek Reservoir	09/01/98	0	0	70	1,760	0	0	0

**ALPINE COUNTY
BLUE GREEN ALGAE**

ID#	Site	Location	Date	Colonies #	Colony # Cells	Filaments #	Filaments # Cells	Filaments #	Filament Length	Single Cells, #
981006-11	SW-01	Carson R Woodfords	10/06/98	0	0	141	774	0	0	0
981006-12	SW-02	Indian Cr Upper	10/06/98	0	0	0	0	0	0	0
981006-13	SW-03	Indian Cr Mid	10/06/98	0	0	0	0	0	0	0
981006-14	SW-04	Indian Cr Lower	10/06/98	0	0	0	0	0	0	0
981006-15	SW-05	Carson R Paynesville	10/06/98	0	0	70	352	0	0	0
981006-16	SW-06	Carson R Stateline	10/06/98	0	0	141	739	0	0	0
981006-17	SW-08	Irrigation Ditch	10/06/98	0	0	0	0	0	0	0
981006-18	HPR	Harvey Place Reservoir	10/06/98	352	9,820	0	0	0	0	0
981006-19	ICR	Indian Creek Reservoir	10/06/98	0	0	0	0	0	0	0

**ALPINE COUNTY
BLUE GREEN ALGAE**

ID#	Site	Location	Date	Colonies #	Colony # Cells	Filaments #	Filaments # Cells	Filaments #	Filament Length	Single Cells, #
981103-10	SW-01	Carson R Woodfords	11/03/98	0	0	211	1,370	0	0	0
981103-11	SW-02	Indian Cr Upper	11/03/98	0	0	0	0	0	0	0
981103-12	SW-03	Indian Cr Mid	11/03/98	0	0	0	0	0	0	0
981103-13	SW-04	Indian Cr Lower	11/03/98	0	0	0	0	0	0	0
981103-14	SW-05	Carson R Paynesville	11/03/98	0	0	106	950	0	0	0
981103-15	SW-06	Carson R Stateline	11/03/98	0	0	4	53	0	0	0
981103-16	SW-08	Irrigation Ditch	11/03/98	0	0	0	0	0	0	0
981103-17	SW-09	Carson R Dressler Ln	11/03/98	0	0	2	25	0	0	0
981103-18	SW-10	Indian Cr at Bruns	11/03/98	0	0	0	0	0	0	0
981103-19	HPR	Harvey Place Reservoir	11/03/98	0	0	0	0	0	0	0
981103-20	ICR	Indian Creek Reservoir	11/03/98	0	0	70	3,480	0	0	0

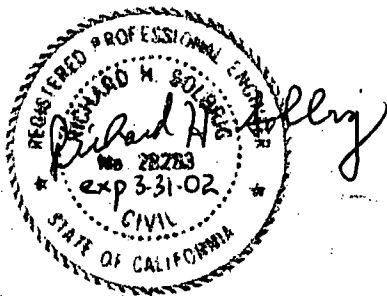
Site	Location	TDS		Cl ⁻		TKN		NO ₃ -N		Total N		Total P		SO ₄		Boron		Exch Na %	
		Limit	Exceedance	Limit	Exceedance	Limit	Exceedance	Limit	Exceedance	Limit	Exceedance	Limit	Exceedance	Limit	Exceedance	Limit	Exceedance	Limit	Exceedance
SW-01	Carson River, Woodfords	55		1.0		0.13	✓	0.02		0.15	✓	0.02		2.0		0.02		20	✓
SW-06	Carson River, Stateline	70		2.5		0.22		0.03	✓	0.25		0.03		2.0		0.02		20	✓
SW-02	Indian Creek, Upper	100		6.0						0.30	✓	0.03	✓	8.0		0.25		30	
SW-03	Indian Creek, Mid	100	✓	6.0	✓					0.30	✓	0.03	✓	8.0		0.25		30	
SW-04	Indian Creek, Lower	100		6.0						0.30	✓	0.03	✓	8.0		0.25		30	
SW-10	Indian Creek, Stateline	100		6.0						0.30		0.03		8.0		0.25		30	

October soil and Blue Green Algae results are not included; they will be sent to you when they are completed. August soil results are included.

Certification

I hereby certify that the enclosed monitoring report was prepared under my direct supervision and that I am a duly Registered Engineer under the laws of the State of California.

Sincerely,



Richard Solbrig,
Assistant Manager/Engineer

Enclosures:

1.

October Monthly Report	Pages
Wastewater Treatment plant	2
Permit Compliance Record	1
Export pipeline inspection	
Sample site locations	2
Monitoring wells (ERB) and Heavenly Valley Creek (HVC)	2
Alpine County Surfacewaters, Groundwaters and Reservoirs	4
Alpine County Blue Green Algae	
Alpine County soils - August	1
Total number of pages:	12

cc: Calif. Dept. of Health Services, ODW - Jess Morehouse
El Dorado Co. Dept. of Environmental Health - Virginia Huber
Nevada Division of Environmental Protection - Wendel McCurry
Alpine County Health Department - Dr. Richard Botto
Alpine County Health Department - Jim Goodloe
Alpine County Board of Supervisors
EPA - Permit and Compliance Branch, W-5 - Bill Pierce
Desert Research Group (Alpine County Consultants) - Bill Albright
STPUD Board of Directors
STPUD General Manager / District Engineer - Robert G. Baer
STPUD Manager of Operations - Ross Johnson
STPUD Laboratory Director - Terry Powers
STPUD Manager of Alpine County Operations - Hal Bird

**SOUTH TAHOE PUBLIC UTILITY DISTRICT
WASTEWATER TREATMENT PLANT MONTHLY REPORT**

11/09/98

08:36:12

OCTOBER 1998

Date	Day	2-Hr Peak		FLOW MGD			PRECIP		D.O. mg/L Fin	COD mg/L		BOD mg/L		SS mg/L	
		Inf	Inf	Eff	Pond Return	Pond Inf	Inch	Type		Raw	Fin	Raw	Fin	Raw	Fin
10/01/98	Thu	4.17	5.8	4.09					4.92	363					
10/02/98	Fri	4.17	5.4	3.60					5.19	462					
10/03/98	Sat	4.52	6.5	4.64					6.62	432	31.0	178	5.9	97	
10/04/98	Sun	4.53	6.6	3.92					5.05	400				3.0	
10/05/98	Mon	4.26	5.7	0.00		4.76									
10/06/98	Tue	4.15	5.8	0.00		4.15				375					
10/07/98	Wed	4.00	4.9	0.00		3.76				386					
10/08/98	Thu	3.99	5.6	0.00		4.09				412					
10/09/98	Fri	4.30	5.5	5.00	0.59					451					
10/10/98	Sat	4.50	6.5	6.68	2.34			6.20	384	35.8	191	7.6	160	6.3	
10/11/98	Sun	4.62	7.6	7.04	2.29			6.24	398						
10/12/98	Mon	4.18	6.1	6.74	2.55			6.73	421						
10/13/98	Tue	3.98	5.6	5.65	1.95			6.90	356						
10/14/98	Wed	3.90	5.5	6.78	2.65			8.01	388	33.8	153	5.9	129	6.1	
10/15/98	Thu	3.96	5.5	4.81	0.84			7.13	255						
10/16/98	Fri	4.06	5.8	3.95				5.49	352						
10/17/98	Sat	4.44	6.2	4.28				5.46	421	28.8	181	7.6	144	4.0	
10/18/98	Sun	4.92	7.0	3.72				3.76	402						
10/19/98	Mon	4.25	5.9	3.93				4.77	377						
10/20/98	Tue	4.12	5.8	4.16				5.06	409						
10/21/98	Wed	4.00	6.2	3.26				6.90	453	37.8	186	6.2	194	3.8	
10/22/98	Thu	3.92	5.8	3.83				5.23	391						
10/23/98	Fri	4.22	5.8	2.99				5.51							
10/24/98	Sat	4.57	7.6	5.11			0.36	Rain	4.07	500	20.1	196	6.5	170	
10/25/98	Sun	4.57	6.7	4.50			0.15	Rain	4.45						
10/26/98	Mon	3.98	5.3	4.04				4.61	398						
10/27/98	Tue	3.84	5.1	3.93				5.06	405						
10/28/98	Wed	3.91	5.2	3.83				5.54	376	30.6	149	4.7	135	2.1	
10/29/98	Thu	4.09	5.5	3.62			0.43	Rain	5.37	508					
10/30/98	Fri	3.77	5.8	3.85				5.07	513						
10/31/98	Sat	4.19	6.0	4.18			0.03	Rain	5.38	476	22.6	175	5.2	152	
PERMIT MAX		7.7									300		45	60	
PERMIT MIN											60		30	30	
PERMIT AVE															
TOTAL		130.08	184.3	122.13	13.21	16.76	0.97		144.72	11464	240.5	1409	49.6	1181	29.2
MAXIMUM		4.92	7.6	7.04	2.65	4.76	0.43		8.01	513	37.8	196	7.6	194	6.3
MINIMUM		3.77	4.9	0.00	0.59	3.76	0.03		3.76	255	20.1	149	4.7	97	1.5
AVERAGE		4.20	5.9	3.94	1.89	4.19	0.24		5.57	409	30.1	176	6.2	148	3.7
# Tests		31	31	31	7	4	4		26	28	8	8	8	8	8

**SOUTH TAHOE PUBLIC UTILITY DISTRICT
WASTEWATER TREATMENT PLANT MONTHLY REPORT**

11/09/98
08:36:12

OCTOBER 1998

Date	Day	SETTLEABLE SOLIDS mL/L		MBAS mg/L		pH Units		TURBIDITY NTU		Cl2 mg/L	FINAL COLIFORMS MPN/100 mL			TDS mg/L		ALKALINITY mg/L	
		Raw	Fin	Raw	Fin	Raw	Fin	Raw	Fin		Total	7day-	Median	Raw	Fin	Raw	Fin
10/01/98	Thu	8.5	< 0.1			7.53	7.36	1.80	5.10		2					157	119
10/02/98	Fri	8.5	< 0.1			7.60	7.70	2.00	2.20		2					153	124
10/03/98	Sat	10.0	< 0.1			7.55	7.58	2.00	1.94	<	2		2			159	126
10/04/98	Sun	10.0				7.52	7.45	2.40	1.63		2		2			166	130
10/05/98	Mon	10.0				7.37										157	
10/06/98	Tue	12.0		2.14		7.57										155	
10/07/98	Wed	11.0				7.57										155	
10/08/98	Thu	10.0				7.57										160	
10/09/98	Fri	10.0				7.54										164	
10/10/98	Sat	11.0	< 0.1			7.47	7.54	3.10	1.83		2		2			165	120
10/11/98	Sun	9.0	< 0.1			7.40	7.39	2.50	1.63		4		2			170	120
10/12/98	Mon	9.0	< 0.1			7.57	7.42	2.40	3.36	<	2		2			160	114
10/13/98	Tue	10.0	< 0.1			7.47	7.54	2.40	2.14		4		2			155	108
10/14/98	Wed	9.5	< 0.1			7.73	7.59	3.80	1.83	<	2	<	2	249	238	156	108
10/15/98	Thu	10.0	< 0.1			7.74	7.59	2.65	2.04	<	2	<	2			153	104
10/16/98	Fri	8.0	< 0.1			7.47	7.38	2.60	2.34		2	<	2			157	108
10/17/98	Sat	10.0	< 0.1			7.49	7.42	2.50	2.14	<	2	<	2			158	104
10/18/98	Sun	10.0	< 0.1			7.46	7.34	2.20	1.22	<	2	<	2			162	114
10/19/98	Mon	10.0	< 0.1			7.73	7.48	2.65	2.75	<	2	<	2			156	102
10/20/98	Tue	10.0	< 0.1		0.026	7.49	7.35	3.40	3.67		2	<	2			156	111
10/21/98	Wed	12.0	< 0.1			7.43	7.35	2.95	4.99	<	2	<	2	249	244	160	110
10/22/98	Thu	9.5	< 0.1			7.53	7.46	3.10	5.71		4	<	2			153	111
10/23/98	Fri		< 0.1				7.41	1.90	24.00	<	2	<	2				113
10/24/98	Sat	11.0	< 0.1			7.60	7.62	2.10	5.71	<	2	<	2			165	110
10/25/98	Sun		< 0.1				7.35	2.10	5.50	<	2	<	2				113
10/26/98	Mon	8.5	< 0.1			7.41	7.34	1.65	4.99	<	2	<	2			155	110
10/27/98	Tue	12.0	< 0.1			7.45	7.52	1.90	4.18	<	2	<	2			154	108
10/28/98	Wed	10.0	< 0.1			7.62	7.56	1.75	5.60	<	2	<	2			151	101
10/29/98	Thu	9.0	< 0.1			7.42	7.36	1.75	5.91	<	2	<	2	241	224	148	102
10/30/98	Fri	10.0	< 0.1			7.37	7.26	1.50	5.60	<	2	<	2			152	94
10/31/98	Sat	10.0	< 0.1			7.32	7.44	1.60	5.30	<	2	<	2			153	97
PERMIT MAX			0.1		2.0		8.5	20			240		23				
PERMIT MIN							6.5										
PERMIT AVE					1.0			10									
TOTAL		288.5	2.5	2.14	0.026	217.99	193.80	60.70	113.31		58		52	739	706	4565	2882
MAXIMUM		12.0	0.1	2.14	0.026	7.74	7.70	3.80	24.00		4		2	249	244	170	130
MINIMUM		8.0	0	2.14	0.026	7.32	7.26	1.50	1.22		2		2	241	224	148	94
AVERAGE		9.9	0.1	2.14	0.026	7.52	7.45	2.33	4.36		2		2	246	235	157	111
# Tests		29	25	1	1	29	26	26	26		26		26	3	3	29	26

SAMPLE LOCATIONS

TAHOE BASIN MONITORING WELLS

<u>Site</u>	<u>Location</u>
ERB	Emergency Retention Basin
CONTROL	North of Post Office
MW02-25, -50	Emergency Retention Basin, S side
MW03-25, -50	Emergency Retention Basin, S side
MW04-25, -50	Emergency Retention Basin, W side
MW07-25, -50	Emergency Retention Basin, N side
MW08-25, -50	Pond #1, SW corner
MW11	S.E. corner of wastewater treatment plant grounds
MW12	South of Emergency Pump Building, for buried sludge
MW13	Pond 2, along Heavenly Valley Creek, for buried sludge

HEAVENLY VALLEY CREEK

HVC-1	At Pioneer Trail
HVC-2	250 ft upstream of Pond #2
HVC-3	25 ft downstream of Johnson Blvd.
HVC-4	Effluent of drain pipe from Lower Shop area
HVC-5	Effluent of drainage pipe along Johnson Blvd, 10 feet upstream of Johnson Blvd.

ALPINE COUNTY MONITORING WELLS

<u>Site</u>	<u>Location</u>
ACMW-01AW	Below main dam at Harvey Place Reservoir
ACMW-01BE	Below auxiliary dam at Harvey Place Reservoir
ACMW-02, N&S	On dam access road at Diamond Valley Road
ACMW-03	Bruns ranch, east side of Highway 88
ACMW-04W	Gansberg ranch, west side of Highway 88
ACMW-05	Dressler ranch
ACMW-06, N&S	Celio ranch, on Diamond Valley Road

ALPINE SOILS

<u>Site</u>	<u>Ranch</u>
S2	Celio
S3	Hall
S4	Gansberg
S5	Gansberg
S6	Neddenriep
S7	Bruns
S8	Dressler

ALPINE GROUNDWATERS

<u>Site</u>	<u>Homeowner</u>
GW-01	Sagues
GW-03	Smith/Springmeyer
GW-04	Celio
GW-05	Neddenriep
GW-07	Gansberg, Jr.
GW-08	Arant
GW-11	Diamond Valley School
GW-14	Sierra Pines Store

ALPINE SURFACEWATERS

<u>Site</u>	<u>Location</u>
SW-01	Carson River, Woodfords
SW-02	Indian Creek, @ HWY 89
SW-03	Indian Creek, @ upper bridge
SW-04	Indian Creek, @ lower bridge
SW-05	Carson River, Paynesville
SW-06	Carson River, Stateline
SW-07	Fredericksberg Ditch, Stateline
SW-08	Irrigation Ditch along Carson River Road
SW-09	Carson River, Dressler Lane
SW-10	Indian Creek, @ Smith-Springmeyer Ranch

TAHOE BASIN MONITORING

11/01/98

Site	Date	ID	Location	Depth msl	Temp C	pH	EC umhos	Cl mg/L	COD mg/L	Comment
Buried Sludge Monitoring										
MW12	10/27/98	981027-13	Sludge Pond	6265.3	9.0	6.46	171	2.9	<	5.0
MW13	10/27/98	981027-14	Sludge Pond	6257.0	7.8	6.80	798	3.6		11.9
ERB Monitoring										
CONTROL	10/27/98	981027-06	At Post Office	6283.9	9.8	6.63	172	6.1	<	5.0
MW01.5	10/27/98	981027-07	SW corner of ERB	6269.1	9.0	7.20	172	3.6	<	5.0
MW02-50	10/27/98	981027-08	Black Bart side of ERB	6268.9	10.0	6.53	517	49.4	<	5.0
MW03-50	10/27/98	981027-09	Black Bart side of ERB	6268.9	10.1	6.16	457	45.2	<	5.0
MW04-50	10/27/98	981027-10	Hank Monk side of ERB	6269.3	8.6	6.18	79	5.6	<	5.0
MW07-50	10/27/98	981027-11	North side of ERB	6279.8	7.9	6.49	273	26.3	<	5.0
Heavenly Valley Creek										
HVC-1	10/13/98	981013-16	Downstream of Pioneer		4.2	7.04	41	0.7	<	5.0
HVC-2	10/13/98	981013-17	250' upstream of Pond #2		3.4	7.05	44	0.8	<	5.0
HVC-3	10/13/98	981013-18	25' downstream of Johnson Blvd		3.8	6.54	44	0.8	<	5.0
HVC-4	10/13/98	981013-19	Effluent of drain from Lower Sho		7.5	6.82	150	0.8	<	5.0
Treatment Plant Monitoring										
MW08-25	10/27/98	981027-12	SW side of Pond #1	6247.5	11.5	6.42	1076	55.0		97.2

TAHOE BASIN MONITORING

11/01/98

Site	Date	TotalP mg/L	PO4-P mg/L	TKN mg/L	NH3-N mg/L	NO2-N mg/L	NO3-N mg/L	Total N mg/L
Buried Sludge Monitoring								
MW12	10/27/98				0.021	< 0.010	0.247	0.257
MW13	10/27/98				< 0.020	0.033	2.680	2.713
ERB Monitoring								
CONTROL	10/27/98				0.025	< 0.010	2.070	2.080
MW01.5	10/27/98				0.020	< 0.010	0.646	0.656
MW02-50	10/27/98			<	0.020	< 0.010	10.400	10.410
MW03-50	10/27/98				0.022	< 0.010	6.510	6.520
MW04-50	10/27/98				0.023	< 0.010	0.055	0.065
MW07-50	10/27/98			<	0.020	< 0.010	0.595	0.605
Heavenly Valley Creek								
HVC-1	10/13/98			0.155	< 0.020	< 0.010	0.023	0.188
HVC-2	10/13/98			0.175	< 0.020	< 0.010	< 0.010	0.195
HVC-3	10/13/98			0.177	< 0.020	< 0.010	< 0.010	0.197
HVC-4	10/13/98			0.237	0.024	< 0.010	0.057	0.304
Treatment Plant Monitoring								
MW08-25	10/27/98				8.000	0.065	< 0.010	0.075

ALPINE COUNTY MONITORING

10/28/98

Site	Date	ID	Location	Temp C	pH	EC umhos	DO mg/L	Alk mg/L	TDS mg/L	SS mg/L	Turb NTU	Cl mg/L	SO4 mg/L
Alpine Monitoring Wells													
ACMW-01AW	10/20/98	981020-09	Main Dam	13.1	6.31	110		49	84			3.7	
ACMW-01BE	10/20/98	981020-10	Secondary Dam	10.0	6.47	95		46	72			0.7	
ACMW-02N	10/20/98	981020-11	Access Gate	12.0	6.61	137		62	87			3.3	
ACMW-02S	10/20/98	981020-12	Access Gate	12.7	6.52	106		53	66			1.5	
ACMW-04W	10/20/98	981020-13	Gansberg	11.3	6.02	204		56	133			13.4	
ACMW-06N	10/20/98	981020-14	Celio	10.5	7.12	700		259	422			54.8	
ACMW-06S	10/20/98	981020-15	Celio	11.6	8.73	626		252	432			76.5	
Groundwaters													
GW-03	10/13/98	981013-20	Smith/Springmeyer	14.1	7.56	310		131	225			1.3	
GW-04	10/13/98	981013-21	Celio	14.4	7.62	264		119	195			2.9	
GW-05	10/13/98	981013-22	Neddenriep	12.2	6.70	279		63	183			27.4	
GW-07	10/13/98	981013-23	Gansberg	11.0	6.55	120		55	92			1.4	
GW-08	10/13/98	981013-24	Arant	13.0	6.68	219		55	147			16.5	
GW-11	10/13/98	981013-25	Diamond Val. School	16.8	6.45	100		48	62			0.8	
GW-14	10/13/98	981013-26	Sierra Pines	12.2	6.56	111		54	92			1.0	
Reservoirs													
HPR	10/06/98	981006-18	Harvey Place Reservoir	13.1	7.47	471	6.60	107	227	10.30	4.9	50.2	19.8
ICR	10/06/98	981006-19	Indian Creek Reservoir	12.3	8.24	96	7.30	43	64	9.54	4.7	1.5	2.5
Surfacewaters: Carson R													
SW-01	10/06/98	981006-11	Carson R Woodfords	6.4	6.58	71	9.90	34	40	0.95	.36	0.8	1.9
SW-05	10/06/98	981006-15	Carson R Paynesville	7.2	7.65	77	10.00	37	58	1.53	.4	0.9	2.0
SW-06	10/06/98	981006-16	Carson R Stateline	8.6	7.77	79	10.10	38	63	2.09	.46	1.4	2.0
SW-08	10/06/98	981006-17	Irrigation Ditch	14.5	7.49	114	8.00	52	82	14.20	2.6	1.5	3.7
Surfacewaters: Indian Cr													
SW-02	10/06/98	981006-12	Indian Cr Upper	8.0	6.80	134	9.10	71	95	2.92	1.9	0.8	2.4
SW-03	10/06/98	981006-13	Indian Cr Mid	9.5	6.86	228	9.00	106	151	2.31	6.5	7.0	3.9
SW-04	10/06/98	981006-14	Indian Cr Lower	8.6	7.38	125	9.40	60	85	10.30	3.5	2.3	2.3

ALPINE COUNTY MONITORING

10/28/98

Site	Date	TotalP mg/L	PO4-P mg/L	TKN mg/L	NH3-N mg/L	NO2-N mg/L	NO3-N mg/L	Total N mg/L	MBAS mg/L
Alpine Monitoring Wells									
ACMW-01A	10/20/98	0.026		0.150	0.028	< 0.010	0.019	0.179	
ACMW-01B	10/20/98	0.022	<	0.100	< 0.020	< 0.010	0.137	0.247	
ACMW-02N	10/20/98	0.018		0.102	< 0.020	< 0.010	0.154	0.266	
ACMW-02S	10/20/98	0.018		0.131	< 0.020	< 0.010	< 0.010	0.151	
ACMW-04W	10/20/98	0.022		0.020	< 0.020	< 0.010	2.810	2.840	
ACMW-06N	10/20/98	0.246		0.329	0.044	< 0.010	< 0.010	0.349	
ACMW-06S	10/20/98	0.050		0.962	0.217	0.065	0.016	1.043	
Groundwaters									
GW-03	10/13/98	0.038	<	0.100	< 0.020	< 0.010	0.693	0.803	
GW-04	10/13/98	0.058	<	0.100	< 0.020	< 0.010	0.798	0.908	
GW-05	10/13/98	0.036		0.104	< 0.020	< 0.010	2.980	3.094	
GW-07	10/13/98	0.085	<	0.100	< 0.020	< 0.010	0.779	0.889	
GW-08	10/13/98	0.050	<	0.100	< 0.020	< 0.010	3.680	3.790	
GW-11	10/13/98	0.022	<	0.100	< 0.020	< 0.010	0.468	0.578	
GW-14	10/13/98	0.056		0.151	< 0.020	< 0.100	0.446	0.697	
Reservoirs									
HPR	10/06/98	2.280	2.150	15.700	12.100	0.693	2.420	18.813	0.040
ICR	10/06/98	0.064	0.022	0.840	0.181	< 0.010	0.010	0.860	
Surfacewaters: Carson R									
SW-01	10/06/98	0.020	< 0.010	0.187	0.036	< 0.010	0.016	0.213	
SW-05	10/06/98	0.012	< 0.010	0.168	0.023	< 0.010	0.012	0.190	
SW-06	10/06/98	0.010	< 0.010	0.100	0.021	< 0.010	< 0.010	0.120	
SW-08	10/06/98	0.064	0.024	0.321	0.028	< 0.010	0.226	0.557	
Surfacewaters: Indian Cr									
SW-02	10/06/98	0.044	0.022	0.321	0.023	< 0.010	< 0.010	0.341	
SW-03	10/06/98	0.065	0.028	0.267	0.026	< 0.010	0.048	0.325	
SW-04	10/06/98	0.068	0.026	0.383	0.029	< 0.010	0.026	0.419	

ALPINE COUNTY MONITORING

10/28/98

Site	Date	COD mg/L	BOD mg/L	O & G mg/L	Boron mg/L	Ca mg/L	Mg mg/L	Na mg/L	K mg/L	SAR	Exch Na %	Hardness mg/L	Water Level MSL or Ft
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Alpine Monitoring Wells

ACMW-01A	10/20/98												5481.5
ACMW-01B	10/20/98												5489.3
ACMW-02N	10/20/98												5458.7
ACMW-02S	10/20/98												5459.6
ACMW-04W	10/20/98												4905.3
ACMW-06N	10/20/98												5216.1
ACMW-06S	10/20/98												5204.8

Groundwaters

GW-03	10/13/98												
GW-04	10/13/98												
GW-05	10/13/98												
GW-07	10/13/98												
GW-08	10/13/98												
GW-11	10/13/98												
GW-14	10/13/98												

Reservoirs

HPR	10/06/98	21	6		0.02	13.9	3.5	51.4	9.9	3.19	64.4		20.0
ICR	10/06/98	13	2		0.01	10.3	1.8	6.8	2.2	0.51	29.1		

Surfacewaters: Carson R

SW-01	10/06/98		1	<	1		0.03	7.4	2.0	3.9	1.5	0.33	22.8
SW-05	10/06/98		1	<	1	<	0.01	7.9	2.1	4.5	1.6	0.36	24.1
SW-06	10/06/98		1	<	1		0.02	8.1	2.2	4.6	1.7	0.37	24.3
SW-08	10/06/98		1	<	1		0.02	10.0	2.5	9.0	2.4	0.66	33.7

Surfacewaters: Indian Cr

SW-02	10/06/98		1	<	1		0.03	14.7	3.5	8.4	2.0	0.51	25.5
SW-03	10/06/98		1	<	1		0.03	22.2	6.7	16.9	2.5	0.81	29.9
SW-04	10/06/98		2	<	1	<	0.01	12.6	3.7	8.1	1.9	0.51	26.4

**ALPINE COUNTY
BACTERIOLOGICAL MONITORING**

10/28/98

Alpine Monitoring Wells

Site	Date		Total Coliform MPN/100mL		Fecal Coliform MPN/100mL		Fecal Streptococci MPN/100mLL
ACMW-01A	10/20/98	<	1.1	<	1.1		
ACMW-01B	10/20/98	<	1.1	<	1.1		
ACMW-02N	10/20/98	<	1.1	<	1.1		
ACMW-02S	10/20/98		1.1	<	1.1		
ACMW-04W	10/20/98	>	23	<	1.1		
ACMW-06N	10/20/98		1.1	<	1.1		
ACMW-06S	10/20/98		16.1	<	1.1		

Groundwaters

Site	Date		Total Coliform MPN/100mL		Fecal Coliform MPN/100mL		Fecal Streptococci MPN/100mLL
GW-03	10/13/98	<	1.1	<	1.1		
GW-04	10/13/98		1.1	<	1.1		
GW-05	10/13/98	<	1.1	<	1.1		
GW-07	10/13/98	<	1.1	<	1.1		
GW-08	10/13/98		23	<	1.1		
GW-11	10/13/98	<	1.1	<	1.1		
GW-14	10/13/98	<	1.1	<	1.1		

Reservoirs

Site	Date		Total Coliform MPN/100mL		Fecal Coliform MPN/100mL		Fecal Streptococci MPN/100mLL
HPR	10/06/98		14	<	2	<	2
ICR	10/06/98		13		8		2

Surfacewaters: Carson R

Site	Date		Total Coliform MPN/100mL		Fecal Coliform MPN/100mL		Fecal Streptococci MPN/100mLL
SW-01	10/06/98		30	<	30		
SW-05	10/06/98	<	30	<	30		
SW-06	10/06/98		70		70		
SW-08	10/06/98		430		430		

Surfacewaters: Indian Cr

Site	Date		Total Coliform MPN/100mL		Fecal Coliform MPN/100mL		Fecal Streptococci MPN/100mLL
SW-02	10/06/98		90		40		
SW-03	10/06/98		230		30		
SW-04	10/06/98		2100		30		

ALPINE COUNTY SOILS

11/01/98

Site	Date	Location	Type	pH	EC mmho	%Sat	TKN mg/Kg	NO3-N mg/L	Total P mg/Kg	Exch P mg/L
S2a	08/07/98	Celio	KT	8.31	1.33	63.9	2,750	1.2		1.6
S3a	08/07/98	Hall	SMB	5.95	0.33	36.0	1,820	1.6		13.5
S4a	08/07/98	Gansberg	DI	6.54	0.61	40.6	1,960	2.3		9.6
S5a	08/07/98	Gansberg	HRB	6.38	0.22	31.7	1,340	4.6		7.3
S6a	08/07/98	Neddenriep	DWB	6.26	0.43	43.7	1,670	6.5		56.2
S7a	08/07/98	Bruns	JaC	6.27	0.10	43.4	1,940	2.2		3.8
S8a	08/07/98	Dressler	SOD	6.44	0.10	17.4	272	0.9		9.5

Site	Date	Cl mg/L	SO4 mg/Kg	CEC meq/100g	Cu mg/Kg	Mo mg/Kg	Ca mg/L	Mg mg/L	Na mg/L	SAR	%Na	
S2a	08/07/98		56		19.0	<	1.0	56.9	26.9	156.0	4.27	4.7
S3a	08/07/98		7		19.0	<	1.0	16.7	3.9	54.0	3.09	3.1
S4a	08/07/98		7		33.0	<	1.0	29.1	5.9	57.4	2.53	2.4
S5a	08/07/98	<	1		24.0	<	1.0	15.4	2.8	19.3	1.19	0.5
S6a	08/07/98		13		32.0	<	1.0	10.9	2.4	66.8	4.76	5.3
S7a	08/07/98		2		35.0	<	1.0	9.8	2.2	6.9	0.52	-0.5
S8a	08/07/98	<	1		11.0	<	1.0	7.6	3.7	5.4	0.40	-0.7

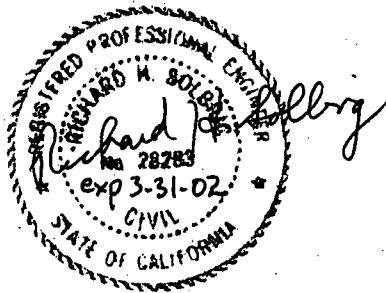
Site	Location	TDS		Cl		TKN		NO ₃ -N		Total N		Total P		SO ₄		Boron		Exch Na %	
		Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence
SW-01	Carson River, Woodfords	55		1.0		0.13		0.02		0.15		0.02		2.0		0.02		20	✓
SW-06	Carson River, Stataline	70	✓	2.5	✓	0.22	✓	0.03	✓	0.25	✓	0.03		2.0		0.02		20	✓
SW-02	Indian Creek, Upper	100	✓	6.0						0.30	✓	0.03		8.0		0.25		30	
SW-03	Indian Creek, Mid	100	✓	6.0	✓					0.30	✓	0.03	✓	8.0		0.25		30	
SW-04	Indian Creek, Lower	100	✓	6.0						0.30	✓	0.03	✓	8.0		0.25		30	
SW-10	Indian Creek, Stataline	100		6.0						0.30		0.03		8.0		0.25		30	

September soil and Blue Green Algae results are not included; they will be sent to you when they are completed. July soil results are included.

Certification

I hereby certify that the enclosed monitoring report was prepared under my direct supervision and that I am a duly Registered Engineer under the laws of the State of California.

Sincerely,



Richard Solbrig,
Assistant Manager/Engineer

Enclosures:

1.

September Monthly Report	Pages
Wastewater Treatment plant	2
Permit Compliance Record	1
Export pipeline inspection	
Sample site locations	2
Monitoring wells (ERB) and Heavenly Valley Creek (HVC)	2
Alpine County Surfacewaters, Groundwaters and Reservoirs	4
Alpine County Blue Green Algae	
Alpine County soils - July	1
Total number of pages:	12

- cc: Calif. Dept. of Health Services, ODW - Jess Morehouse
El Dorado Co. Dept. of Environmental Health - Virginia Huber
Nevada Division of Environmental Protection - Wendel McCurry
Alpine County Health Department - Dr. Richard Botto
Alpine County Health Department - Jim Goodloe
Alpine County Board of Supervisors
EPA - Permit and Compliance Branch, W-5 - Bill Pierce
Desert Research Group (Alpine County Consultants) - Bill Albright
STPUD Board of Directors
STPUD General Manager / District Engineer - Robert G. Baer
STPUD Manager of Operations - Ross Johnson
STPUD Laboratory Director - Terry Powers
STPUD Manager of Alpine County Operations - Hal Bird

**SOUTH TAHOE PUBLIC UTILITY DISTRICT
WASTEWATER TREATMENT PLANT MONTHLY REPORT**

10/08/98

14:57:57

SEPTEMBER 1998

Date	Day	2-Hr Peak		FLOW MGD			PRECIP		D.O.	COD		BOD		SS	
		Inf	Inf	Eff	Pond Return	Pond Inf	Inch	Type	mg/L Fin	Raw	Fin	Raw	Fin	Raw	Fin
09/01/98	Tue	4.17	6.0	5.03					6.74	437					
09/02/98	Wed	4.06	5.0	3.76					5.39	464	38.0	187	6.8	176	5.5
09/03/98	Thu	4.14	5.4	4.05					5.10	382					
09/04/98	Fri	4.73	6.5	4.35					5.01	398					
09/05/98	Sat	5.72	9.0	5.59			0.39	Rain	4.77	489	39.3	197	7.4	175	2.6
09/06/98	Sun	5.82	9.8	5.40					4.96	538					
09/07/98	Mon	5.39	8.5	4.94					4.87	544	30.5	244	5.0	192	1.8
09/08/98	Tue	4.63	6.5	4.65			0.28	Rain	5.09	568					
09/09/98	Wed	4.70	6.4	4.29			0.20	Rain	4.59	483					
09/10/98	Thu	4.57	6.0	4.55					4.25	522					
09/11/98	Fri	4.41	6.1	4.21			0.06	Rain	4.77	564					
09/12/98	Sat	4.96	7.0	4.53					4.95	418	34.0	181	5.2	140	1.3
09/13/98	Sun	4.98	7.8	4.51					5.18	508					
09/14/98	Mon	4.57	6.3	4.15					4.83	437					
09/15/98	Tue	4.37	5.8	4.11					4.42	488					
09/16/98	Wed	4.42	6.0	3.86					4.91	366	34.9	151	4.4	132	1.7
09/17/98	Thu	4.61	6.2	4.05					4.76	490					
09/18/98	Fri	4.59	6.5	4.56					4.29	379					
09/19/98	Sat	4.95	7.8	4.29					4.52	380	28.1	167	5.5	150	2.4
09/20/98	Sun	5.00	7.8	4.73					3.88	354					
09/21/98	Mon	4.47	6.4	4.32					4.21	384					
09/22/98	Tue	4.22	5.8	4.08					4.64	343					
09/23/98	Wed	4.29	6.2	3.98			0.15	Rain	4.51	438	36.8	174	6.3	187	3.5
09/24/98	Thu	4.39	6.2	4.16			0.02	Rain	4.69	333					
09/25/98	Fri	4.45	6.2	4.36			0.03	Rain	3.67	449					
09/26/98	Sat	4.93	7.4	4.79			0.38	Rain	6.09	378	39.0	178	9.7	124	6.5
09/27/98	Sun	4.84	8.0	4.63					4.55	391					
09/28/98	Mon	4.33	5.7	4.37			0.15	Rain	6.47	354					
09/29/98	Tue	4.27	5.8	3.82			0.03	Rain	5.03		28.4	156	4.8	153	3.8
09/30/98	Wed	4.17	6.0	4.11					4.98	386					
PERMIT MAX		7.7									300		45		60
PERMIT MIN															
PERMIT AVE											60		30		30
TOTAL		139.15	200.1	132.23			1.69		146.12	12665	309.0	1635	55.0	1429	28.9
MAXIMUM		5.82	9.8	5.59			0.39		6.74	568	39.3	244	9.7	192	6.5
MINIMUM		4.06	5.0	3.76			0.02		3.67	333	28.1	151	4.4	124	1.3
AVERAGE		4.64	6.7	4.41			0.17		4.87	437	34.3	182	6.1	159	3.2
# Tests		30	30	30	0	0	10		30	29	9	9	9	9	9

**SOUTH TAHOE PUBLIC UTILITY DISTRICT
WASTEWATER TREATMENT PLANT MONTHLY REPORT**

10/08/98

14:57:57

SEPTEMBER 1998

Date	Day	SETTLEABLE SOLIDS mL/L		MBAS mg/L		pH Units		TURBIDITY NTU		Cl ₂ mg/L	FINAL COLIFORMS MPN/100 mL			TDS mg/L		ALKALINITY mg/L	
		Raw	Fin	Raw	Fin	Raw	Fin	Raw	Fin		Total	7day-	Median	Raw	Fin	Raw	Fin
09/01/98	Tue	10.0	< 0.1	3.20	0.050	7.43	7.53	3.30	3.97	<	2	<	2			161	151
09/02/98	Wed	10.0	< 0.1			7.36	7.46	3.10	6.12	<	4	<	2	255	246	158	148
09/03/98	Thu	10.0	< 0.1			7.52	7.63	2.50	5.20	<	2	<	2			155	146
09/04/98	Fri	11.0	< 0.1			7.35	7.36	2.10	3.97	<	2	<	2			160	150
09/05/98	Sat	13.0	< 0.1			7.34	7.62	2.80	2.14	<	2	<	2			171	158
09/06/98	Sun	13.0	< 0.1			7.28	7.68	2.50	1.94	<	2	<	2			168	158
09/07/98	Mon	11.0	< 0.1			7.40	7.60	1.70	4.69	<	2	<	2	258	237	175	167
09/08/98	Tue	12.0	< 0.1			7.56	7.59	1.80	3.16	<	2	<	2			162	161
09/09/98	Wed	9.0	< 0.1			7.34	7.47	2.15	1.73	<	2	<	2			158	152
09/10/98	Thu	9.5	< 0.1			7.53	7.64	2.00	2.34	<	2		2			158	145
09/11/98	Fri	11.0	< 0.1			7.62	7.62	2.00	2.34		4		2			159	146
09/12/98	Sat	10.5	< 0.1			7.66	7.38	2.35	3.06	<	2		2			166	146
09/13/98	Sun	10.0	< 0.1			7.42	7.32	1.95	2.55		2		2			168	150
09/14/98	Mon	9.5	< 0.1			7.42	7.61	1.70	3.47		2		2			169	149
09/15/98	Tue	10.0	< 0.1			7.50	7.62	1.90	1.83		2		2			159	150
09/16/98	Wed	10.0	< 0.1			7.48	7.65	1.65	1.53		2		2	244	232	160	146
09/17/98	Thu	10.0	< 0.1			7.50	7.70	1.75	1.55	<	2		2			155	141
09/18/98	Fri	10.5	< 0.1			7.38	7.41	1.80	1.73	<	2		2			159	142
09/19/98	Sat	9.5	< 0.1			7.27	7.56	1.95	1.12		4		2			160	145
09/20/98	Sun	11.0	< 0.1			7.51	7.59	2.50	1.22	<	2		2			166	148
09/21/98	Mon	10.0	< 0.1			7.49	7.42	2.10	0.82		2		2			163	142
09/22/98	Tue	9.5	< 0.1			7.60	7.62	2.10	1.86		2		2			160	136
09/23/98	Wed	14.0	< 0.1			7.56	7.58	2.30	1.22		2		2	253	232	169	138
09/24/98	Thu	9.5	< 0.1			7.53	7.57	2.50								157	136
09/25/98	Fri	10.0	< 0.1			7.45	7.41	3.00	1.63		2		2			161	136
09/26/98	Sat	10.0	< 0.1			7.36	7.54	3.50	0.77		2		2			158	142
09/27/98	Sun	10.5	< 0.1			7.34	7.44	3.70	1.92		4		2			160	138
09/28/98	Mon	9.0	< 0.1			7.58	7.56	2.60	3.18		2		2			161	131
09/29/98	Tue	9.0	< 0.1			7.55	7.52	1.90	2.14	<	2		2	233	223	160	128
09/30/98	Wed	10.0	< 0.1			7.45	7.34	1.80	3.46	<	2		2			151	122
PERMIT MAX			0.1		2.0		8.5	20			240		23				
PERMIT MIN							6.5										
PERMIT AVE					1.0			10									
TOTAL		312.0	3.0	3.20	0.050	223.78	226.04	69.00	72.66		66		58	1243	1170	4847	4348
MAXIMUM		14.0	0.1	3.20	0.050	7.66	7.70	3.70	6.12		4		2	258	246	175	167
MINIMUM		9.0	0	3.20	0.050	7.27	7.32	1.65	0.77		2		2	233	223	151	122
AVERAGE		10.4	0.1	3.20	0.050	7.46	7.53	2.30	2.51		2		2	249	234	162	145
# Tests		30	30	1	1	30	30	30	29		29		29	5	5	30	30

SAMPLE LOCATIONS

TAHOE BASIN MONITORING WELLS

<u>Site</u>	<u>Location</u>
ERB	Emergency Retention Basin
CONTROL	North of Post Office
MW02-25, -50	Emergency Retention Basin, S side
MW03-25, -50	Emergency Retention Basin, S side
MW04-25, -50	Emergency Retention Basin, W side
MW07-25, -50	Emergency Retention Basin, N side
MW08-25, -50	Pond #1, SW corner
MW11	S.E. corner of wastewater treatment plant grounds
MW12	South of Emergency Pump Building, for buried sludge
MW13	Pond 2, along Heavenly Valley Creek, for buried sludge

HEAVENLY VALLEY CREEK

HVC-1	At Pioneer Trail
HVC-2	250 ft upstream of Pond #2
HVC-3	25 ft downstream of Johnson Blvd.
HVC-4	Effluent of drain pipe from Lower Shop area
HVC-5	Effluent of drainage pipe along Johnson Blvd, 10 feet upstream of Johnson Blvd.

ALPINE COUNTY MONITORING WELLS

<u>Site</u>	<u>Location</u>
ACMW-01AW	Below main dam at Harvey Place Reservoir
ACMW-01BE	Below auxiliary dam at Harvey Place Reservoir
ACMW-02, N&S	On dam access road at Diamond Valley Road
ACMW-03	Bruns ranch, east side of Highway 88
ACMW-04W	Gansberg ranch, west side of Highway 88
ACMW-05	Dressler ranch
ACMW-06, N&S	Celio ranch, on Diamond Valley Road

ALPINE SOILS

<u>Site</u>	<u>Ranch</u>
S2	Celio
S3	Hall
S4	Gansberg
S5	Gansberg
S6	Neddenriep
S7	Bruns
S8	Dressler

ALPINE GROUNDWATERS

<u>Site</u>	<u>Homeowner</u>
GW-01	Sagues
GW-03	Smith/Springmeyer
GW-04	Celio
GW-05	Neddenriep
GW-07	Gansberg, Jr.
GW-08	Arant
GW-11	Diamond Valley School
GW-14	Sierra Pines Store

ALPINE SURFACEWATERS

<u>Site</u>	<u>Location</u>
SW-01	Carson River, Woodfords
SW-02	Indian Creek, @ HWY 89
SW-03	Indian Creek, @ upper bridge
SW-04	Indian Creek, @ lower bridge
SW-05	Carson River, Paynesville
SW-06	Carson River, Stateline
SW-07	Fredericksberg Ditch, Stateline
SW-08	Irrigation Ditch along Carson River Road
SW-09	Carson River, Dressler Lane
SW-10	Indian Creek, @ Smith-Springmeyer Ranch

TAHOE BASIN MONITORING

10/09/98

Site	Date	ID	Location	Depth msl	Temp C	pH	EC umhos	Cl mg/L	COD mg/L	Comment
Buried Sludge Monitoring										
MW11	09/09/98	980909-14	Sludge Pond	6269.0	7.5	6.48	85	1.4	< 5.0	
MW12	09/09/98	980909-15	Sludge Pond	6265.8	7.3	6.17	183	3.4	< 5.0	
MW13	09/09/98	980909-16	Sludge Pond	6257.0	10.1	6.93	774	3.4	21.8	
ERB Monitoring										
CONTROL	09/09/98	980909-07	At Post Office	6284.3	9.5	6.67	173	6.5	< 5.0	
MW01.5	09/09/98	980909-08	SW corner of ERB	6269.4	9.3	7.29	168	3.9	< 5.0	
MW02-50	09/09/98	980909-09	Black Bart side of ERB	6269.1	10.8	6.78	534	52.9	< 5.0	
MW03-50	09/09/98	980909-10	Black Bart side of ERB	6269.1	10.4	6.36	465	46.4	< 5.0	
MW04-50	09/09/98	980909-11	Hank Monk side of ERB	6269.6	8.6	6.25	78	5.6	< 5.0	
MW07-50	09/09/98	980909-12	North side of ERB	6280.1	8.3	6.33	271	26.9	< 5.0	
Heavenly Valley Creek										
HVC-1	09/15/98	980915-13	Downstream of Pioneer		11.7	7.11	46	0.6	< 5.0	
HVC-2	09/15/98	980915-14	250' upstream of Pond #2		13.8	7.40	42	0.6	< 5.0	
HVC-3	09/15/98	980915-15	25' downstream of Johnson Blvd		13.3	7.29	42	0.6	< 5.0	
HVC-4	09/15/98	980915-16	Effluent of drain from Lower Sho		14.2	7.12	163	1.0	< 5.0	
HVC-5	09/15/98	80915-HVC	Effluent of drainage pipe along J							No Flow
Treatment Plant Monitoring										
MW08-25	09/09/98	980909-13	SW side of Pond #1	6247.4	8.8	6.16	1072	53.3	87.4	

TAHOE BASIN MONITORING

10/09/98

Site	Date	TotalP mg/L	PO4-P mg/L	TKN mg/L	NH3-N mg/L	NO2-N mg/L	NO3-N mg/L	Total N mg/L
Buried Sludge Monitoring								
MW11	09/09/98				0.026	<	0.010	0.174
MW12	09/09/98				0.034	<	0.010	0.310
MW13	09/09/98				0.022		0.024	2.420
								2.444
ERB Monitoring								
CONTROL	09/09/98				0.081	<	0.010	2.500
MW01.5	09/09/98				0.027	<	0.010	0.686
MW02-50	09/09/98				0.024	<	0.010	12.200
MW03-50	09/09/98				0.021	<	0.010	8.330
MW04-50	09/09/98				0.034	<	0.010	0.020
MW07-50	09/09/98				0.029	<	0.010	0.628
								0.638
Heavenly Valley Creek								
HVC-1	09/15/98			0.300	0.024	<	0.010	<
HVC-2	09/15/98			0.357	0.027	<	0.010	<
HVC-3	09/15/98			0.308	<	0.020	<	0.010
HVC-4	09/15/98			0.441	0.023	<	0.010	0.021
HVC-5	09/15/98							0.000
Treatment Plant Monitoring								
MW08-25	09/09/98				8.960		0.058	<
							0.010	0.068

ALPINE COUNTY MONITORING

10/11/98

Site	Date	ID	Location	Temp C	pH	EC umhos	DO mg/L	Alk mg/L	TDS mg/L	SS mg/L	Turb NTU	Cl mg/L	SO4 mg/L
Alpine Monitoring Wells													
ACMW-01AW	09/22/98	980922-11	Main Dam	13.3	6.40	100		45	74			2.2	
ACMW-01BE	09/22/98	980922-12	Secondary Dam	10.2	6.45	93		46	70			0.7	
ACMW-02N	09/22/98	980922-13	Access Gate	13.0	6.50	135		62	91			3.0	
ACMW-02S	09/22/98	980922-14	Access Gate	13.8	6.45	99		48	79			1.1	
ACMW-03	09/22/98	980922-15	HWY 88	14.7	5.95	238		77	146			19.6	
ACMW-04W	09/22/98	980922-16	Gansberg	12.1	5.84	206		53	139			12.6	
ACMW-06N	09/22/98	980922-17	Celio	11.8	6.81	718		268	437			55.1	
ACMW-06S	09/22/98	980922-18	Celio	12.2	7.85	690		264	430			75.8	
Groundwaters													
GW-03	09/15/98	980915-06	Smith/Springmeyer	17.1	7.52	308		132	225			1.4	
GW-04	09/15/98	980915-07	Celio	15.6	7.51	269		120	196			3.0	
GW-05	09/15/98	980915-08	Neddenriep	15.0	6.29	280		62	183			28.1	
GW-07	09/15/98	980915-09	Gansberg	13.5	6.30	121		55	93			1.4	
GW-08	09/15/98	980915-10	Arant	16.1	6.72	230		57	149			18.2	
GW-11	09/15/98	980915-11	Diamond Val. School	20.2	6.18	98		47	81			0.9	
GW-14	09/15/98	980915-12	Sierra Pines	16.1	6.42	111		54	96			1.0	
Reservoirs													
HPR	09/01/98	980901-30	Harvey Place Reservoir	21.8	7.96	462	6.30	111	239	8.78	6.6	50.1	20.3
ICR	09/01/98	980901-31	Indian Creek Reservoir	21.5	9.99	108	6.90	42	69	3.92	1.8	1.6	2.2
Surfacewaters: Carson R													
SW-01	09/01/98	980901-23	Carson R Woodfords	13.6	7.19	67	7.60	31	55	1.00	.25	1.0	1.8
SW-05	09/01/98	980901-27	Carson R Paynesville	16.3	7.54	85	7.80	37	66	2.00	.4	1.0	2.0
SW-06	09/01/98	980901-28	Carson R Stateline	17.8	7.53	113	8.30	47	82	3.76	.48	3.8	2.0
SW-08	09/01/98	980901-29	Irrigation Ditch	19.4	7.29	130	8.00	52	82	14.20	2.6	1.5	3.7
Surfacewaters: Indian Cr													
SW-02	09/01/98	980901-24	Indian Cr Upper	15.5	7.44	171	6.90	88	122	1.00	2.4	1.0	2.4
SW-03	09/01/98	980901-25	Indian Cr Mid	15.3	6.92	238	5.60	104	158	24.00	7.5	8.5	4.4
SW-04	09/01/98	980901-26	Indian Cr Lower	15.6	7.32	129	6.60	61	101	67.60	6.3	2.3	2.5

ALPINE COUNTY MONITORING

10/12/98

Site	Date	Total P mg/L	PO4-P mg/L	TKN mg/L	NH3-N mg/L	NO2-N mg/L	NO3-N mg/L	Total N mg/L	MBAS mg/L
Alpine Monitoring Wells									
ACMW-01A	09/22/98	0.030	<	0.100	< 0.020	< 0.010	0.159	0.269	
ACMW-01B	09/22/98	0.024	<	0.100	< 0.020	< 0.010	0.101	0.211	
ACMW-02N	09/22/98	0.020	<	0.100	< 0.020	< 0.010	0.199	0.309	
ACMW-02S	09/22/98	0.020	<	0.100	< 0.020	< 0.010	< 0.010	0.120	
ACMW-03	09/22/98	0.070		0.157	< 0.020	< 0.010	1.580	1.747	
ACMW-04W	09/22/98	0.022		0.243	< 0.020	< 0.010	3.680	3.933	
ACMW-06N	09/22/98	0.261		0.280	0.038	< 0.010	< 0.010	0.300	
ACMW-06S	09/22/98	0.064		0.660	0.403	0.038	0.012	0.710	
Groundwaters									
GW-03	09/15/98	0.040		0.162	< 0.020	< 0.010	0.693	0.865	
GW-04	09/15/98	0.058		0.131	< 0.020	< 0.010	0.802	0.943	
GW-05	09/15/98	0.036		0.163	< 0.020	< 0.010	2.900	3.073	
GW-07	09/15/98	0.090			< 0.020	< 0.010	0.828	0.838	
GW-08	09/15/98	0.044		0.169	< 0.020	< 0.010	3.930	4.109	
GW-11	09/15/98	0.024	<	0.100	< 0.020	< 0.010	0.461	0.571	
GW-14	09/15/98	0.056		0.135	0.021	< 0.010	0.438	0.583	
Reservoirs									
HPR	09/01/98	2.600	2.350	16.800	11.600	0.516	1.220	18.536	
ICR	09/01/98	0.042	< 0.010	0.783	0.025	< 0.010	< 0.010	0.803	< 0.025
Surfacewaters: Carson R									
SW-01	09/01/98	0.016	0.010	< 0.100	0.087	< 0.010	0.020	0.130	
SW-05	09/01/98	0.020	< 0.010	0.188	< 0.020	< 0.010	0.040	0.238	
SW-06	09/01/98	0.026	< 0.010	0.287	< 0.020	< 0.010	0.045	0.342	
SW-08	09/01/98	0.064	0.024	0.321	0.028	< 0.010	0.226	0.557	
Surfacewaters: Indian Cr									
SW-02	09/01/98	0.032	0.020	0.299	0.031	< 0.010	< 0.010	0.319	
SW-03	09/01/98	0.220	0.022	0.448	0.020	< 0.010	0.024	0.482	
SW-04	09/01/98	0.140	0.044	0.394	0.020	< 0.010	0.013	0.417	

ALPINE COUNTY MONITORING

10/11/98

Site	Date	COD mg/L	BOD mg/L	O & G mg/L	Boron mg/L	Ca mg/L	Mg mg/L	Na mg/L	K mg/L	SAR	Exch Na %	Hardness mg/L	Water Level MSL or Ft
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Alpine Monitoring Wells

ACMW-01A	09/22/98												5482.4
ACMW-01B	09/22/98												5492.6
ACMW-02N	09/22/98												5460.2
ACMW-02S	09/22/98												5462.4
ACMW-03	09/22/98												5037.5
ACMW-04W	09/22/98												4909.7
ACMW-06N	09/22/98												5215.4
ACMW-06S	09/22/98												5204.5

Groundwaters

GW-03	09/15/98												
GW-04	09/15/98												
GW-05	09/15/98												
GW-07	09/15/98												
GW-08	09/15/98												
GW-11	09/15/98												
GW-14	09/15/98												

Reservoirs

HPR	09/01/98	17	4		0.02	15.7	3.5	45.6	9.0	2.70	60.3		36.0
ICR	09/01/98	21	3		< 0.01	9.8	1.7	5.5	1.8	0.42	26.0		

Surfacewaters: Carson R

SW-01	09/01/98	<	1	<	1	<	0.01	6.4	1.8	3.0	1.3	0.27	20.9
SW-05	09/01/98		1	<	1		0.01	7.6	2.1	4.0	1.7	0.33	22.5
SW-06	09/01/98		1	<	1	<	0.01	10.7	3.2	5.1	2.1	0.35	20.6
SW-08	09/01/98		2	<	1		0.02	11.2	2.7	8.9	3.5	0.62	30.8

Surfacewaters: Indian Cr

SW-02	09/01/98		1	<	1	<	0.01	18.5	4.2	8.4	2.1	0.46	21.7
SW-03	09/01/98		1	<	1		0.03	20.0	6.1	15.5	2.4	0.78	30.1
SW-04	09/01/98		1	<	1		0.02	12.4	3.5	6.4	1.4	0.42	22.9

**ALPINE COUNTY
BACTERIOLOGICAL MONITORING**

10/11/98

Alpine Monitoring Wells

Site	Date		Total Coliform MPN/100mL		Fecal Coliform MPN/100mL		Fecal Streptococci MPN/100mLL
ACMW-01A	09/22/98		2.2	<	1.1		
ACMW-01B	09/22/98		1.1	<	1.1		
ACMW-02N	09/22/98	<	1.1	<	1.1		
ACMW-02S	09/22/98		6.9		1.1		
ACMW-03	09/22/98		12	<	1.1		
ACMW-04W	09/22/98	>	23	<	1.1		
ACMW-06N	09/22/98		2.2	<	1.1		
ACMW-06S	09/22/98	>	23		16.1		

Groundwaters

Site	Date		Total Coliform MPN/100mL		Fecal Coliform MPN/100mL		Fecal Streptococci MPN/100mLL
GW-03	09/15/98	<	1.1	<	1.1		
GW-04	09/15/98	<	1.1	<	1.1		
GW-05	09/15/98	<	1.1	<	1.1		
GW-07	09/15/98		5.1	<	1.1		
GW-08	09/15/98		23	<	1.1		
GW-11	09/15/98	<	1.1	<	1.1		
GW-14	09/15/98	<	1.1	<	1.1		

Reservoirs

Site	Date		Total Coliform MPN/100mL		Fecal Coliform MPN/100mL		Fecal Streptococci MPN/100mLL
HPR	09/01/98		170		22		13
ICR	09/01/98	<	2	<	2		2

Surfacewaters: Carson R

Site	Date		Total Coliform MPN/100mL		Fecal Coliform MPN/100mL		Fecal Streptococci MPN/100mLL
SW-01	09/01/98		40	<	30		
SW-05	09/01/98		4600		90		
SW-06	09/01/98		930	<	30		
SW-08	09/01/98	>	24000		11000		

Surfacewaters: Indian Cr

Site	Date		Total Coliform MPN/100mL		Fecal Coliform MPN/100mL		Fecal Streptococci MPN/100mLL
SW-02	09/01/98		2400		2400		
SW-03	09/01/98		2400		2400		
SW-04	09/01/98		930		230		

ALPINE COUNTY SOILS

10/13/98

Site	Date	Location	Type	pH	EC mmho	%Sat	TKN mg/Kg	NO3-N mg/L	Total P mg/Kg	Exch P mg/L
S2a	07/01/98	Celio	KT	7.99	1.14	61.4	2,420	1.2		7.8
S3a	07/01/98	Hall	SMB	5.87	0.55	32.8	1,020	0.5		12.4
S4a	07/01/98	Gansberg	DI	5.69	0.97	28.9	982	1.4		17.9
S5a	07/01/98	Gansberg	HRB	5.94	0.51	32.3	1,230	13.1		10.6
S6a	07/01/98	Neddenriep	DWB	6.29	0.27	45.4	1,750	5.0		19.5
S7a	07/01/98	Bruns	JaC	6.23	0.14	41.0	1,660	2.8		4.7
S8a	07/01/98	Dressler	SOD	6.08	0.13	16.3	249	3.3		8.6

Site	Date	Cl mg/L	SO4 mg/Kg	CEC meq/100g	Cu mg/Kg	Mo mg/Kg	Ca mg/L	Mg mg/L	Na mg/L	SAR	%Na	
S2a	07/01/98		44		15.0	<	1.0	55.3	25.4	159.0	4.44	4.9
S3a	07/01/98		17		20.0	<	1.0	46.5	16.8	33.8	1.08	0.3
S4a	07/01/98		7		29.0	<	1.0	38.3	7.6	41.9	1.62	1.1
S5a	07/01/98		4		20.0	<	1.0	55.8	9.8	39.5	1.28	0.6
S6a	07/01/98		3		48.0	<	1.0	4.7	0.8	50.2	5.65	6.5
S7a	07/01/98		5		36.0	<	1.0	16.6	3.1	11.2	0.66	-0.3
S8a	07/01/98	<	1		17.0	<	1.0	6.2	2.2	23.3	2.05	1.7

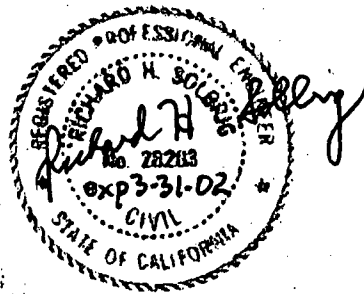
Site	Location	TDS		Cl ⁻		TKN		NO ₃ -N		Total N		Total P		SO ₄		Boron		Exch Na %	
		Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence
SW-01	Carson River, Woodfords	55		1.0		0.13	✓	0.02		0.15	✓	0.02		2.0	✓	0.02		20	✓
SW-06	Carson River, Stateline	70		2.5		0.22	✓	0.03		0.25	✓	0.03		2.0	✓	0.02		20	✓
SW-02	Indian Creek, Upper	100		6.0						0.30	✓	0.03	✓	8.0		0.25		30	
SW-03	Indian Creek, Mid	100	✓	6.0						0.30		0.03	✓	8.0		0.25		30	
SW-04	Indian Creek, Lower	100		6.0						0.30	✓	0.03	✓	8.0		0.25		30	
SW-10	Indian Creek, Stateline	100		6.0						0.30		0.03		8.0		0.25		30	

August soil and Blue Green Algae results are not included; they will be sent to you when they are completed.

Certification

I hereby certify that the enclosed monitoring report was prepared under my direct supervision and that I am a duly Registered Engineer under the laws of the State of California.

Sincerely,



Richard Solbrig,
Assistant Manager/Engineer

Enclosures:

1.

August Monthly Report	Pages
Wastewater Treatment plant	2
Permit Compliance Record	1
Export pipeline inspection	
Sample site locations	2
Monitoring wells (ERB) and Heavenly Valley Creek (HVC)	2
Alpine County Surfacewaters, Groundwaters and Reservoirs	4
Alpine County Blue Green Algae	
Alpine County soils	
Total number of pages:	11

- cc: Calif. Dept. of Health Services, ODW - Jess Morehouse
El Dorado Co. Dept. of Environmental Health - Virginia Huber
Nevada Division of Environmental Protection - Wendel McCurry
Alpine County Health Department - Dr. Richard Botto
Alpine County Health Department - Jim Goodloe
Alpine County Board of Supervisors
EPA - Permit and Compliance Branch, W-5 - Bill Pierce
Desert Research Group (Alpine County Consultants) - Bill Albright
STPUD Board of Directors
STPUD General Manager / District Engineer - Robert G. Baer
STPUD Manager of Operations - Ross Johnson
STPUD Laboratory Director - Terry Powers
STPUD Manager of Alpine County Operations - Hal Bird

**SOUTH TAHOE PUBLIC UTILITY DISTRICT
WASTEWATER TREATMENT PLANT MONTHLY REPORT**

09/08/98
16:10:30

AUGUST 1998

Date	Day	FLOW MGD			Pond Inf	PRECIP Inch	Type	D.O. mg/L Fin	COD mg/L		BOD mg/L		SS mg/L	
		2-Hr Peak Inf	2-Hr Peak Inf	Eff					Pond Return	Raw	Fin	Raw	Fin	Raw
08/01/98	Sat	5.34	8.4	5.06				6.23	370	39.7	187	6.3	197	2.2
08/02/98	Sun	5.45	8.4	5.67				5.94	479					
08/03/98	Mon	4.79	7.2	4.61				5.90	462					
08/04/98	Tue	4.86	7.6	4.68				6.00	377					
08/05/98	Wed	4.96	7.2	4.96				5.61		45.0		8.7		1.9
08/06/98	Thu	5.22	7.5	3.93				6.59	479					
08/07/98	Fri	5.34	7.0	6.03				5.82	550					
08/08/98	Sat	5.57	8.4	5.30				6.74	484	46.2	233	8.3	196	2.6
08/09/98	Sun	5.50	9.0	5.32				6.03	580					
08/10/98	Mon	5.14	7.7	5.05				5.97	753					
08/11/98	Tue	5.26	7.8	5.09				5.81	610					
08/12/98	Wed	5.04	7.7	4.84				5.85	488	41.2	196	8.0	194	2.8
08/13/98	Thu	5.33	7.0	5.38				5.54	469					
08/14/98	Fri	5.50	7.3	5.08			0.08	5.96	449					
08/15/98	Sat	5.49	9.2	2.04	1.00	3.50	0.01	5.89	438	55.3	177	10.2	152	5.2
08/16/98	Sun	5.29	9.1	5.88	2.00			5.47	400					
08/17/98	Mon	5.05	7.5	2.67	0.50			5.40	377					
08/18/98	Tue	5.01	7.2	0.00		5.01			370					
08/19/98	Wed	4.91	6.8	4.74	0.60				396	38.6	159	6.4	149	3.6
08/20/98	Thu	4.95	8.9	6.77	1.20			6.55	472					
08/21/98	Fri	5.00	7.2	6.86	1.20			7.22	432					
08/22/98	Sat	5.40	8.0	7.06	1.00			7.79	446	46.5	196	9.0	189	9.4
08/23/98	Sun	5.06	8.8	6.96	1.00			8.02	409					
08/24/98	Mon	4.76	7.6	3.77		0.99		7.40	361					
08/25/98	Tue	4.81	6.8	0.00		4.81		7.25	361					
08/26/98	Wed	4.57	6.2	0.00		4.57			1009					
08/27/98	Thu	4.59	6.8	4.37					663					
08/28/98	Fri	4.72	6.5	8.26	3.54			6.67	432					
08/29/98	Sat	4.90	7.3	7.97	3.07			6.97	810	54.6	310	7.9	329	10.4
08/30/98	Sun	4.68	6.0	6.20	1.92			7.31	502					
08/31/98	Mon	4.31	7.0	5.75	1.94			8.16	504					
PERMIT MAX		7.7								300		45		60
PERMIT MIN														
PERMIT AVE										60		30		30
TOTAL		156.80	235.1	150.30	18.97	18.88	0.09	174.09	14932	367.1	1458	64.8	1406	38.0
MAXIMUM		5.57	9.2	8.26	3.54	5.01	0.08	8.16	1009	55.3	310	10.2	329	10.4
MINIMUM		4.31	6.0	0.00	0.50	0.99	0.01	5.40	361	38.6	159	6.3	149	1.9
AVERAGE		5.06	7.6	4.85	1.58	3.78	0.05	6.45	498	45.9	208	8.1	201	4.7
# Tests		31	31	31	12	5	2	27	30	8	7	8	7	8

**SOUTH TAHOE PUBLIC UTILITY DISTRICT
WASTEWATER TREATMENT PLANT MONTHLY REPORT**

09/08/98

16:10:30

AUGUST 1998

Date	Day	SETTLEABLE SOLIDS mL/L		MBAS mg/L		pH Units		TURBIDITY NTU		Cl2 mg/L	FINAL COLIFORMS MPN/100 mL			TDS mg/L		ALKALINITY mg/L	
		Raw	Fin	Raw	Fin	Raw	Fin	Raw	Fin		Total	7day-	Median	Raw	Fin	Raw	Fin
08/01/98	Sat	14.0	< 0.1			7.64	7.83	2.50	2.24		2					181	163
08/02/98	Sun	16.0	< 0.1			7.38	7.68	3.50	2.04		4					178	166
08/03/98	Mon	17.0	< 0.1			7.41	7.75	4.40	3.06		2					175	164
08/04/98	Tue	12.0	< 0.1	2.86	0.082	7.36	7.50	4.30	2.96		8					170	164
08/05/98	Wed		< 0.1				7.52	4.00	1.94	<	2			236			168
08/06/98	Thu	12.5	< 0.1			7.40	7.53	4.00	1.12	<	2					167	162
08/07/98	Fri	13.0	< 0.1			7.26	7.44	4.30	2.32	<	2	<	2			173	162
08/08/98	Sat	12.5	< 0.1			7.30	7.56	5.30	1.94		2	<	2			174	166
08/09/98	Sun	13.0	< 0.1			7.28	7.56	4.60	1.35		2	<	2			181	168
08/10/98	Mon	12.0	< 0.1			7.23	7.52	3.00	1.73	<	2		2			175	170
08/11/98	Tue	15.0	< 0.1			7.16	7.53	2.90	1.83	<	2		2			173	164
08/12/98	Wed	12.0	< 0.1			7.36	7.62	3.10	2.04		2		2	274	241	169	162
08/13/98	Thu	12.5	< 0.1			7.59	7.70	2.10	2.55		2		2			172	161
08/14/98	Fri	11.0	< 0.1			7.50	7.64	2.30	1.63		27		2			173	162
08/15/98	Sat	12.0				7.55	7.73	6.20	1.63		2		2			173	162
08/16/98	Sun	11.0	< 0.1			7.48	7.38	4.80	3.46	<	2	<	2			177	158
08/17/98	Mon	10.5				7.67		3.80	4.18	<	2	<	2			171	
08/18/98	Tue	11.0				7.32		2.10								168	
08/19/98	Wed	11.0	< 0.1			7.51	7.75	2.50	1.02	<	2	<	2	230	532	171	162
08/20/98	Thu	10.5	< 0.1			7.63	7.55	2.60	3.06		2	<	2			169	155
08/21/98	Fri	9.0	< 0.1			7.44	7.53	3.20	3.67	<	2	<	2			171	156
08/22/98	Sat	9.5	< 0.1			7.26	7.75	3.50	3.57		2	<	2			170	153
08/23/98	Sun	12.0	< 0.1			7.50	7.56	4.30	4.38	<	2	<	2			178	149
08/24/98	Mon	11.0	< 0.1			7.58	7.77	4.10	8.36	<	2	<	2			168	140
08/25/98	Tue	11.0				7.45		2.80	1.94	<	2	<	2			166	
08/26/98	Wed	25.0				7.23		2.90								177	
08/27/98	Thu	17.0	< 0.1			7.41	7.62	4.50								163	150
08/28/98	Fri	10.0	< 0.1			7.54	7.64	3.00	3.67	<	2	<	2			160	150
08/29/98	Sat	18.0	< 0.1			7.22	7.76	3.50	3.36	<	2	<	2			174	151
08/30/98	Sun	12.0	< 0.1			7.41	7.70	3.10	3.47	<	2	<	2			175	150
08/31/98	Mon	11.0	< 0.1			7.35	7.70	2.70	4.38	<	2	<	2			165	142
PERMIT MAX			0.1		2.0		8.5	20			240		23				
PERMIT MIN							6.5										
PERMIT AVE					1.0			10									
TOTAL		384.0	2.6	2.86	0.082	222.42	205.82	109.90	78.90		89		56	504	1009	5157	4280
MAXIMUM		25.0	0.1	2.86	0.082	7.67	7.83	6.20	8.36		27		2	274	532	181	170
MINIMUM		9.0	0	2.86	0.082	7.16	7.38	2.10	1.02		2		2	230	236	160	140
AVERAGE		12.8	0.1	2.86	0.082	7.41	7.62	3.55	2.82		3		2	252	336	172	159
# Tests		30	26	1	1	30	27	31	28		28		28	2	3	30	27

SAMPLE LOCATIONS

TAHOE BASIN MONITORING WELLS

<u>Site</u>	<u>Location</u>
ERB	Emergency Retention Basin
CONTROL	North of Post Office
MW02-25, -50	Emergency Retention Basin, S side
MW03-25, -50	Emergency Retention Basin, S side
MW04-25, -50	Emergency Retention Basin, W side
MW07-25, -50	Emergency Retention Basin, N side
MW08-25, -50	Pond #1, SW corner
MW11	S.E. corner of wastewater treatment plant grounds
MW12	South of Emergency Pump Building, for buried sludge
MW13	Pond 2, along Heavenly Valley Creek, for buried sludge

HEAVENLY VALLEY CREEK

HVC-1	At Pioneer Trail
HVC-2	250 ft upstream of Pond #2
HVC-3	25 ft downstream of Johnson Blvd.
HVC-4	Effluent of drain pipe from Lower Shop area
HVC-5	Effluent of drainage pipe along Johnson Blvd, 10 feet upstream of Johnson Blvd.

ALPINE COUNTY MONITORING WELLS

<u>Site</u>	<u>Location</u>
ACMW-01AW	Below main dam at Harvey Place Reservoir
ACMW-01BE	Below auxiliary dam at Harvey Place Reservoir
ACMW-02, N&S	On dam access road at Diamond Valley Road
ACMW-03	Bruns ranch, east side of Highway 88
ACMW-04W	Gansberg ranch, west side of Highway 88
ACMW-05	Dressler ranch
ACMW-06, N&S	Celio ranch, on Diamond Valley Road

ALPINE SOILS

<u>Site</u>	<u>Ranch</u>
S2	Celio
S3	Hall
S4	Gansberg
S5	Gansberg
S6	Neddenriep
S7	Bruns
S8	Dressler

ALPINE GROUNDWATERS

<u>Site</u>	<u>Homeowner</u>
GW-01	Sagues
GW-03	Smith/Springmeyer
GW-04	Celio
GW-05	Neddenriep
GW-07	Gansberg, Jr.
GW-08	Arant
GW-11	Diamond Valley School
GW-14	Sierra Pines Store

ALPINE SURFACEWATERS

<u>Site</u>	<u>Location</u>
SW-01	Carson River, Woodfords
SW-02	Indian Creek, @ HWY 89
SW-03	Indian Creek, @ upper bridge
SW-04	Indian Creek, @ lower bridge
SW-05	Carson River, Paynesville
SW-06	Carson River, Stateline
SW-07	Fredericksberg Ditch, Stateline
SW-08	Irrigation Ditch along Carson River Road
SW-09	Carson River, Dressler Lane
SW-10	Indian Creek, @ Smith-Springmeyer Ranch

TAHOE BASIN MONITORING

09/09/98

Site	Date	ID	Location	Depth msl	Temp C	pH	EC umhos	Cl mg/L	COD mg/L	Comment
Buried Sludge Monitoring										
MW11	08/19/98	980819-14	Sludge Pond	6269.1	8.0	6.61	83	0.9	< 5.0	
MW12	08/19/98	980819-15	Sludge Pond	6266.2	8.8	6.45	182	3.2	< 5.0	
MW13	08/19/98	980819-16	Sludge Pond	6257.3	8.8	6.92	819	3.6	17.2	
ERB Monitoring										
CONTROL	08/19/98	980819-07	At Post Office	6284.4	10.5	6.86	168	6.0	< 5.0	
MW01.5	08/19/98	980819-08	SW corner of ERB	6269.5	9.2	7.05	167	3.9	< 5.0	
MW02-50	08/19/98	980819-09	Black Bart side of ERB	6269.2	11.2	6.72	542	53.2	< 5.0	
MW03-50	08/19/98	980819-10	Black Bart side of ERB	6269.2	11.1	6.13	469	46.2	< 5.0	
MW04-50	08/19/98	980819-11	Hank Monk side of ERB	6270.0	8.1	6.18	78	5.2	< 5.0	
MW07-50	08/19/98	980819-12	North side of ERB	6280.1	8.6	6.22	276	27.8	< 5.0	
ERB	08/19/98	980819-17	Emergency Retention Basin		21.9	6.93	556	44.9	24.0	
Heavenly Valley Creek										
HVC-1	08/11/98	980811-28	Downstream of Pioneer		9.5	6.70	37	0.7	< 5.0	
HVC-2	08/11/98	980811-29	250' upstream of Pond #2		9.8	6.03	41	0.7	< 5.0	
HVC-3	08/11/98	980811-30	25' downstream of Johnson Blvd		9.4	6.47	40	0.9	< 5.0	
HVC-4	08/11/98	980811-31	Effluent of drain from Lower Sho		12.9	6.53	153	0.9	< 5.0	
HVC-5	08/11/98	80811-HVC	Effluent of drainage pipe along J							Dry
Treatment Plant Monitoring										
MW08-25	08/19/98	980819-13	SW side of Pond #1	6247.5	10.5	6.53	1032	52.4	73.1	

TAHOE BASIN MONITORING

09/09/98

Site	Date	TotalP mg/L	PO4-P mg/L	TKN mg/L	NH3-N mg/L	NO2-N mg/L	NO3-N mg/L	Total N mg/L
Buried Sludge Monitoring								
MW11	08/19/98	0.132		0.108	0.020	< 0.010	0.200	0.318
MW12	08/19/98	0.222		0.127	0.025	< 0.010	0.290	0.427
MW13	08/19/98	0.050		0.648	0.020	0.272	0.269	1.189
ERB Monitoring								
CONTROL	08/19/98				0.051	< 0.010	2.370	2.380
MW01.5	08/19/98				0.023	< 0.010	0.661	0.671
MW02-50	08/19/98			< 0.020	< 0.010	< 0.010	12.100	12.110
MW03-50	08/19/98				0.027	< 0.010	8.660	8.670
MW04-50	08/19/98				0.023	< 0.010	0.042	0.052
MW07-50	08/19/98			< 0.020	< 0.010	< 0.010	0.580	0.590
ERB	08/19/98				27.200	0.029	0.040	0.069
Heavenly Valley Creek								
HVC-1	08/11/98	0.020		0.174	0.120	< 0.010	0.017	0.201
HVC-2	08/11/98	0.034		0.270	0.040	< 0.010	< 0.010	0.290
HVC-3	08/11/98	0.042		0.302	0.047	< 0.010	< 0.010	0.322
HVC-4	08/11/98	0.056		0.341	0.038	< 0.010	0.024	0.375
HVC-5	08/11/98							0.000
Treatment Plant Monitoring								
MW08-25	08/19/98	0.507		9.480	10.100	0.016	0.155	9.651

ALPINE COUNTY MONITORING

09/10/98

Site	Date	ID	Location	Temp C	pH	EC umhos	DO mg/L	Alk mg/L	TDS mg/L	SS mg/L	Turb NTU	Cl mg/L	SO4 mg/L
Alpine Monitoring Wells													
ACMW-01AW	08/25/98	980825-07	Main Dam	13.2	6.28	105		47	79			3.3	
ACMW-01BE	08/25/98	980825-08	Secondary Dam	12.1	6.26	93		45	71			0.8	
ACMW-02N	08/25/98	980825-09	Access Gate	13.3	6.30	134		62	91			3.1	
ACMW-02S	08/25/98	980825-10	Access Gate	16.4	6.18	96		47	72			0.9	
ACMW-03	08/25/98	980825-11	HWY 88	14.5	6.20	192		86	130			5.7	
ACMW-04W	08/25/98	980825-12	Gansberg	13.3	6.01	208		50	146			13.0	
ACMW-06N	08/25/98	980825-13	Celio	12.3	6.72	728		265	446			56.4	
ACMW-06S	08/25/98	980825-14	Celio	12.8	9.16	586		176	351			74.7	
Groundwaters													
GW-08	08/04/98	980804-19	Arant	16.8	6.48	254					2.6		
GW-03	08/11/98	980811-20	Smith/Springmeyer	17.9	7.31	308		130	228			1.6	
GW-04	08/11/98	980811-21	Celio	16.1	7.41	265		118	200			3.2	
GW-05	08/11/98	980811-22	Neddenriep	14.1	6.44	282		61	181			27.9	
GW-07	08/11/98	980811-23	Gansberg	13.1	6.36	120		53	97			1.3	
GW-08	08/11/98	980811-24	Arant	16.6	6.54	254		57	164			20.4	
GW-11	08/11/98	980811-25	Diamond Val. School	13.5	6.45	124		48	85			1.5	
GW-14	08/11/98	980811-26	Sierra Pines	13.7	6.50	112		53	99			1.2	
Reservoirs													
HPR	08/04/98	980804-16	Harvey Place Reservoir	23.1	8.33	414	12.20	101	217	2.56	3.4	49.0	20.7
ICR	08/04/98	980804-17	Indian Creek Reservoir	24.2	9.27	122	9.50	43	61	8.66	9	1.5	2.8
Surfacewaters: Carson R													
SW-01	08/04/98	980804-09	Carson R Woodfords	12.0	6.30	54	8.25	26	43	2.96	1.7	0.6	2.8
SW-05	08/04/98	980804-13	Carson R Paynesville	14.8	7.05	62	8.30	31	47	4.57	2.6	0.7	2.7
SW-06	08/04/98	980804-14	Carson R Stateline	19.6	6.82	70	6.65	33	51	3.64	3	1.0	2.7
SW-08	08/04/98	980804-15	Irrigation Ditch	20.1	6.39	111	6.45	53	83	10.00	4	1.3	4.5
Surfacewaters: Indian Cr													
SW-02	08/04/98	980804-10	Indian Cr Upper	15.0	6.79	133	6.30	67	99	3.00	5	1.3	3.3
SW-03	08/04/98	980804-11	Indian Cr Mid	17.9	6.84	177	7.70	78	118	2.72	6.9	4.2	3.5
SW-04	08/04/98	980804-12	Indian Cr Lower	17.1	6.63	117	6.85	56	90	6.96	8.9	1.9	4.4

ALPINE COUNTY MONITORING

09/10/98

Site	Date	TotalP mg/L	PO4-P mg/L	TKN mg/L	NH3-N mg/L	NO2-N mg/L	NO3-N mg/L	Total N mg/L	MBAS mg/L
Alpine Monitoring Wells									
ACMW-01A	08/25/98	0.028		0.131	< 0.020	< 0.010	0.300	0.441	
ACMW-01B	08/25/98	0.020		0.106	< 0.020	< 0.010	0.082	0.198	
ACMW-02N	08/25/98	0.018	<	0.100	< 0.020	< 0.010	0.163	0.273	
ACMW-02S	08/25/98	0.020		0.141	< 0.020	< 0.010	< 0.010	0.161	
ACMW-03	08/25/98	0.066		0.194	< 0.020	< 0.010	0.506	0.710	
ACMW-04W	08/25/98	0.019		0.199	< 0.020	< 0.010	3.610	3.819	
ACMW-06N	08/25/98	0.256		0.341	0.042	< 0.010	< 0.010	0.361	
ACMW-06S	08/25/98	0.020		0.448	0.237	0.023	0.010	0.481	
Groundwaters									
GW-08	08/04/98							0.000	
GW-03	08/11/98	0.038	<	0.100	< 0.020	< 0.010	0.669	0.779	
GW-04	08/11/98	0.062	<	0.100	< 0.020	< 0.010	0.774	0.884	
GW-05	08/11/98	0.036	<	0.100	< 0.020	< 0.010	2.700	2.810	
GW-07	08/11/98	0.100		0.110	< 0.020	< 0.010	0.767	0.887	
GW-08	08/11/98	0.068		0.138	< 0.020	< 0.010	4.470	4.618	
GW-11	08/11/98	0.046	<	0.100	< 0.020	< 0.010	0.432	0.542	
GW-14	08/11/98	0.060	<	0.100	< 0.020	< 0.010	0.414	0.524	
Reservoirs									
HPR	08/04/98	2.100	2.340	11.900	9.590	0.515	1.260	13.675	0.060
ICR	08/04/98	0.046	< 0.010	1.050	< 0.020	< 0.010	< 0.010	1.070	
Surfacewaters: Carson R									
SW-01	08/04/98	0.022	0.018	0.162	< 0.020	< 0.010	0.011	0.183	
SW-05	08/04/98	0.026	0.018	0.150	< 0.020	< 0.010	0.019	0.179	
SW-06	08/04/98	0.031	0.020	0.238	< 0.020	< 0.010	0.023	0.271	
SW-08	08/04/98	0.066	0.030	0.348	0.021	< 0.010	0.179	0.537	
Surfacewaters: Indian Cr									
SW-02	08/04/98	0.048	0.028	0.376	< 0.020	< 0.010	0.021	0.407	
SW-03	08/04/98	0.114	0.080	0.281	< 0.020	< 0.010	< 0.010	0.301	
SW-04	08/04/98	0.146	0.090	0.514	< 0.020	< 0.010	< 0.010	0.534	

ALPINE COUNTY MONITORING

09/10/98

Site	Date	COD mg/L	BOD mg/L	O & G mg/L	Boron mg/L	Ca mg/L	Mg mg/L	Na mg/L	K mg/L	SAR	Exch Na %	Hardness mg/L	Water Level MSL or Ft
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Alpine Monitoring Wells

ACMW-01A	08/25/98												5483.1
ACMW-01B	08/25/98												5493.8
ACMW-02N	08/25/98												5459.9
ACMW-02S	08/25/98												5462.2
ACMW-03	08/25/98												5039.3
ACMW-04W	08/25/98												4909.0
ACMW-06N	08/25/98												5214.7
ACMW-06S	08/25/98												5204.0

Groundwaters

GW-08	08/04/98												
GW-03	08/11/98												
GW-04	08/11/98												
GW-05	08/11/98												
GW-07	08/11/98												
GW-08	08/11/98												
GW-11	08/11/98												
GW-14	08/11/98												

Reservoirs

HPR	08/04/98	32	4		0.16	15.0	3.3	44.5	8.8	2.71	60.9		41.8
ICR	08/04/98	32	5	<	0.01	10.2	1.6	5.7	1.9	0.44	26.4		

Surfacewaters: Carson R

SW-01	08/04/98		0	<	1	<	0.01	5.4	1.4	2.5	1.2	0.25	21.0
SW-05	08/04/98		0	<	1	<	0.01	6.5	1.6	3.0	1.3	0.27	20.7
SW-06	08/04/98		1	<	1	<	0.01	7.1	1.8	3.4	1.5	0.29	21.2
SW-08	08/04/98		1	<	1	<	0.01	10.6	2.2	7.7	2.1	0.56	30.3

Surfacewaters: Indian Cr

SW-02	08/04/98		1	<	1	<	0.01	14.1	3.0	7.0	2.3	0.44	23.1
SW-03	08/04/98		1	<	1		0.02	16.0	3.9	10.5	2.3	0.61	28.0
SW-04	08/04/98		1	<	1		0.02	12.4	3.1	5.0	2.6	0.33	18.8

**ALPINE COUNTY
BACTERIOLOGICAL MONITORING**

09/10/98

Alpine Monitoring Wells

Site	Date	Total Coliform MPN/100mL	Fecal Coliform MPN/100mL	Fecal Streptococci MPN/100mLL
ACMW-01A	08/25/98	3.6	<	1.1
ACMW-01B	08/25/98	<	<	1.1
ACMW-02N	08/25/98	<	<	1.1
ACMW-02S	08/25/98	3.6	<	1.1
ACMW-03	08/25/98	3.6	<	1.1
ACMW-04W	08/25/98	>	23	<
ACMW-06N	08/25/98	<	1.1	<
ACMW-06S	08/25/98	23	<	1.1

Groundwaters

Site	Date	Total Coliform MPN/100mL	Fecal Coliform MPN/100mL	Fecal Streptococci MPN/100mLL
GW-08	08/04/98			
GW-03	08/11/98	<	1.1	<
GW-04	08/11/98	<	1.1	<
GW-05	08/11/98	<	1.1	<
GW-07	08/11/98	<	1.1	<
GW-08	08/11/98	6.9	<	1.1
GW-11	08/11/98	<	1.1	<
GW-14	08/11/98	<	1.1	<

Reservoirs

Site	Date	Total Coliform MPN/100mL	Fecal Coliform MPN/100mL	Fecal Streptococci MPN/100mLL
HPR	08/04/98	350	<	2
ICR	08/04/98	8	<	2

Surfacewaters: Carson R

Site	Date	Total Coliform MPN/100mL	Fecal Coliform MPN/100mL	Fecal Streptococci MPN/100mLL
SW-01	08/04/98	110	<	30
SW-05	08/04/98	1500		150
SW-06	08/04/98	430		90
SW-08	08/04/98	2400		930

Surfacewaters: Indian Cr

Site	Date	Total Coliform MPN/100mL	Fecal Coliform MPN/100mL	Fecal Streptococci MPN/100mLL
SW-02	08/04/98	2400		930
SW-03	08/04/98	150		40
SW-04	08/04/98	>	24000	>

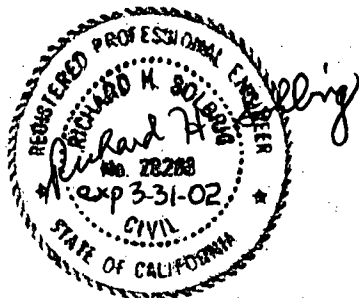
Site	Location	TDS		Cl ⁻		TKN		NO ₃ -N		Total N		Total P		SO ₄		Boron		Exch Na %	
		Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence
SW-01	Carson River, Woodfords	55		1.0		0.13		0.02		0.15		0.02		2.0	✓	0.02		20	
SW-06	Carson River, Stataline	70		2.5		0.22		0.03		0.25		0.03		2.0	✓	0.02		20	
SW-02	Indian Creek, Upper	100		6.0						0.30	✓	0.03	✓	8.0		0.25		30	
SW-03	Indian Creek, Mid	100		6.0						0.30	✓	0.03	✓	8.0		0.25		30	
SW-04	Indian Creek, Lower	100		6.0						0.30	✓	0.03	✓	8.0		0.25		30	
SW-10	Indian Creek, Stataline																		

July soil and Blue Green Algae results are not included; they will be sent to you when they are completed. Soil results for May and June are included, as are the Blue Green Algae results for May, June and July.

Certification

I hereby certify that the enclosed monitoring report was prepared under my direct supervision and that I am a duly Registered Engineer under the laws of the State of California.

Sincerely,



Richard Solbrig,
Assistant Manager/Engineer

Enclosures:

1.

July Monthly Report	Pages
Wastewater Treatment plant	2
Permit Compliance Record	1
Export pipeline inspection	1
Sample site locations	2
Monitoring wells (ERB) and Heavenly Valley Creek (HVC)	2
Alpine County Surfacewaters, Groundwaters and Reservoirs	4
Alpine County Blue Green Algae, May, June and July	1
Alpine County soils, May and June	1
Total number of pages:	14

cc: Calif. Dept. of Health Services, ODW - Jess Morehouse
El Dorado Co. Dept. of Environmental Health - Virginia Huber
Nevada Division of Environmental Protection - Wendel McCurry
Alpine County Health Department - Dr. Richard Botto
Alpine County Health Department - Jim Goodloe
Alpine County Board of Supervisors
EPA - Permit and Compliance Branch, W-5 - Bill Pierce
Desert Research Group (Alpine County Consultants) - Bill Albright
STPUD Board of Directors
STPUD General Manager / District Engineer - Robert G. Baer
STPUD Manager of Operations - Ross Johnson
STPUD Laboratory Director - Terry Powers
STPUD Manager of Alpine County Operations - Hal Bird

**SOUTH TAHOE PUBLIC UTILITY DISTRICT
WASTEWATER TREATMENT PLANT MONTHLY REPORT**

08/04/98
15:53:50

JULY 1998

Date	Day	2-Hr Peak		FLOW MGD			PRECIP		D.O.	COD		BOD		SS	
		Inf	Inf	Eff	Pond Return	Pond Inf	Inch	Type	mg/L Fin	Raw	Fin	Raw	Fin	Raw	Fin
07/01/98	Wed	5.15	7.0	4.14					6.52	412					
07/02/98	Thu	5.39	8.2	5.23					6.60	409					
07/03/98	Fri	6.14	9.9	5.66					6.60	455					
07/04/98	Sat	6.77	11.6	6.17					6.34	462	46.6	217	11.9	172	9.0
07/05/98	Sun	6.29	10.6	6.01					6.64	451					
07/06/98	Mon	4.95	8.3	4.94					6.69	449					
07/07/98	Tue	4.98	7.4	4.76					6.63	400					
07/08/98	Wed	4.62	7.4	4.36					6.78	543	37.0	196	6.6	205	3.2
07/09/98	Thu	4.84	6.1	4.65					6.63	529					
07/10/98	Fri	4.91	7.6	4.93					6.39	568					
07/11/98	Sat	5.45	8.5	5.05					6.69	472	34.2	190	5.7	195	2.9
07/12/98	Sun	5.03	8.0	5.05					6.40	536					
07/13/98	Mon	4.81	7.8	4.71					6.21	695					
07/14/98	Tue	4.78	6.8	4.52					6.50	458					
07/15/98	Wed	4.63	6.5	4.66					6.32	492					
07/16/98	Thu	4.88	6.5	4.67					6.42	486	39.4	200	10.5	195	6.3
07/17/98	Fri	5.10	6.5	4.90					6.68	409					
07/18/98	Sat	5.40	7.5	5.06					6.10	429	35.6	200	8.5	143	2.5
07/19/98	Sun	5.28	8.2	4.95					6.24	396					
07/20/98	Mon	4.72	7.2	4.40					6.34	389					
07/21/98	Tue	4.83	6.6	4.64			0.01	Rain	6.03	366					
07/22/98	Wed	4.89	7.0	4.38			0.02	Rain	6.08	399	41.4	139	5.1	156	2.6
07/23/98	Thu	4.85	6.3	4.94					5.61	398					
07/24/98	Fri	5.28	6.7	4.99					6.05	479					
07/25/98	Sat	5.42	8.5	4.81					5.97	420	45.6	199	8.7	182	3.5
07/26/98	Sun	5.45	8.4	5.40			0.06	Rain	5.80	405					
07/27/98	Mon	5.05	8.0	5.09					6.31	359					
07/28/98	Tue	4.91	7.0	4.60					6.32	322					
07/29/98	Wed	4.73	8.2	4.63					5.96	407	33.2	157		160	1.8
07/30/98	Thu	4.88	7.0	4.87					6.06	426				176	1.7
07/31/98	Fri	4.94	7.4	4.40					6.31	589					
PERMIT MAX		7.7									300		45		60
PERMIT MIN															
PERMIT AVE											60		30		30
TOTAL		159.35	238.7	151.57			0.09		196.22	14010	313.0	1498	56.9	1584	33.5
MAXIMUM		6.77	11.6	6.17			0.06		6.78	695	46.6	217	11.9	205	9.0
MINIMUM		4.62	6.1	4.14			0.01		5.61	322	33.2	139	5.1	143	1.7
AVERAGE		5.14	7.7	4.89			0.03		6.33	452	39.1	187	8.1	176	3.7
# Tests		31	31	31	0	0	3		31	31	8	8	7	9	9

**SOUTH TAHOE PUBLIC UTILITY DISTRICT
WASTEWATER TREATMENT PLANT MONTHLY REPORT**

08/04/98
15:53:50

JULY 1998

Date	Day	SETTLEABLE SOLIDS mL/L		MBAS mg/L		pH Units		TURBIDITY NTU		Cl2 mg/L	FINAL COLIFORMS MPN/100 mL			TDS mg/L		ALKALINITY mg/L		
		Raw	Fin	Raw	Fin	Raw	Fin	Raw	Fin		Fin	Total	7day-	Median	Raw	Fin	Raw	Fin
07/01/98	Wed	10.5	<	0.1			7.56	7.60	2.80	4.08	<	2	<	2			156	145
07/02/98	Thu	9.0	<	0.1			7.38	7.50	3.40	2.85	<	2	<	2			166	148
07/03/98	Fri	11.0	<	0.1			7.34	7.54	3.15	4.48		2	<	2			170	156
07/04/98	Sat	13.0	<	0.1			7.33	7.67	5.00	2.55		2	<	2			178	165
07/05/98	Sun	12.0	<	0.1			7.41	7.72	4.40	2.22		2		2			181	174
07/06/98	Mon	11.0	<	0.1			7.63	7.82	3.90	1.94	<	2		2			170	165
07/07/98	Tue	12.0	<	0.1			7.44	7.67	2.50	3.57		4		2			164	162
07/08/98	Wed	15.5	<	0.1			7.43	7.82	2.55	2.75		2	<	2	246	228	163	160
07/09/98	Thu	14.0	<	0.1			7.30	7.54	2.70	2.55	<	2	<	2			164	162
07/10/98	Fri	15.0	<	0.1			7.36	7.73	2.60	2.45		2	<	2			170	162
07/11/98	Sat	14.0	<	0.1			7.40	7.44	2.00	2.45	<	2	<	2			167	154
07/12/98	Sun	18.0	<	0.1			7.42	7.84	3.40	1.83	<	2	<	2			180	171
07/13/98	Mon	18.5	<	0.1			7.42	7.69	2.15	2.75		2	<	2			166	162
07/14/98	Tue	12.0	<	0.1			7.39	7.75	2.10	3.36	<	2	<	2			166	159
07/15/98	Wed	13.0	<	0.1	2.49	0.080	7.33	7.58	3.40	3.26	<	2	<	2			163	158
07/16/98	Thu	14.0	<	0.1			7.32	7.56	3.90	2.55	<	2	<	2	256	230	162	155
07/17/98	Fri	10.0	<	0.1			7.40	7.55	3.95	2.65	<	2	<	2			164	155
07/18/98	Sat	12.5	<	0.1			7.33	7.52	2.90	2.55	<	2	<	2			168	158
07/19/98	Sun	11.5	<	0.1			7.40	7.50	3.00	1.83	<	2	<	2			171	163
07/20/98	Mon	11.0	<	0.1			7.49	7.60	2.70	2.85							168	158
07/21/98	Tue	12.0	<	0.1			7.33	7.58	2.15	3.36		2	<	2			163	156
07/22/98	Wed	11.0	<	0.1			7.47	7.70	2.00	1.83	<	2	<	2	242	226	166	158
07/23/98	Thu	11.0	<	0.1			7.44	7.49	1.90	2.04	<	2	<	2			163	156
07/24/98	Fri	10.5	<	0.1			7.39	7.60	1.95	3.36	<	2	<	2			165	158
07/25/98	Sat	11.0	<	0.1			7.42	7.58	2.70	2.69		2	<	2			171	162
07/26/98	Sun	12.0	<	0.1			7.40	7.57	2.00	2.24		2	<	2			170	161
07/27/98	Mon	11.0	<	0.1			7.44	7.59	1.80	4.28		2	<	2			166	158
07/28/98	Tue	12.0	<	0.1			7.31	7.64	1.80	2.04	<	2	<	2			165	156
07/29/98	Wed	11.0	<	0.1			7.40	7.68	1.90	2.34		2	<	2	239	220	165	154
07/30/98	Thu	11.5	<	0.1			7.50	7.67	2.10	2.75	<	2	<	2			163	155
07/31/98	Fri	18.5	<	0.1			7.35	7.63	2.55	2.55		2	<	2			166	157
PERMIT MAX				0.1				2.0	8.5	20		240		23				
PERMIT MIN									6.5									
PERMIT AVE								1.0		10								
TOTAL		389.0		3.1	2.49	0.080	229.53	236.37	85.35	85.00		62		60	983	904	5180	4923
MAXIMUM		18.5		0.1	2.49	0.080	7.63	7.84	5.00	4.48		4		2	256	230	181	174
MINIMUM		9.0		0	2.49	0.080	7.30	7.44	1.80	1.83		2		2	239	220	156	145
AVERAGE		12.5		0.1	2.49	0.080	7.40	7.62	2.75	2.74		2		2	246	226	167	159
# Tests		31		31	1	1	31	31	31	31		30		30	4	4	31	31

SOUTH TAHOE PUBLIC UTILITY DISTRICT
MEMORANDUM

Date: July 23, 1998,

To: Bob Baer, Diane Noble, Terry Powers

From: Greg Schrempp

Topic: Export Line Inspection

On July 22 and 23 1998, Tim Rieger and I conducted our check of the District's export line from the treatment plant to where the "C" line daylights at Harvey Place at Station 564+04. Numerous wet spots were checked, however no leaks were found.

SAMPLE LOCATIONS

TAHOE BASIN MONITORING WELLS

<u>Site</u>	<u>Location</u>
ERB	Emergency Retention Basin
CONTROL	North of Post Office
MW02-25, -50	Emergency Retention Basin, S side
MW03-25, -50	Emergency Retention Basin, S side
MW04-25, -50	Emergency Retention Basin, W side
MW07-25, -50	Emergency Retention Basin, N side
MW08-25, -50	Pond #1, SW corner
MW11	S.E. corner of wastewater treatment plant grounds
MW12	South of Emergency Pump Building, for buried sludge
MW13	Pond 2, along Heavenly Valley Creek, for buried sludge

HEAVENLY VALLEY CREEK

HVC-1	At Pioneer Trail
HVC-2	250 ft upstream of Pond #2
HVC-3	25 ft downstream of Johnson Blvd.
HVC-4	Effluent of drain pipe from Lower Shop area
HVC-5	Effluent of drainage pipe along Johnson Blvd, 10 feet upstream of Johnson Blvd.

ALPINE COUNTY MONITORING WELLS

<u>Site</u>	<u>Location</u>
ACMW-01AW	Below main dam at Harvey Place Reservoir
ACMW-01BE	Below auxiliary dam at Harvey Place Reservoir
ACMW-02, N&S	On dam access road at Diamond Valley Road
ACMW-03	Bruns ranch, east side of Highway 88
ACMW-04W	Gansberg ranch, west side of Highway 88
ACMW-05	Dressler ranch
ACMW-06, N&S	Celio ranch, on Diamond Valley Road

ALPINE SOILS

<u>Site</u>	<u>Ranch</u>
S2	Celio
S3	Hall
S4	Gansberg
S5	Gansberg
S6	Neddenriep
S7	Bruns
S8	Dressler

ALPINE GROUNDWATERS

<u>Site</u>	<u>Homeowner</u>
GW-01	Sagues
GW-03	Smith/Springmeyer
GW-04	Celio
GW-05	Neddenriep
GW-07	Gansberg, Jr.
GW-08	Arant
GW-11	Diamond Valley School
GW-14	Sierra Pines Store

ALPINE SURFACEWATERS

<u>Site</u>	<u>Location</u>
SW-01	Carson River, Woodfords
SW-02	Indian Creek, @ HWY 89
SW-03	Indian Creek, @ upper bridge
SW-04	Indian Creek, @ lower bridge
SW-05	Carson River, Paynesville
SW-06	Carson River, Stateline
SW-07	Fredericksberg Ditch, Stateline
SW-08	Irrigation Ditch along Carson River Road
SW-09	Carson River, Dressler Lane
SW-10	Indian Creek, @ Smith-Springmeyer Ranch

TAHOE BASIN MONITORING

08/06/98

Site	Date	ID	Location	Depth msl	Temp C	pH	EC umhos	Cl mg/L	COD mg/L	Comment
Buried Sludge Monitoring										
MW11	07/28/98	980728-27	Sludge Pond	6269.2	10.2	5.92	84	1.1	<	5.0
MW12	07/28/98	980728-28	Sludge Pond	6266.4	10.2	5.99	188	3.5	<	5.0
MW13	07/28/98	980728-29	Sludge Pond	6257.7	10.8	6.55	957	5.1		31.8
ERB Monitoring										
CONTROL	07/28/98	980728-20	At Post Office	6284.4	13.6	6.38	173	6.0	<	5.0
MW01.5	07/28/98	980728-21	SW corner of ERB	6269.5	11.1	7.01	166	4.2	<	5.0
MW02-50	07/28/98	980728-22	Black Bart side of ERB	6269.4	13.9	6.40	555	53.2	<	5.0
MW03-50	07/28/98	980728-23	Black Bart side of ERB	6269.4	12.5	6.35	480	46.0	<	5.0
MW04-50	07/28/98	980728-24	Hank Monk side of ERB	6270.5	10.6	6.55	79	5.5	<	5.0
MW07-50	07/28/98	980728-25	North side of ERB	6280.3	10.0	6.36	275	26.0	<	5.0
Heavenly Valley Creek										
HVC-1	07/07/98	980707-06	Downstream of Pioneer		7.7	7.23	26	0.4	<	5.0
HVC-2	07/07/98	980707-07	250' upstream of Pond #2		8.7	7.12	30	0.5	<	5.0
HVC-3	07/07/98	980707-08	25' downstream of Johnson Blvd		8.4	7.00	30	0.5	<	5.0
HVC-4	07/07/98	980707-09	Effluent of drain from Lower Sho		12.0	7.21	129	0.6	<	5.0
HVC-5	07/07/98	80707-HVC	Effluent of drainage pipe along J							Dry
Treatment Plant Monitoring										
MW08-25	07/28/98	980728-26	SW side of Pond #1	6248.1	12.0	6.05	1042	51.5		58.1

TAHOE BASIN MONITORING

08/06/98

Site	Date	TotalP mg/L	PO4-P mg/L	TKN mg/L	NH3-N mg/L	NO2-N mg/L	NO3-N mg/L	Total N mg/L
Buried Sludge Monitoring								
MW11	07/28/98	0.032		0.424	< 0.020	< 0.010	0.272	0.706
MW12	07/28/98	0.020		0.277	0.020	< 0.010	0.329	0.616
MW13	07/28/98	0.063		0.864	< 0.020	0.070	6.930	7.864
ERB Monitoring								
CONTROL	07/28/98				0.047	< 0.010	2.700	2.710
MW01.5	07/28/98				0.024	< 0.010	0.696	0.706
MW02-50	07/28/98				0.022	< 0.010	12.600	12.610
MW03-50	07/28/98				0.032	< 0.010	9.850	9.860
MW04-50	07/28/98				< 0.020	< 0.010	0.051	0.061
MW07-50	07/28/98				< 0.020	< 0.010	0.562	0.572
Heavenly Valley Creek								
HVC-1	07/07/98	0.076		0.217	0.020	< 0.010	0.046	0.273
HVC-2	07/07/98	0.034		0.237	0.027	< 0.010	0.024	0.271
HVC-3	07/07/98	0.042		0.235	< 0.020	< 0.010	0.014	0.259
HVC-4	07/07/98	0.144		0.378	0.024	< 0.010	0.035	0.423
HVC-5	07/07/98							0.000
Treatment Plant Monitoring								
MW08-25	07/28/98	0.580		11.200	9.780	0.047	< 0.010	11.257

ALPINE COUNTY MONITORING

08/03/98

Site	Date	ID	Location	Temp C	pH	EC umhos	DO mg/L	Alk mg/L	TDS mg/L	SS mg/L	Turb NTU	Cl mg/L	SO4 mg/L
Alpine Monitoring Wells													
ACMW-01AW	07/21/98	980721-14	Main Dam	11.2	6.41	108		42	75		1.7	1.8	
ACMW-01BE	07/21/98	980721-15	Secondary Dam	10.3	6.40	89		51	71		2.5	0.7	
ACMW-02N	07/21/98	980721-16	Access Gate	14.0	6.45	134		60	89		.8	3.1	
ACMW-02S	07/21/98	980721-17	Access Gate	15.3	5.68	95		44	72		.83	1.1	
ACMW-03	07/21/98	980721-18	HWY 88	14.6	5.79	182		76	115		3.1	4.0	
ACMW-04W	07/21/98	980721-19	Gansberg	13.4	5.88	213		50	147		14	14.5	
ACMW-06N	07/21/98	980721-20	Celio	11.9	6.69	725		267	446		16	56.3	
ACMW-06S	07/21/98	980721-21	Celio	13.6	9.28	534		214	298		1.5	74.2	
Groundwaters													
GW-03	07/07/98	980707-16	Smith/Springmeyer	17.9	7.21	308		129	229			1.2	
GW-04	07/07/98	980707-17	Celio	15.8	7.45	265		117	204			3.0	
GW-05	07/07/98	980707-18	Neddenriep	14.2	6.50	285		62	182			29.5	
GW-07	07/07/98	980707-19	Gansberg	11.9	6.61	117		54	95			0.9	
GW-08	07/07/98	980707-20	Arant	13.8	6.40	268		57	169			25.4	
GW-11	07/07/98	980707-21	Diamond Val. School	25.0	6.53	110		54	93			0.9	
GW-14	07/07/98	980707-22	Sierra Pines	14.7	6.73	112		53	95			0.8	
Reservoirs													
HPR	07/14/98	980714-16	Harvey Place Reservoir	21.5	7.77	438	7.10	105	226	2.20	2.2	47.2	16.6
ICR	07/14/98	980714-17	Indian Creek Reservoir	20.3	9.47	114	10.20	41	65	2.84	2.1	1.1	2.6
Surfacewaters: Carson R													
SW-01	07/14/98	980714-08	Carson R Woodfords	8.9	6.72	41	10.60	21	34	5.07	1.6	0.5	2.3
SW-05	07/14/98	980714-12	Carson R Paynesville	12.0	7.15	53	11.10	21	41	5.57	1.7	0.5	2.3
SW-06	07/14/98	980714-13	Carson R Stateline	16.3	7.26	63	10.10	23	43	5.56	1.9	0.6	2.4
SW-07	07/14/98	980714-14	Fredericksburg Ditch	17.0	7.04	144	9.00	60	114	6.39	3.4	5.9	4.0
SW-08	07/14/98	980714-15	Irrigation Ditch	18.2	7.42	105	9.10	47	84	14.10	2.6	1.5	2.6
Surfacewaters: Indian Cr													
SW-02	07/14/98	980714-09	Indian Cr Upper	13.5	7.76	107	9.10	54	86	2.39	1.95	0.7	3.0
SW-03	07/14/98	980714-10	Indian Cr Mid	15.2	7.24	114	9.85	56	95	4.04	3	1.7	3.3
SW-04	07/14/98	980714-11	Indian Cr Lower	15.2	7.10	110	7.35	55	99	14.60	4.2	1.3	4.4

ALPINE COUNTY MONITORING

08/03/98

Site	Date	Total P mg/L	PO4-P mg/L	TKN mg/L	NH3-N mg/L	NO2-N mg/L	NO3-N mg/L	Total N mg/L	MBAS mg/L
Alpine Monitoring Wells									
ACMW-01A	07/21/98	0.026		0.346	< 0.020	< 0.010	0.084	0.440	
ACMW-01B	07/21/98	0.022		0.282	< 0.020	< 0.010	0.151	0.443	
ACMW-02N	07/21/98	0.022		0.264	< 0.020	< 0.010	0.152	0.426	
ACMW-02S	07/21/98	0.034		0.294	< 0.020	< 0.010	0.067	0.371	
ACMW-03	07/21/98	0.076		0.315	< 0.020	< 0.010	0.295	0.620	
ACMW-04W	07/21/98	0.082		1.040	0.071	< 0.010	4.160	5.210	
ACMW-06N	07/21/98	0.270		0.393	0.050	< 0.010	< 0.010	0.413	
ACMW-06S	07/21/98	0.024		0.441	0.207	< 0.010	0.054	0.505	
Groundwaters									
GW-03	07/07/98	0.035		0.261	< 0.020	< 0.010	0.676	0.947	
GW-04	07/07/98	0.062		0.222	< 0.020	< 0.010	0.776	1.008	
GW-05	07/07/98	0.030		0.260	< 0.020	< 0.010	2.830	3.100	
GW-07	07/07/98	0.074		0.100	< 0.020	< 0.010	0.690	0.800	
GW-08	07/07/98	0.054		0.157	< 0.020	< 0.010	5.000	5.167	
GW-11	07/07/98	0.018		0.131	< 0.020	< 0.010	0.436	0.577	
GW-14	07/07/98	0.060		0.308	< 0.020	< 0.010	0.417	0.735	
Reservoirs									
HPR	07/14/98	2.070	2.220	12.600	10.600	0.311	1.424	14.335	
ICR	07/14/98	0.034	< 0.010	0.667	0.020	< 0.010	0.010	0.687	< 0.025
Surfacewaters: Carson R									
SW-01	07/14/98	0.024	0.010	0.103	0.020	< 0.010	0.010	0.123	
SW-05	07/14/98	0.024	0.010	0.067	< 0.020	< 0.010	0.010	0.087	
SW-06	07/14/98	0.030	0.010	0.142	0.026	< 0.010	0.012	0.164	
SW-07	07/14/98	0.132	0.074	0.726	0.030	0.010	0.130	0.866	
SW-08	07/14/98	0.048	0.016	0.284	0.022	< 0.010	0.174	0.468	
Surfacewaters: Indian Cr									
SW-02	07/14/98	0.040	0.018	0.295	0.021	< 0.010	0.010	0.315	
SW-03	07/14/98	0.080	0.046	0.303	0.020	< 0.010	0.010	0.323	
SW-04	07/14/98	0.132	0.048	0.658	0.020	< 0.010	< 0.010	0.678	

ALPINE COUNTY MONITORING

08/03/98

Site	Date	COD mg/L	BOD mg/L	O & G mg/L	Boron mg/L	Ca mg/L	Mg mg/L	Na mg/L	K mg/L	SAR	Exch Na %	Hardness mg/L	Water Level MSL or Ft
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Alpine Monitoring Wells

ACMW-01A	07/21/98												5483.5
ACMW-01B	07/21/98												5495.3
ACMW-02N	07/21/98												5460.7
ACMW-02S	07/21/98												5463.6
ACMW-03	07/21/98												5042.2
ACMW-04W	07/21/98												4907.2
ACMW-06N	07/21/98												5215.1
ACMW-06S	07/21/98												5204.5

Groundwaters

GW-03	07/07/98												
GW-04	07/07/98												
GW-05	07/07/98												
GW-07	07/07/98												
GW-08	07/07/98												
GW-11	07/07/98												
GW-14	07/07/98												

Reservoirs

HPR	07/14/98	20	3		0.18	15.6	3.6	41.5	8.6	2.46	58.2		46.9
ICR	07/14/98	13	2		0.01	10.1	1.9	5.6	1.8	0.42	25.7		

Surfacewaters: Carson R

SW-01	07/14/98		1	<	1		0.01	4.3	1.3	1.8	0.8	0.19	18.2
SW-05	07/14/98		1	<	1	<	0.01	4.7	1.4	2.0	0.9	0.21	18.9
SW-06	07/14/98		1	<	1		0.02	5.1	1.5	2.1	1.0	0.21	18.9
SW-07	07/14/98		2	<	1		0.03	12.5	3.2	10.7	3.6	0.70	32.2
SW-08	07/14/98		1	<	1		0.01	10.0	2.4	7.1	2.1	0.52	29.1

Surfacewaters: Indian Cr

SW-02	07/14/98		1	<	1		0.01	11.9	3.1	5.2	2.0	0.35	20.2
SW-03	07/14/98		1	<	1		0.01	12.3	3.2	5.9	2.0	0.39	21.8
SW-04	07/14/98		2	<	1		0.01	13.1	3.6	4.5	2.1	0.28	16.3

**ALPINE COUNTY
BACTERIOLOGICAL MONITORING**

08/03/98

Alpine Monitoring Wells

Site	Date		Total Coliform MPN/100mL		Fecal Coliform MPN/100mL		Fecal Streptococci MPN/100mLL
ACMW-01A	07/21/98		23	<	1.1		
ACMW-01B	07/21/98	<	1.1	<	1.1		
ACMW-02N	07/21/98	<	1.1	<	1.1		
ACMW-02S	07/21/98		23	<	1.1		
ACMW-03	07/21/98		23	<	1.1		
ACMW-04W	07/21/98	>	23		1.1		
ACMW-06N	07/21/98	<	1.1	<	1.1		
ACMW-06S	07/21/98		3.6	<	1.1		

Groundwaters

Site	Date		Total Coliform MPN/100mL		Fecal Coliform MPN/100mL		Fecal Streptococci MPN/100mLL
GW-03	07/07/98	<	1.1	<	1.1		
GW-04	07/07/98		5.1	<	1.1		
GW-05	07/07/98	<	1.1	<	1.1		
GW-07	07/07/98		2.2	<	1.1		
GW-08	07/07/98	<	1.1	<	1.1		
GW-11	07/07/98	<	1.1	<	1.1		
GW-14	07/07/98	<	1.1	<	1.1		

Reservoirs

Site	Date		Total Coliform MPN/100mL		Fecal Coliform MPN/100mL		Fecal Streptococci MPN/100mLL
HPR	07/14/98		2		2		
ICR	07/14/98	<	2	<	2		2

Surfacewaters: Carson R

Site	Date		Total Coliform MPN/100mL		Fecal Coliform MPN/100mL		Fecal Streptococci MPN/100mLL
SW-01	07/14/98	<	30	<	30		
SW-05	07/14/98		40		40		
SW-06	07/14/98		90	<	30		
SW-07	07/14/98		4600		2400		
SW-08	07/14/98		2400		930		

Surfacewaters: Indian Cr

Site	Date		Total Coliform MPN/100mL		Fecal Coliform MPN/100mL		Fecal Streptococci MPN/100mLL
SW-02	07/14/98		230		230		
SW-03	07/14/98		430		230		
SW-04	07/14/98		2400		930		

**ALPINE COUNTY
BLUE GREEN ALGAE**

ID#	Site	Location	Date	Colonies #	Colony # Cells	Filaments #	Filaments # Cells	Filaments #	Filament Length	Single Cells, #
980505-19	SW-01	Carson R Woodfords	05/05/98	0	0	0	0	0	0	0
980505-20	SW-02	Indian Cr Upper	05/05/98	0	0	0	0	0	0	0
980505-21	SW-03	Indian Cr Mid	05/05/98	0	0	0	0	0	0	0
980505-22	SW-04	Indian Cr Lower	05/05/98	0	0	0	0	0	0	0
980505-23	SW-05	Carson R Paynesville	05/05/98	0	0	0	0	0	0	0
980505-24	SW-06	Carson R Stateline	05/05/98	0	0	0	0	0	0	0
980505-25	SW-08	Irrigation Ditch	05/05/98	0	0	0	0	0	0	0
980505-26	SW-09	Carson R Dressler Ln	05/05/98	0	0	0	0	0	0	0
980505-27	SW-10	Indian Cr at Bruns	05/05/98	0	0	0	0	0	0	0
980602-06	SW-01	Carson R Woodfords	06/02/98	0	0	0	0	0	0	0
980602-07	SW-02	Indian Cr Upper	06/02/98	0	0	0	0	0	0	0
980602-08	SW-03	Indian Cr Mid	06/02/98	0	0	0	0	0	0	0
980602-09	SW-04	Indian Cr Lower	06/02/98	0	0	0	0	0	0	0
980602-10	SW-05	Carson R Paynesville	06/02/98	0	0	0	0	0	0	0
980602-11	SW-06	Carson R Stateline	06/02/98	0	0	0	0	0	0	0
980602-12	SW-08	Irrigation Ditch	06/02/98	0	0	0	0	0	0	0
980714-08	SW-01	Carson R Woodfords	07/14/98	0	0	0	0	0	0	0
980714-09	SW-02	Indian Cr Upper	07/14/98	0	0	0	0	0	0	0
980714-10	SW-03	Indian Cr Mid	07/14/98	0	0	0	0	0	0	0
980714-11	SW-04	Indian Cr Lower	07/14/98	0	0	0	0	0	0	0
980714-12	SW-05	Carson R Paynesville	07/14/98	0	0	0	0	0	0	0
980714-13	SW-06	Carson R Stateline	07/14/98	0	0	0	0	0	0	0
980714-14	SW-07	Fredericksburg Ditch	07/14/98	0	0	0	0	0	0	0
980714-15	SW-08	Irrigation Ditch	07/14/98	0	0	0	0	0	0	0

ALPINE COUNTY SOILS

08/07/98

Site	Date	Location	Type	pH	EC mmho	%Sat	TKN mg/Kg	NO3-N mg/L	Total P mg/Kg	Exch P mg/L
S2a	05/01/98	Celio	KT	8.04	0.94	70.2	2,230	4.7		6.5
S3a	05/01/98	Hall	SMB	6.56	0.41	41.0	1,570	6.5		16.9
S4a	05/01/98	Gansberg	DI	6.12	0.48	36.4	1,550	5.6		10.9
S5a	05/01/98	Gansberg	HRB	6.63	1.14	34.6	1,220	29.5		47.6
S6a	05/01/98	Neddenriep	DWB	5.43	0.22	40.6	1,280	1.3		40.1
S7a	05/01/98	Bruns	JaC	6.03	0.17	37.4	1,350	4.6		3.7
S8a	05/01/98	Dressler	SOD	6.19	0.08	15.8	175	0.9		5.2
S3a	06/05/98	Hall	SMB	6.37	0.61	35.2	1,400	1.5		15.3
S4a	06/05/98	Gansberg	DI	7.11	0.58	36.9	1,510	2.2		14.8
S5a	06/05/98	Gansberg	HRB	6.06	0.57	31.1	952	11.8		11.4
S7a	06/05/98	Bruns	JaC	6.35	0.11	37.4	1,320	5.0		6.0
S8a	06/05/98	Dressler	SOD	6.35	0.10	17.2	213	1.5		10.4
S2a	06/09/98	Celio	KT	8.25	0.96	63.5	2,020	1.0		4.6
S6a	06/09/98	Neddenriep	DWB	6.41	0.37	48.1	1,630	9.3		25.6

Site	Date	Cl mg/L	SO4 mg/Kg	CEC meq/100g	Cu mg/Kg	Mo mg/Kg	Ca mg/L	Mg mg/L	Na mg/L	SAR	%Na	
S2a	05/01/98		43	28.8	13.0	<	1.0	50.5	17.7	118.0	3.64	3.9
S3a	05/01/98		2	17.0	19.0	<	1.0	41.0	4.0	24.4	0.97	0.2
S4a	05/01/98		3	17.2	26.0	<	1.0	27.1	6.4	44.1	1.98	1.6
S5a	05/01/98		7	10.9	17.0	<	1.0	116.7	28.4	44.2	0.95	0.1
S6a	05/01/98		15	11.4	24.0	<	1.0	5.0	0.5	29.9	3.39	3.5
S7a	05/01/98		0	10.9	25.0	<	1.0	14.8	2.9	10.8	0.67	-0.3
S8a	05/01/98	<	1	5.8	13.0	<	1.0	3.0	0.7	12.2	1.64	1.1
S3a	06/05/98		26					50.7	14.9	45.5	1.44	0.8
S4a	06/05/98		5		34.0			56.4	11.9	55.8	1.76	1.3
S5a	06/05/98		3		22.0			55.8	3.9	37.3	1.30	0.6
S7a	06/05/98		10		38.0			9.0	2.4	10.0	0.76	-0.2
S8a	06/05/98	<	1		17.0			5.8	2.3	11.5	1.03	0.2
S2a	06/09/98		51		28.0			42.8	19.4	139.0	4.42	4.9
S6a	06/09/98		4		96.0			7.7	1.5	63.0	5.44	6.2

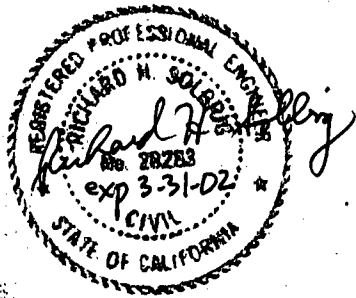
Site	Location	TDS		Cl ⁻		TKN		NO ₃ -N		Total N		Total P		SO ₄		Boron		Exch Na %	
		Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence
SW-01	Carson River, Woodfords	55		1.0		0.13	✓	0.02		0.15	✓	0.02	✓	2.0	✓	0.02	✓	20	
SW-06	Carson River, Stateline	70		2.5		0.22	✓	0.03		0.25	✓	0.03	✓	2.0	✓	0.02		20	✓
SW-02	Indian Creek, Upper	100		6.0						0.30		0.03		8.0		0.25		30	
SW-03	Indian Creek, Mid	100		6.0						0.30	✓	0.03	✓	8.0		0.25		30	
SW-04	Indian Creek, Lower	100		6.0						0.30	✓	0.03	✓	8.0		0.25		30	
SW-10	Indian Creek, Stateline																		

June soil and Blue Green Algae results are not included; they will be sent to you when they are completed.

Certification

I hereby certify that the enclosed monitoring report was prepared under my direct supervision and that I am a duly Registered Engineer under the laws of the State of California.

Sincerely,



Richard Solbrig,
Assistant Manager/Engineer

Enclosures:

1.

June Monthly Report	Pages
Wastewater Treatment plant	2
Permit Compliance Record	1
Export pipeline inspection	1
Sample site locations	2
Monitoring wells (ERB) and Heavenly Valley Creek (HVC)	2
Alpine County Surfacewaters, Groundwaters and Reservoirs	4
Alpine County Blue Green Algae	
Alpine County soils,	
Total number of pages:	12

- cc: Calif. Dept. of Health Services, ODW - Jess Morehouse
El Dorado Co. Dept. of Environmental Health - Virginia Huber
Nevada Division of Environmental Protection - Wendel McCurry
Alpine County Health Department - Dr. Richard Botto
Alpine County Health Department - Jim Goodloe
Alpine County Board of Supervisors
EPA - Permit and Compliance Branch, W-5 - Bill Pierce
Desert Research Group (Alpine County Consultants) - Bill Albright
STPUD Board of Directors
STPUD General Manager / District Engineer - Robert G. Baer
STPUD Manager of Operations - Ross Johnson
STPUD Laboratory Director - Terry Powers
STPUD Manager of Alpine County Operations - Hal Bird

**SOUTH TAHOE PUBLIC UTILITY DISTRICT
WASTEWATER TREATMENT PLANT MONTHLY REPORT**

07/13/98
10:18:46

JUNE 1998

Date	Day	FLOW MGD			PRECIP Inch	Type	D.O. mg/L Fin	COD mg/L		BOD mg/L		SS mg/L		
		Inf	2-Hr Peak Inf	Eff				Pond Return	Pond Inf	Raw	Fin	Raw	Fin	Raw
06/01/98	Mon	4.24	5.2	4.69			6.28	366	50.9	160	12.2	125	11.9	
06/02/98	Tue	4.21	6.2	4.40			6.65	331						
06/03/98	Wed	4.21	5.1	3.95			7.03	347						
06/04/98	Thu	4.18	6.8	3.86			7.18	396						
06/05/98	Fri	4.37	6.7	4.13			6.52	333						
06/06/98	Sat	5.31	6.8	5.34	1.10	Rain	6.49	344	38.0	154	9.7	141	9.6	
06/07/98	Sun	5.05	6.9	5.09			6.29	324						
06/08/98	Mon	4.79	7.0	4.93	0.04	Rain	6.75	336						
06/09/98	Tue	4.58	6.8	4.89			6.58	292						
06/10/98	Wed	4.72	7.2	4.93	0.19	Rain	6.46	285	35.8	114	6.7	122	5.9	
06/11/98	Thu	5.00	7.6	4.93	0.22	Rain	6.94	382						
06/12/98	Fri	4.82	6.6	4.91	0.40	Rain	7.09	356						
06/13/98	Sat	5.32	8.2	5.03			7.23	388	37.1	152	8.5	109	5.8	
06/14/98	Sun	5.22	8.4	4.95			6.16	349						
06/15/98	Mon	4.89	7.5	5.34			6.18	456	44.4	125	7.0	173	7.1	
06/16/98	Tue	4.82	6.0	4.65			6.46	310						
06/17/98	Wed	5.24	8.0	4.74			5.82	345						
06/18/98	Thu	4.87	7.4	4.58			6.33	363						
06/19/98	Fri	4.90	7.4	4.63			6.52	333						
06/20/98	Sat	5.34	7.9	5.21			5.46	350	41.0	139	6.4	155	4.7	
06/21/98	Sun	5.12	6.6	5.25			6.91	428						
06/22/98	Mon	4.77	6.8	4.71			6.87	370						
06/23/98	Tue	4.69	7.0	4.64			6.09	336						
06/24/98	Wed	4.61	6.2	4.40			5.82	352	30.8	155	6.1	124	2.3	
06/25/98	Thu	4.73	7.2	4.49			5.45	398						
06/26/98	Fri	4.82	7.4	4.97			5.15	366						
06/27/98	Sat	5.27	7.5	5.11			5.99	375	46.4	179	8.4	141	6.6	
06/28/98	Sun	5.10	8.0	5.33			5.34	405	23.7				7.7	
06/29/98	Mon	4.68	7.0	4.75			5.77	356	31.0	143	9.5	127	8.2	
06/30/98	Tue	4.67	7.4	4.57			6.62	370						
PERMIT MAX		7.7							300		45		60	
PERMIT MIN														
PERMIT AVE									60		30		30	
TOTAL		144.54	210.8	143.40		1.95	190.43	10742	379.1	1321	74.6	1217	69.9	
MAXIMUM		5.34	8.4	5.34		1.10	7.23	456	50.9	179	12.2	173	11.9	
MINIMUM		4.18	5.1	3.86		0.04	5.15	285	23.7	114	6.1	109	2.3	
AVERAGE		4.82	7.0	4.78		0.39	6.35	358	37.9	147	8.3	135	7.0	
# Tests		30	30	30	0	0	5	30	30	10	9	9	9	10

**SOUTH TAHOE PUBLIC UTILITY DISTRICT
WASTEWATER TREATMENT PLANT MONTHLY REPORT**

07/13/98

10:18:46

JUNE 1998

Date	Day	SETTLABLE SOLIDS mL/L		MBAS mg/L		pH Units		TURBIDITY NTU		Cl2 mg/L	FINAL COLIFORMS MPN/100 mL			TDS mg/L		ALKALINITY mg/L	
		Raw	Fin	Raw	Fin	Raw	Fin	Raw	Fin		Total	7day-	Median	Raw	Fin	Raw	Fin
06/01/98	Mon	9.5	< 0.1			7.42	7.57	6.10	5.76	<	2	<	2	234	216	151	129
06/02/98	Tue	8.5	< 0.1	3.41	0.118	7.35	7.49	5.90	8.49	<	2	<	2			151	125
06/03/98	Wed	9.0	< 0.1			7.40	7.52	4.60	8.28	<	2	<	2			152	124
06/04/98	Thu	9.0	< 0.1			7.41	7.50	4.45	7.48	<	2	<	2			150	126
06/05/98	Fri	8.5	< 0.1			7.41	7.42	5.15	8.28	<	2	<	2			148	130
06/06/98	Sat	10.0	< 0.1			7.21	7.34	4.50	6.87	<	2	<	2			147	127
06/07/98	Sun	9.5	< 0.1			7.44	7.47	4.20	6.06	<	2	<	2			152	126
06/08/98	Mon	9.0	< 0.1			7.42	7.32	4.30	6.06	<	2	<	2			147	121
06/09/98	Tue	9.5	< 0.1			7.46	7.80	4.70	6.37	<	2	<	2			144	121
06/10/98	Wed	7.0	< 0.1			7.42	7.45	3.70	6.16	<	2	<	2	221	206	141	119
06/11/98	Thu	7.5	< 0.1			7.36	7.32	2.85	5.05	<	2	<	2			141	118
06/12/98	Fri	9.5	< 0.1			7.56	7.45	2.90	5.15	<	2	<	2			139	118
06/13/98	Sat	13.0	< 0.1			7.33	7.22	3.50	5.35	<	2	<	2			142	114
06/14/98	Sun	8.5	< 0.1			7.36	7.61	2.80	4.85	<	2	<	2			152	128
06/15/98	Mon	16.0	< 0.1			7.47	7.69	3.55	3.74	<	2	<	2	233	210	153	131
06/16/98	Tue	9.0	< 0.1			7.42	7.61	3.60	3.97	<	2	<	2			148	129
06/17/98	Wed	10.5	< 0.1			7.49	7.62	2.50	4.38	<	2	<	2			145	129
06/18/98	Thu	9.5	< 0.1			7.44	7.49	2.25	3.77	<	2	<	2			146	132
06/19/98	Fri	9.0	< 0.1			7.40	7.52	2.05	5.30	<	2	<	2			150	132
06/20/98	Sat	10.0	< 0.1			7.34	7.33	2.00	6.42	<	2	<	2			149	131
06/21/98	Sun	10.0	< 0.1			7.40	7.50	2.20	4.28	<	2	<	2			153	138
06/22/98	Mon	9.5	< 0.1			7.69	7.61	2.05	4.79	<	2	<	2			155	135
06/23/98	Tue	10.0	< 0.1			7.38	7.58	1.80	3.97	<	2	<	2			152	136
06/24/98	Wed	11.0	< 0.1			7.53	7.75	1.60	4.59	<	2	<	2	221	213	151	136
06/25/98	Thu	10.0	< 0.1			7.50	7.66	1.60	4.89	<	2	<	2			147	134
06/26/98	Fri	9.5	< 0.1			7.43	7.44	1.50	5.81	<	2	<	2			152	137
06/27/98	Sat	10.5	< 0.1			7.28	7.66	3.10	4.28	<	2	<	2			155	141
06/28/98	Sun	10.0	< 0.1			7.40	7.64	3.70	3.16	<	2	<	2			160	146
06/29/98	Mon	9.0	< 0.1			7.41	7.66	3.80	3.36	<	2	<	2	227	218	157	144
06/30/98	Tue	10.0	< 0.1			7.52	7.58	3.05	3.06	<	2	<	2			155	145
PERMIT MAX			0.1		2.0		8.5	20			240		23				
PERMIT MIN							6.5										
PERMIT AVE					1.0			10									
TOTAL		291.5	3.0	3.41	0.118	222.65	225.82	100.00	159.98		58	58	1136	1063	4485	3902	
MAXIMUM		16.0	0.1	3.41	0.118	7.69	7.80	6.10	8.49		2	2	234	218	160	146	
MINIMUM		7.0	0	3.41	0.118	7.21	7.22	1.50	3.06		2	2	221	206	139	114	
AVERAGE		9.7	0.1	3.41	0.118	7.42	7.53	3.33	5.33		2	2	227	213	150	130	
# Tests		30	30	1	1	30	30	30	30		29	29	5	5	30	30	

**SOUTH TAHOE PUBLIC UTILITY DISTRICT
MEMORANDUM**

Date: June 30, 1998
To: Bob Baer, Diane Noble
From: Tim Rieger
Topic: Export Line Check



On June 23 & 24, 1998, Greg Schrempp and I conducted our monthly check of the District's export line from the treatment plant to station 564+06 near the Harvey Place reservoir.

Again due to the heavy runoff this season many wet areas were checked. However, nothing positive was found.

CC Terry Powers

SAMPLE LOCATIONS

TAHOE BASIN MONITORING WELLS

<u>Site</u>	<u>Location</u>
ERB	Emergency Retention Basin
CONTROL	North of Post Office
MW02-25, -50	Emergency Retention Basin, S side
MW03-25, -50	Emergency Retention Basin, S side
MW04-25, -50	Emergency Retention Basin, W side
MW07-25, -50	Emergency Retention Basin, N side
MW08-25, -50	Pond #1, SW corner
MW11	S.E. corner of wastewater treatment plant grounds
MW12	South of Emergency Pump Building, for buried sludge
MW13	Pond 2, along Heavenly Valley Creek, for buried sludge

HEAVENLY VALLEY CREEK

HVC-1	At Pioneer Trail
HVC-2	250 ft upstream of Pond #2
HVC-3	25 ft downstream of Johnson Blvd.
HVC-4	Effluent of drain pipe from Lower Shop area
HVC-5	Effluent of drainage pipe along Johnson Blvd, 10 feet upstream of Johnson Blvd.

ALPINE COUNTY MONITORING WELLS

<u>Site</u>	<u>Location</u>
ACMW-01AW	Below main dam at Harvey Place Reservoir
ACMW-01BE	Below auxiliary dam at Harvey Place Reservoir
ACMW-02, N&S	On dam access road at Diamond Valley Road
ACMW-03	Bruns ranch, east side of Highway 88
ACMW-04W	Gansberg ranch, west side of Highway 88
ACMW-05	Dressler ranch
ACMW-06, N&S	Celio ranch, on Diamond Valley Road

ALPINE SOILS

<u>Site</u>	<u>Ranch</u>
S2	Celio
S3	Hall
S4	Gansberg
S5	Gansberg
S6	Neddenriep
S7	Bruns
S8	Dressler

ALPINE GROUNDWATERS

<u>Site</u>	<u>Homeowner</u>
GW-01	Sagues
GW-03	Smith/Springmeyer
GW-04	Celio
GW-05	Neddenriep
GW-07	Gansberg, Jr.
GW-08	Arant
GW-11	Diamond Valley School
GW-14	Sierra Pines Store

ALPINE SURFACEWATERS

<u>Site</u>	<u>Location</u>
SW-01	Carson River, Woodfords
SW-02	Indian Creek, @ HWY 89
SW-03	Indian Creek, @ upper bridge
SW-04	Indian Creek, @ lower bridge
SW-05	Carson River, Paynesville
SW-06	Carson River, Stateline
SW-07	Fredericksberg Ditch, Stateline
SW-08	Irrigation Ditch along Carson River Road
SW-09	Carson River, Dressler Lane
SW-10	Indian Creek, @ Smith-Springmeyer Ranch

TAHOE BASIN MONITORING

07/13/98

Site	Date	ID	Location	Depth msl	Temp C	pH	EC umhos	Cl mg/L	COD mg/L	Comment
Buried Sludge Monitoring										
MW11	06/23/98	980623-17	Sludge Pond	6269.3	9.2	6.68	86	1.0	< 5.0	
MW12	06/23/98	980623-18	Sludge Pond	6266.9	9.1	6.28	214	3.2	< 5.0	
MW13	06/23/98	980623-19	Sludge Pond	6258.2	10.4	6.75	1051	5.6	24.0	
ERB Monitoring										
CONTROL	06/23/98	980623-10	At Post Office	6284.3	8.6	6.30	171	6.0	< 5.0	
MW01.5	06/23/98	980623-11	SW corner of ERB	6269.8	9.7	6.83	164	4.4	< 5.0	
MW02-50	06/23/98	980623-12	Black Bart side of ERB	6268.4	10.4	6.37	565	55.9	< 5.0	
MW03-50	06/23/98	980623-13	Black Bart side of ERB	6269.3	10.2	5.97	496	45.5	< 5.0	
MW04-50	06/23/98	980623-14	Hank Monk side of ERB	6271.6	8.6	5.93	81	5.6	< 5.0	
MW07-50	06/23/98	980623-15	North side of ERB	6280.6	8.6	6.32	273	27.5	< 5.0	
Heavenly Valley Creek										
HVC-1	06/09/98	980609-34	Downstream of Pioneer		8.9	6.98	38	1.0	5.0	
HVC-2	06/09/98	980609-35	250' upstream of Pond #2		13.9	6.45	36	1.1	< 5.0	
HVC-3	06/09/98	980609-36	25' downstream of Johnson Blvd		13.4	6.62	38	1.1	< 5.0	
HVC-4	06/09/98	980609-37	Effluent of drain from Lower Sho		13.0	6.68	111	0.9	< 5.0	
HVC-5	06/09/98	80609-HVC	Effluent of drainage pipe along J							Dry
Treatment Plant Monitoring										
MW08-25	06/23/98	980623-16	SW side of Pond #1	6248.9	9.9	6.16	1008	47.4	61.8	

TAHOE BASIN MONITORING

07/13/98

Site	Date	TotalP mg/L	PO4-P mg/L	TKN mg/L	NH3-N mg/L	NO2-N mg/L	NO3-N mg/L	Total N mg/L
Buried Sludge Monitoring								
MW11	06/23/98	0.044		0.135	0.034	< 0.010	0.350	0.495
MW12	06/23/98	0.032		0.307	0.103	< 0.010	0.308	0.625
MW13	06/23/98	0.036		1.150	0.024	0.058	12.400	13.608
ERB Monitoring								
CONTROL	06/23/98				0.057	< 0.010	2.490	2.500
MW01-5	06/23/98				0.040	< 0.010	0.070	0.080
MW02-50	06/23/98				0.035	< 0.010	12.700	12.710
MW03-50	06/23/98				0.033	< 0.010	11.300	11.310
MW04-50	06/23/98				0.046	< 0.010	0.063	0.073
MW07-50	06/23/98				0.034	< 0.010	0.576	0.586
Heavenly Valley Creek								
HVC-1	06/09/98	0.090		0.214	< 0.020	< 0.010	0.040	0.264
HVC-2	06/09/98	0.028		0.231	0.022	< 0.010	0.013	0.254
HVC-3	06/09/98	0.032		0.260	< 0.020	< 0.010	0.013	0.283
HVC-4	06/09/98	0.100		0.284	0.030	< 0.010	0.063	0.357
HVC-5	06/09/98							0.000
Treatment Plant Monitoring								
MW08-25	06/23/98			10.700	8.040	0.043	< 0.010	10.753

ALPINE COUNTY MONITORING

06/26/98

Site	Date	ID	Location	Temp C	pH	EC umhos	DO mg/L	Alk mg/L	TDS mg/L	SS mg/L	Turb NTU	Cl mg/L	SO4 mg/L
Alpine Monitoring Wells													
ACMW-01AW	06/17/98	980617-07	Main Dam	10.4	6.05	118		53	81			3.3	
ACMW-01BE	06/17/98	980617-08	Secondary Dam	10.2	5.92	140		65	97			1.3	
ACMW-02N	06/17/98	980617-09	Access Gate	11.7	6.47	95		40	95			2.8	
ACMW-02S	06/17/98	980617-10	Access Gate	12.4	6.04	142		68	70			1.8	
ACMW-03	06/17/98	980617-11	HWY 88	11.6	5.85	122		55	92			2.2	
ACMW-04W	06/17/98	980617-12	Gansberg	11.8	5.64	213		53	144			16.5	
ACMW-06N	06/17/98	980617-13	Celio	10.7	6.67	710		271	440			56.7	
ACMW-06S	06/17/98	980617-14	Celio	11.1	9.70	533		148	312			76.0	
Groundwaters													
GW-01	06/09/98	980609-12	Cohen	10.8	7.22	148							
GW-03	06/09/98	980609-13	Smith/Springmeyer	14.6	7.33	296		128	227			1.6	
GW-04	06/09/98	980609-14	Celio	14.0	7.26	256		116	196			3.0	
GW-05	06/09/98	980609-15	Neddenriep	12.6	6.18	288		61	190			30.8	
GW-07	06/09/98	980609-16	Gansberg	11.6	6.00	120		53	100			1.3	
GW-11	06/09/98	980609-17	Diamond Val. School	16.7	5.94	90		44	86			0.7	
GW-14	06/09/98	980609-18	Sierra Pines	11.6	6.31	109		51	103			1.2	
GW-08	06/17/98	980617-16	Arant	11.9	6.22	275		58	171			27.9	
Reservoirs													
HPR	06/02/98	980602-13	Harvey Place Reservoir	14.4	7.33	442	8.40	111	224	6.28	3.6	46.4	18.0
ICR	06/02/98	980602-14	Indian Creek Reservoir	15.7	8.27	89	5.40	40	67	7.37	2.9	1.1	2.4
Surfacewaters: Carson R													
SW-01	06/02/98	980602-06	Carson R Woodfords	4.5	6.69	41	10.00	20	43	27.90	4.7	0.6	2.5
SW-05	06/02/98	980602-10	Carson R Paynesville	6.4	6.81	43	6.30	21	41	20.20	3.8	0.5	2.5
SW-06	06/02/98	980602-11	Carson R Stateline	9.4	6.80	45	6.00	21	45	21.60	4.5	0.6	2.5
SW-08	06/02/98	980602-12	Irrigation Ditch	13.2	6.30	69	4.90	32	83	13.50	1.9	0.9	4.8
Surfacewaters: Indian Cr													
SW-02	06/02/98	980602-07	Indian Cr Upper	10.6	7.45	99	8.00	49	79	3.72	1.8	0.5	2.4
SW-03	06/02/98	980602-08	Indian Cr Mid	12.4	6.90	118	8.30	57	97	4.04	2.9	1.7	2.8
SW-04	06/02/98	980602-09	Indian Cr Lower	11.0	6.99	102	8.30	48	84	6.22	2.3	1.4	3.0

ALPINE COUNTY MONITORING

06/26/98

Site	Date	TotalP mg/L	PO4-P mg/L	TKN mg/L	NH3-N mg/L	NO2-N mg/L	NO3-N mg/L	Total N mg/L
Alpine Monitoring Wells								
ACMW-01A	06/17/98	0.022		0.146	< 0.020	< 0.010	0.355	0.511
ACMW-01B	06/17/98	0.028	<	0.100	< 0.020	< 0.010	1.200	1.310
ACMW-02N	06/17/98	0.020	<	0.100	< 0.020	0.010	0.093	0.203
ACMW-02S	06/17/98	0.020	<	0.100	< 0.020	< 0.010	0.645	0.755
ACMW-03	06/17/98	0.090		0.281	< 0.020	< 0.010	0.571	0.862
ACMW-04W	06/17/98	0.020		0.167	< 0.020	0.010	3.270	3.447
ACMW-06N	06/17/98	0.283		0.579	0.037	< 0.010	< 0.010	0.599
ACMW-06S	06/17/98	0.034		0.635	0.124	0.010	0.075	0.720
Groundwaters								
GW-01	06/09/98					< 0.010		0.010
GW-03	06/09/98	0.036	<	0.100	0.020	< 0.010	0.693	0.803
GW-04	06/09/98	0.060	<	0.100	< 0.020	< 0.010	0.786	0.896
GW-05	06/09/98	0.026	<	0.100	< 0.020	< 0.010	3.030	3.140
GW-07	06/09/98	0.086	<	0.100	< 0.020	< 0.010	0.922	1.032
GW-11	06/09/98	0.020	<	0.100	< 0.020	< 0.010	0.471	0.581
GW-14	06/09/98	0.057	<	0.100	< 0.020	< 0.010	0.423	0.533
GW-08	06/17/98	0.042		0.526	< 0.020	< 0.010	5.010	5.546
Reservoirs								
HPR	06/02/98	2.220	2.160	19.800	14.600	0.131	1.320	21.251
ICR	06/02/98	0.032	< 0.010	0.541	0.029	< 0.010	< 0.010	0.561
Surfacewaters: Carson R								
SW-01	06/02/98	0.054	0.010	0.192	< 0.020	< 0.010	0.012	0.214
SW-05	06/02/98	0.054	0.010	0.241	< 0.020	< 0.010	0.011	0.262
SW-06	06/02/98	0.046	0.010	0.270	< 0.020	< 0.010	0.010	0.290
SW-08	06/02/98	0.058	0.012	0.778	< 0.020	< 0.010	0.014	0.802
Surfacewaters: Indian Cr								
SW-02	06/02/98	0.028	0.010	0.257	< 0.020	< 0.010	< 0.010	0.277
SW-03	06/02/98	0.078	0.040	0.382	< 0.020	< 0.010	0.017	0.409
SW-04	06/02/98	0.086	0.024	0.510	< 0.020	< 0.010	< 0.010	0.530

ALPINE COUNTY MONITORING

06/26/98

Site	Date	COD mg/L	BOD mg/L	O & G mg/L	Boron mg/L	Ca mg/L	Mg mg/L	Na mg/L	K mg/L	SAR	Exch Na %	Hardness mg/L	Water Level MSL or Ft
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Alpine Monitoring Wells

ACMW-01A	06/17/98												5484.4
ACMW-01B	06/17/98												5495.9
ACMW-02N	06/17/98												5460.6
ACMW-02S	06/17/98												5462.8
ACMW-03	06/17/98												5044.0
ACMW-04W	06/17/98												4908.1
ACMW-06N	06/17/98												5216.0
ACMW-06S	06/17/98												5205.1

Groundwaters

GW-01	06/09/98												
GW-03	06/09/98												
GW-04	06/09/98												
GW-05	06/09/98												
GW-07	06/09/98												
GW-11	06/09/98												
GW-14	06/09/98												
GW-08	06/17/98												

Reservoirs

HPR	06/02/98	20	5		0.17	14.1	2.8	40.7	8.0	2.59	60.8		56.5
ICR	06/02/98	9	2		0.01	9.1	1.9	5.3	1.8	0.42	26.0		

Surfacewaters: Carson R

SW-01	06/02/98		1	<	1	<	0.01	4.4	1.3	1.9	0.7	0.21	19.7
SW-05	06/02/98		1	<	1	<	0.01	4.4	1.1	2.1	1.0	0.23	21.6
SW-06	06/02/98		1	<	1	<	0.01	4.6	1.1	2.2	0.9	0.24	22.0
SW-08	06/02/98		1	<	1	<	0.01	6.4	1.7	4.2	2.1	0.38	26.4

Surfacewaters: Indian Cr

SW-02	06/02/98		1	<	1	<	0.01	10.0	2.3	5.8	1.3	0.43	26.0
SW-03	06/02/98		1	<	1	<	0.01	11.6	2.4	7.4	1.7	0.52	28.1
SW-04	06/02/98		1	<	1	<	0.01	10.2	2.5	5.1	1.7	0.37	22.8

**ALPINE COUNTY
BACTERIOLOGICAL MONITORING**

06/26/98

Alpine Monitoring Wells

Site	Date		Total Coliform MPN/100mL		Fecal Coliform MPN/100mL		Fecal Streptococci MPN/100mLL
ACMW-01A	06/17/98		1.1	<	1.1		
ACMW-01B	06/17/98	<	1.1	<	1.1		
ACMW-02N	06/17/98		5.1	<	1.1		
ACMW-02S	06/17/98	<	1.1	<	1.1		
ACMW-03	06/17/98		12		1.1		
ACMW-04W	06/17/98	>	23	<	1.1		
ACMW-06N	06/17/98		1.1	<	1.1		
ACMW-06S	06/17/98		9.2	<	1.1		

Groundwaters

Site	Date		Total Coliform MPN/100mL		Fecal Coliform MPN/100mL		Fecal Streptococci MPN/100mLL
GW-01	06/09/98						
GW-03	06/09/98	<	1.1	<	1.1		
GW-04	06/09/98	<	1.1	<	1.1		
GW-05	06/09/98		1.1	<	1.1		
GW-07	06/09/98		1.1	<	1.1		
GW-11	06/09/98	<	1.1	<	1.1		
GW-14	06/09/98	<	1.1	<	1.1		
GW-08	06/17/98		1.1	<	1.1		

Reservoirs

Site	Date		Total Coliform MPN/100mL		Fecal Coliform MPN/100mL		Fecal Streptococci MPN/100mLL
HPR	06/02/98		13		2		13
ICR	06/02/98		110	<	2		23

Surfacewaters: Carson R

Site	Date		Total Coliform MPN/100mL		Fecal Coliform MPN/100mL		Fecal Streptococci MPN/100mLL
SW-01	06/02/98		230		40		
SW-05	06/02/98		90	<	30		
SW-06	06/02/98		930		110		
SW-08	06/02/98		1500		40		

Surfacewaters: Indian Cr

Site	Date		Total Coliform MPN/100mL		Fecal Coliform MPN/100mL		Fecal Streptococci MPN/100mLL
SW-02	06/02/98		4600		2400		
SW-03	06/02/98		750		430		
SW-04	06/02/98		2400		2400		

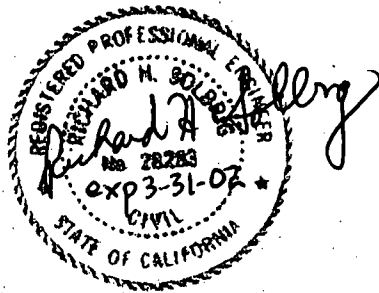
Site	Location	TDS		Cl ⁻		TKN		NO ₃ -N		Total N		Total P		SO ₄		Boron		Exch Na %	
		Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence
SW-01	Carson River, Woodfords	55		1.0		0.13	✓	0.02		0.15	✓	0.02	✓	2.0	✓	0.02	✓	20	
SW-06	Carson River, Stateline	70		2.5		0.22	✓	0.03		0.25	✓	0.03	✓	2.0	✓	0.02		20	✓
SW-02	Indian Creek, Upper	100		6.0						0.30	✓	0.03		8.0		0.25		30	
SW-03	Indian Creek, Mid	100		6.0						0.30	✓	0.03	✓	8.0		0.25		30	
SW-04	Indian Creek, Lower	100		6.0						0.30	✓	0.03	✓	8.0		0.25		30	
SW-10	Indian Creek, Stateline	100	✓	6.0						0.30	✓	0.03	✓	8.0		0.25		30	

Soil analysis for April are included. May soil and Blue Green Algae results are not included; they will be sent to you when they are completed.

Certification

I hereby certify that the enclosed monitoring report was prepared under my direct supervision and that I am a duly Registered Engineer under the laws of the State of California.

Sincerely,



Richard Solbrig,
Assistant Manager/Engineer

Enclosures:

1.

May Monthly Report	Pages
Wastewater Treatment plant	2
Permit Compliance Record	1
Export pipeline inspection	1
Sample site locations	2
Monitoring wells (ERB) and Heavenly Valley Creek (HVC)	2
Alpine County Surfacewaters, Groundwaters and Reservoirs	4
Alpine County Blue Green Algae	
Alpine County soils, April	1
Total number of pages:	13

cc: Calif. Dept. of Health Services, ODW - Jess Morehouse
El Dorado Co. Dept. of Environmental Health - Virginia Huber
Nevada Division of Environmental Protection - Wendel McCurry
Alpine County Health Department - Dr. Richard Botto
Alpine County Health Department - Jim Goodloe
Alpine County Board of Supervisors
EPA - Permit and Compliance Branch, W-5 - Bill Pierce
Desert Research Group (Alpine County Consultants) - Bill Albright
STPUD Board of Directors
STPUD General Manager / District Engineer - Robert G. Baer
STPUD Manager of Operations - Ross Johnson
STPUD Laboratory Director - Terry Powers
STPUD Manager of Alpine County Operations - Hal Bird

**SOUTH TAHOE PUBLIC UTILITY DISTRICT
WASTEWATER TREATMENT PLANT MONTHLY REPORT**

05/11/98
09:55:35

MAY 1998

Date	Day	FLOW MGD			Pond Inf	PRECIP		D.O. mg/L Fin	COD mg/L		BOD mg/L		SS mg/L	
		Inf	2-Hr Peak Inf	Eff		Pond Return	Inch		Type	Raw	Fin	Raw	Fin	Raw
05/01/98	Fri	4.75	5.8	4.91				6.84	460					
05/02/98	Sat	5.04	6.8	4.95				6.68	375	29.1	191	5.7	131	3.0
05/03/98	Sun	4.86	7.0	5.12		0.07	Rain	6.97	393					
05/04/98	Mon	4.56	5.5	4.37		0.40	Rain	6.97	396					
05/05/98	Tue	4.58	6.2	4.97				6.32	322					
05/06/98	Wed	4.85	6.6	4.83		0.31	Rain	7.00	330	31.4	142	5.3	105	4.1
05/07/98	Thu	4.60	6.6	4.61		0.07	Rain	6.61	356					
05/08/98	Fri	4.60	6.2	4.35		0.04	Rain	6.84	439					
05/09/98	Sat	4.79	6.8	4.70				6.86	424	25.4	190	5.6	120	2.6
05/10/98	Sun	4.72	6.9	4.38				7.15	368					
05/11/98	Mon	4.46	5.4	4.68				6.74	271					
05/12/98	Tue	4.77	6.0	4.36		0.41	Snow	6.83	324					
05/13/98	Wed	4.54	5.8	4.74		0.04	Snow	7.14	354	35.0	143	6.6	119	3.9
05/14/98	Thu	4.54	6.3	4.56				6.91	324					
05/15/98	Fri	4.33	6.4	4.41				7.24	319					
05/16/98	Sat	5.55	6.6	5.17		0.32	Snow	6.98	802	40.5	328	8.6	332	5.5
05/17/98	Sun	3.96	6.2	4.25				6.63	379					
05/18/98	Mon	4.57	6.0	4.04				7.22	336					
05/19/98	Tue	4.38	6.6	4.87				6.48	290					
05/20/98	Wed	4.37	5.2	4.17				7.17	508	33.6	149	5.6	210	3.6
05/21/98	Thu	4.22	5.8	4.27				7.25	393					
05/22/98	Fri	4.44	5.8	3.87				7.50	343					
05/23/98	Sat	5.12	7.4	4.74				7.07	388	35.0	176	6.9	158	4.4
05/24/98	Sun	5.39	8.0	5.05				6.85	419					
05/25/98	Mon	5.09	7.5	5.24		0.08	Rain	6.49	384					
05/26/98	Tue	4.35	6.1	4.66		0.08	Snow	6.65	338					8.8
05/27/98	Wed	4.29	5.7	4.42				7.22	350	48.9	128	8.1	125	8.4
05/28/98	Thu	4.22	5.7	4.06		0.14	Snow	7.07	354					
05/29/98	Fri	4.31	5.9	4.53				8.02	347					
05/30/98	Sat	4.45	6.5	4.06				6.69	370	58.6	155	15.1	155	14.2
05/31/98	Sun	4.52	7.4	4.40				6.20	345					
PERMIT MAX		7.7								300		45		60
PERMIT MIN														
PERMIT AVE										60		30		30
TOTAL		143.22	196.7	141.74		1.96		214.59	11801	337.5	1602	67.3	1455	58.5
MAXIMUM		5.55	8.0	5.24		0.41		8.02	802	58.6	328	15.1	332	14.2
MINIMUM		3.96	5.2	3.87		0.04		6.20	271	25.4	128	5.3	105	2.6
AVERAGE		4.62	6.3	4.57		0.18		6.92	381	37.5	178	7.5	162	5.8
# Tests		31	31	31	0	0	11	31	31	9	9	9	9	10

**SOUTH TAHOE PUBLIC UTILITY DISTRICT
WASTEWATER TREATMENT PLANT MONTHLY REPORT**

06/1/98

09:55:35

MAY 1998

Date	Day	SETTLEABLE SOLIDS mL/L		MBAS mg/L		pH Units		TURBIDITY NTU		Cl2 mg/L	FINAL COLIFORMS MPN/100 mL			TDS mg/L		ALKALINITY mg/L	
		Raw	Fin	Raw	Fin	Raw	Fin	Raw	Fin		Total	7day-	Median	Raw	Fin	Raw	Fin
05/01/98	Fri	11.0	< 0.1			7.30	7.47	1.80	6.16	<	2	<	2			161	126
05/02/98	Sat	9.0	< 0.1			7.24	7.49	1.90	5.96	<	2	<	2			151	131
05/03/98	Sun	10.0	< 0.1			7.29	7.54	1.90	4.44	<	2	<	2			153	134
05/04/98	Mon	8.5	< 0.1			7.15	7.50	1.90	7.07	<	2	<	2			146	128
05/05/98	Tue	7.5	< 0.1	2.09	0.051	7.37	7.49	2.00	5.56	<	2	<	2			140	124
05/06/98	Wed	7.5	< 0.1			7.23	7.50	2.50	5.46	<	2	<	2	239	186	147	116
05/07/98	Thu	10.0	< 0.1			7.43	7.56	1.85	5.15	<	2	<	2			141	117
05/08/98	Fri	10.5	< 0.1			7.30	7.54	1.60	5.56	<	2	<	2			155	123
05/09/98	Sat	10.0	< 0.1			7.31	7.53	1.70	5.35	<	2	<	2			155	129
05/10/98	Sun	9.0	< 0.1			7.29	7.56	2.40	5.25	<	2	<	2			150	131
05/11/98	Mon	8.5	< 0.1			7.47	7.58	2.50	6.57	<	2	<	2			147	128
05/12/98	Tue	10.0	< 0.1			7.29	7.50	2.90	5.86	<	2	<	2			156	126
05/13/98	Wed	8.5	< 0.1			7.31	7.61	2.60	5.76	<	2	<	2	227	198	151	124
05/14/98	Thu	9.5	< 0.1			7.50	7.62	2.40	5.56	<	2	<	2			146	123
05/15/98	Fri	8.0	< 0.1			7.32	7.46	2.35	5.86	<	2	<	2			149	127
05/16/98	Sat	23.0	< 0.1			7.36	7.43	3.40	5.56	<	2	<	2			157	129
05/17/98	Sun	10.0	< 0.1			7.27	7.51	2.70	5.35	<	2	<	2			154	133
05/18/98	Mon	7.5	< 0.1			7.37	7.51	2.60	6.97	<	2	<	2			148	128
05/19/98	Tue	12.0	< 0.1			7.62	7.58	2.60	5.76	<	2	<	2			176	130
05/20/98	Wed	10.0	< 0.1			7.31	7.61	2.25	5.25	<	2	<	2	228	210	158	132
05/21/98	Thu	9.0	< 0.1			7.47	7.53	2.30	6.36	<	2	<	2			146	130
05/22/98	Fri	9.5	< 0.1			7.35	7.44	2.20	4.04	<	2	<	2			144	126
05/23/98	Sat	10.5	< 0.1			7.41	7.63	2.50	5.56	<	2	<	2			163	128
05/24/98	Sun	11.5	< 0.1			7.35	7.50	2.80	4.65	<	2	<	2			164	146
05/25/98	Mon	9.0	< 0.1			7.42	7.48	3.35	6.47	<	2	<	2			161	146
05/26/98	Tue	9.0	< 0.1			7.47	7.73	4.20	4.95	<	2	<	2			157	144
05/27/98	Wed	8.5	< 0.1			7.47	7.80	4.20	4.75	<	2	<	2	224	214	146	137
05/28/98	Thu	9.0	< 0.1			7.43	7.54	5.10	5.05	<	2	<	2			151	134
05/29/98	Fri	8.5	< 0.1			7.40	7.36	5.50	5.25	<	2	<	2			157	136
05/30/98	Sat	9.5	< 0.1			7.31	7.57	7.50	6.46	<	2	<	2			150	132
05/31/98	Sun	8.0	< 0.1			7.49	7.60	6.50	7.17	<	2	<	2			155	130
PERMIT MAX			0.1		2.0		8.5	20			240		23				
PERMIT MIN							6.5										
PERMIT AVE					1.0			10									
TOTAL		302.0	3.1	2.09	0.051	228.30	233.77	92.00	175.17		62		62	918	808	4735	4028
MAXIMUM		23.0	0.1	2.09	0.051	7.62	7.80	7.50	7.17		2		2	239	214	176	146
MINIMUM		7.5	0	2.09	0.051	7.15	7.36	1.60	4.04		2		2	224	186	140	116
AVERAGE		9.7	0.1	2.09	0.051	7.36	7.54	2.97	5.65		2		2	230	202	153	130
# Tests		31	31	1	1	31	31	31	31		31		31	4	4	31	31

SOUTH TAHOE PUBLIC UTILITY DISTRICT
MEMORANDUM

Date: June 4, 1998

To: Bob Baer, Diane Noble, Terry Powers

From: Greg Schrempp

Topic: Export Line Inspection

On May 27 and 28 1998, Tim (fast track) Rieger and I conducted our check of the District's export line from the treatment plant to where the "C" line daylights at Harvey Place at Station 564+04. Numerous wet spots were checked, however no leaks were found. One sample was submitted to the Lab for analysis, but tests there proved negative. An air relief at station 288+83 on the "C" line was found to be releasing some liquid with the air, but this not abnormal. To be on the safe side, Randy Curtis has been notified of the situation.

SAMPLE LOCATIONS

TAHOE BASIN MONITORING WELLS

<u>Site</u>	<u>Location</u>
ERB	Emergency Retention Basin
CONTROL	North of Post Office
MW02-25, -50	Emergency Retention Basin, S side
MW03-25, -50	Emergency Retention Basin, S side
MW04-25, -50	Emergency Retention Basin, W side
MW07-25, -50	Emergency Retention Basin, N side
MW08-25, -50	Pond #1, SW corner
MW11	S.E. corner of wastewater treatment plant grounds
MW12	South of Emergency Pump Building, for buried sludge
MW13	Pond 2, along Heavenly Valley Creek, for buried sludge

HEAVENLY VALLEY CREEK

HVC-1	At Pioneer Trail
HVC-2	250 ft upstream of Pond #2
HVC-3	25 ft downstream of Johnson Blvd.
HVC-4	Effluent of drain pipe from Lower Shop area
HVC-5	Effluent of drainage pipe along Johnson Blvd, 10 feet upstream of Johnson Blvd.

ALPINE COUNTY MONITORING WELLS

<u>Site</u>	<u>Location</u>
ACMW-01AW	Below main dam at Harvey Place Reservoir
ACMW-01BE	Below auxiliary dam at Harvey Place Reservoir
ACMW-02, N&S	On dam access road at Diamond Valley Road
ACMW-03	Bruns ranch, east side of Highway 88
ACMW-04W	Gansberg ranch, west side of Highway 88
ACMW-05	Dressler ranch
ACMW-06, N&S	Celio ranch, on Diamond Valley Road

ALPINE SOILS

<u>Site</u>	<u>Ranch</u>
S2	Celio
S3	Hall
S4	Gansberg
S5	Gansberg
S6	Neddenriep
S7	Bruns
S8	Dressler

ALPINE GROUNDWATERS

<u>Site</u>	<u>Homeowner</u>
GW-01	Sagues
GW-03	Smith/Springmeyer
GW-04	Celio
GW-05	Neddenriep
GW-07	Gansberg, Jr.
GW-08	Arant
GW-11	Diamond Valley School
GW-14	Sierra Pines Store

ALPINE SURFACEWATERS

<u>Site</u>	<u>Location</u>
SW-01	Carson River, Woodfords
SW-02	Indian Creek, @ HWY 89
SW-03	Indian Creek, @ upper bridge
SW-04	Indian Creek, @ lower bridge
SW-05	Carson River, Paynesville
SW-06	Carson River, Stateline
SW-07	Fredericksberg Ditch, Stateline
SW-08	Irrigation Ditch along Carson River Road
SW-09	Carson River, Dressler Lane
SW-10	Indian Creek, @ Smith-Springmeyer Ranch

ALPINE COUNTY MONITORING

05/29/98

Site	Date	ID	Location	Temp C	pH	EC umhos	DO mg/L	Alk mg/L	TDS mg/L	SS mg/L	Turb NTU	Cl mg/L	SO4 mg/L
Alpine Monitoring Wells													
ACMW-01AW	05/19/98	980519-06	Main Dam	10.0	6.29	129		51	90		1	5.1	1.7
ACMW-01BE	05/19/98	980519-07	Secondary Dam	10.2	6.06	143		64	99		1.9	1.5	1.7
ACMW-02N	05/19/98	980519-08	Access Gate	12.0	6.25	139		66	96		.45	3.3	2.9
ACMW-02S	05/19/98	980519-09	Access Gate	10.1	6.55	101		40	68		1.2	2.1	3.5
ACMW-03	05/19/98	980519-10	HWY 88	10.0	6.17	127		44	95		5.2	4.6	8.7
ACMW-04W	05/19/98	980519-11	Gansberg	11.5	5.79	211		54	143		.39	15.6	15.0
ACMW-06N	05/19/98	980519-12	Celio	10.3	6.72	723		271	440		8.6	57.1	25.7
ACMW-06S	05/19/98	980519-13	Celio	10.9	10.60	508		101	219		80	78.1	21.9
Groundwaters													
GW-01	05/12/98	980512-18	Cohen	7.5	6.83	164		76	104		33	5.2	
GW-03	05/12/98	980512-19	Smith/Springmeyer	12.7	7.47	308		133	227		1	1.5	
GW-04	05/12/98	980512-20	Celio	12.4	7.53	267		123	198		1.9	3.1	
GW-05	05/12/98	980512-21	Neddenriep	9.8	6.23	299		63	195		1.1	31.2	
GW-07	05/12/98	980512-22	Gansberg	9.7	6.27	122		55	93		.07	1.2	
GW-08	05/12/98	980512-23	Arant	10.1	6.37	293		57	180		.61	31.7	
GW-11	05/12/98	980512-24	Diamond Val. School	15.1	6.16	95		49	81		1	0.8	
GW-14	05/12/98	980512-25	Sierra Pines	9.7	6.35	111		54	96		1.2	1.2	
Reservoirs													
HPR	05/05/98	980505-28	Harvey Place Reservoir	11.7	7.93	446	6.60	116	220	10.80	2.5	45.6	13.8
ICR	05/05/98	980505-29	Indian Creek Reservoir	21.9	9.60	60	8.00	40	68	2.76	3	1.4	2.7
Surfacewaters: Carson R													
SW-01	05/05/98	980505-19	Carson R Woodfords	3.0	7.15	44	10.50	28	42	7.78	2.85	0.9	2.5
SW-05	05/05/98	980505-23	Carson R Paynesville	5.0	7.26	41	9.90	29	48	12.90	2.4	0.8	2.5
SW-06	05/05/98	980505-24	Carson R Stateline	5.2	7.01	40	9.60	32	52	14.30	3.5	0.9	2.6
SW-08	05/05/98	980505-25	Irrigation Ditch	14.8	7.65	85	8.00	57	105	117.00	2.9	1.8	2.8
SW-09	05/05/98	980505-26	Carson R Dressler Ln	5.5	7.41	41	9.80	32	53	15.80	3.2	1.0	2.7
Surfacewaters: Indian Cr													
SW-02	05/05/98	980505-20	Indian Cr Upper	8.3	7.48	91	6.80	34	80	1.24	1.7	0.6	2.5
SW-03	05/05/98	980505-21	Indian Cr Mid	9.0	7.16	115	8.90	38	98	2.02	2.7	2.0	2.9
SW-04	05/05/98	980505-22	Indian Cr Lower	8.7	7.07	114	8.10	46	95	10.40	2.3	2.0	3.3
SW-10	05/05/98	980505-27	Indian Cr at Bruns	8.5	7.34	121	8.50	36	102	4.70	2.4	2.0	3.3

ALPINE COUNTY MONITORING

05/29/98

Site	Date	TotalP mg/L	PO4-P mg/L	TKN mg/L	NH3-N mg/L	NO2-N mg/L	NO3-N mg/L	Total N mg/L
Alpine Monitoring Wells								
ACMW-01A	05/19/98	0.023		0.110	0.021	0.019	1.460	1.589
ACMW-01B	05/19/98	0.022		0.108	< 0.020	< 0.010	1.790	1.908
ACMW-02N	05/19/98	0.018		0.106	< 0.020	< 0.010	0.061	0.177
ACMW-02S	05/19/98	0.018		0.121	< 0.020	< 0.010	0.116	0.247
ACMW-03	05/19/98	0.088		0.254	0.020	< 0.010	1.510	1.774
ACMW-04W	05/19/98	0.018		0.106	< 0.020	< 0.010	3.370	3.486
ACMW-06N	05/19/98	0.370		0.343	0.037	< 0.010	< 0.010	0.363
ACMW-06S	05/19/98	0.016		0.342	0.169	0.013	0.079	0.434
Groundwaters								
GW-01	05/12/98	0.026		0.100	< 0.020	< 0.010	< 0.010	0.120
GW-03	05/12/98	0.040		0.149	< 0.020	< 0.010	0.710	0.869
GW-04	05/12/98	0.056		0.100	< 0.020	< 0.010	0.816	0.926
GW-05	05/12/98	0.032		0.135	< 0.020	< 0.010	3.340	3.485
GW-07	05/12/98	0.093		0.100	< 0.020	< 0.010	1.010	1.120
GW-08	05/12/98	0.046		0.147	< 0.020	< 0.010	6.100	6.257
GW-11	05/12/98	0.026		0.100	< 0.020	< 0.010	0.334	0.444
GW-14	05/12/98	0.058		0.203	< 0.020	< 0.010	0.425	0.638
Reservoirs								
HPR	05/05/98	2.280	2.080	17.500	16.900	0.068	1.010	18.578
ICR	05/05/98	0.038	< 0.010	0.675	0.056	< 0.010	0.010	0.695
Surfacewaters: Carson R								
SW-01	05/05/98	0.030	0.010	0.292	0.020	< 0.010	0.016	0.318
SW-05	05/05/98	0.050	0.010	0.304	< 0.020	< 0.010	0.018	0.332
SW-06	05/05/98	0.036	0.010	0.300	< 0.020	< 0.010	0.022	0.332
SW-08	05/05/98	0.210	0.014	0.477	0.020	< 0.010	0.167	0.654
SW-09	05/05/98	0.062	0.010	0.344	0.020	< 0.010	0.027	0.381
Surfacewaters: Indian Cr								
SW-02	05/05/98	0.020	0.010	0.288	0.020	< 0.010	0.010	0.308
SW-03	05/05/98	0.058	0.030	0.337	0.020	< 0.010	< 0.010	0.357
SW-04	05/05/98	0.078	0.028	0.724	< 0.020	< 0.010	0.010	0.744
SW-10	05/05/98	0.078	0.032	0.686	0.020	< 0.010	0.013	0.709

ALPINE COUNTY MONITORING

05/29/98

Site	Date	COD mg/L	BOD mg/L	O & G mg/L	Boron mg/L	Ca mg/L	Mg mg/L	Na mg/L	K mg/L	SAR	Exch Na %	Hardness mg/L	Water Level MSL or Ft
Alpine Monitoring Wells													
ACMW-01A	05/19/98	<	5									51	5483.4
ACMW-01B	05/19/98	<	5									58	5495.8
ACMW-02N	05/19/98	<	5									48.5	5460.1
ACMW-02S	05/19/98	<	5									32	5461.7
ACMW-03	05/19/98	<	5									21.5	5041.8
ACMW-04W	05/19/98	<	5									52	4901.3
ACMW-06N	05/19/98	<	5									259	5216.9
ACMW-06S	05/19/98	<	5									72	5205.6

Groundwaters

GW-01	05/12/98	<	5									61	
GW-03	05/12/98	<	5									122	
GW-04	05/12/98	<	5									99	
GW-05	05/12/98	<	5									97	
GW-07	05/12/98	<	5									45	
GW-08	05/12/98	<	5									52	
GW-11	05/12/98	<	5									37	
GW-14	05/12/98	<	5									33	

Reservoirs

HPR	05/05/98		24	5	0.13	15.5	3.3	39.8	7.9	2.39	58.1		57.3
ICR	05/05/98		14	3	0.02	9.2	1.6	5.4	2.0	0.43	26.6		47.3

Surfacewaters: Carson R

SW-01	05/05/98	<	5	1	0.01	4.5	1.2	2.1	0.8	0.22	20.4	11	
SW-05	05/05/98	<	5	1	0.01	4.7	1.3	2.3	0.9	0.24	21.6	11	
SW-06	05/05/98	<	5	1	0.01	4.9	1.3	2.3	0.9	0.24	21.2	16	
SW-08	05/05/98	<	5	1	0.02	12.2	2.7	9.8	2.0	0.66	32.6	40	
SW-09	05/05/98	<	5	1	0.01	5.3	1.4	2.6	1.0	0.26	21.7	18.5	

Surfacewaters: Indian Cr

SW-02	05/05/98	<	5	1	0.01	9.3	2.2	5.7	1.1	0.44	26.8	32	
SW-03	05/05/98	<	5	1	0.02	11.0	2.8	7.8	1.6	0.54	29.2	41	
SW-04	05/05/98	<	5	1	0.02	11.5	3.3	6.4	1.6	0.43	23.9	43	
SW-10	05/05/98		6	1	0.02	12.5	3.5	7.0	1.8	0.45	24.0	46	

**ALPINE COUNTY
BACTERIOLOGICAL MONITORING**

05/29/98

Alpine Monitoring Wells

Site	Date		Total Coliform MPN/100mL		Fecal Coliform MPN/100mL		Fecal Streptococci MPN/100mLL
ACMW-01A	05/19/98	<	1.1	<	1.1		
ACMW-01B	05/19/98	<	1.1	<	1.1		
ACMW-02N	05/19/98	<	1.1	<	1.1		
ACMW-02S	05/19/98		9.2	<	1.1		
ACMW-03	05/19/98		5.1	<	1.1		
ACMW-04W	05/19/98		3.6	<	1.1		
ACMW-06N	05/19/98		16.1	<	1.1		
ACMW-06S	05/19/98	>	23	<	1.1		

Groundwaters

Site	Date		Total Coliform MPN/100mL		Fecal Coliform MPN/100mL		Fecal Streptococci MPN/100mLL
GW-01	05/12/98	<	1.1	<	1.1		
GW-03	05/12/98	<	1.1	<	1.1		
GW-04	05/12/98	<	1.1	<	1.1		
GW-05	05/12/98	<	1.1	<	1.1		
GW-07	05/12/98		2.2		1.1		
GW-08	05/12/98	<	1.1	<	1.1		
GW-11	05/12/98	<	1.1	<	1.1		
GW-14	05/12/98	<	1.1	<	1.1		

Reservoirs

Site	Date		Total Coliform MPN/100mL		Fecal Coliform MPN/100mL		Fecal Streptococci MPN/100mLL
HPR	05/05/98		11		4		8
ICR	05/05/98		14	<	2	<	2

Surfacewaters: Carson R

Site	Date		Total Coliform MPN/100mL		Fecal Coliform MPN/100mL		Fecal Streptococci MPN/100mLL
SW-01	05/05/98		70	<	30		90
SW-05	05/05/98		150	<	30		40
SW-06	05/05/98		930		90		230
SW-08	05/05/98		150	<	30		750
SW-09	05/05/98		930		30		40

Surfacewaters: Indian Cr

Site	Date		Total Coliform MPN/100mL		Fecal Coliform MPN/100mL		Fecal Streptococci MPN/100mLL
SW-02	05/05/98		390	<	30		230
SW-03	05/05/98		930		90		90
SW-04	05/05/98		1500		90		210
SW-10	05/05/98		11000		750		230

ALPINE COUNTY SOILS

05/29/98

Site	Date	Location	Type	pH	EC mmho	%Sat	TKN mg/Kg	NO3-N mg/L	Total P mg/Kg	Exch P mg/L
S2a	04/02/98	Celio	KT	8.05	1.07	70.4	2,200	1.6		5.0
S3a	04/02/98	Hall	SMB	6.27	0.34	31.6	835	1.2		7.9
S4a	04/02/98	Gansberg	DI	6.54	0.77	38.1	870	5.0		3.6
S5a	04/02/98	Gansberg	HRB	6.34	0.53	30.0	928	8.3		12.8
S6a	04/02/98	Neddenriep	DWB	5.79	0.21	37.4	942	1.0		31.3
S7a	04/02/98	Bruns	JaC	6.21	0.13	36.4	1,270	1.9		4.8
S8a	04/02/98	Dressler	SOD	6.12	0.11	17.9	186	1.1		5.3

Site	Date	Cl mg/L	SO4 mg/Kg	CEC meq/100g	Cu mg/Kg	Mo mg/Kg	Ca mg/L	Mg mg/L	Na mg/L	SAR	%Na	
S2a	04/02/98		3		16.0	<	1.0	57.9	40.0	120.0	2.97	3.0
S3a	04/02/98		3		18.0	<	1.0	16.8	5.1	36.7	2.01	1.6
S4a	04/02/98		3		30.0	<	1.0	34.7	6.9	86.3	3.50	3.7
S5a	04/02/98		0		19.0	<	1.0	38.8	7.1	36.5	1.41	0.8
S6a	04/02/98		9		27.0	<	1.0	9.0	2.4	20.1	1.53	1.0
S7a	04/02/98	<	0		30.0	<	1.0	11.2	2.6	8.2	0.57	-0.4
S8a	04/02/98	<	0		16.0	<	1.0	4.1	2.4	13.4	1.30	0.6

TAHOE BASIN MONITORING

06/11/98

Site	Date	ID	Location	Depth msl	Temp C	pH	EC umhos	Cl mg/L	COD	Comment
Buried Sludge Monitoring										
MW11	05/26/98	980526-17	Sludge Pond	6269.3	6.1	6.85	89	1.1	< 5.0	
MW12	05/26/98	980526-18	Sludge Pond	6268.0	8.1	6.16	225	2.7	< 5.0	
MW13	05/26/98	980526-19	Sludge Pond	6258.4	6.2	7.06	1087	4.8	18.6	
ERB Monitoring										
CONTROL	05/26/98	980526-10	At Post Office	6284.3	8.3	7.05	170	6.0	< 5.0	
MW01.5	05/26/98	980526-11	SW corner of ERB	6269.8	8.3	6.71	163	4.4	< 5.0	
MW02-50	05/26/98	980526-12	Black Bart side of ERB	6269.5	9.0	6.34	573	56.1	< 5.0	
MW03-50	05/26/98	980526-13	Black Bart side of ERB	6269.5	9.2	5.98	513	46.9	< 5.0	
MW04-50	05/26/98	980526-14	Hank Monk side of ERB	6272.0	7.9	6.01	81	6.4	< 5.0	
MW07-50	05/26/98	980526-15	North side of ERB	6280.7	6.8	6.16	279	28.2	5.0	
Heavenly Valley Creek										
HVC-1	05/12/98	980512-07	Downstream of Pioneer		4.9	7.01	43	1.3	< 5.0	
HVC-2	05/12/98	980512-08	250' upstream of Pond #2		3.9	5.92	46	1.6	< 5.0	
HVC-3	05/12/98	980512-09	25' downstream of Johnson Blvd		4.3	6.53	49	2.0	< 5.0	
HVC-4	05/12/98	980512-10	Effluent of drain from Lower Sho		5.6	6.32	107	1.4	< 5.0	
HVC-5	05/12/98	80512-HVC	Effluent of drainage pipe along J							Dry
Treatment Plant Monitoring										
MW08-25	05/26/98	980526-16	SW side of Pond #1	6248.7	8.1	6.32	987	47.2	61.6	

TAHOE BASIN MONITORING

06/11/98

Site	Date	TotalP mg/L	PO4-P mg/L	TKN mg/L	NH3-N mg/L	NO2-N mg/L	NO3-N mg/L	Total N mg/L
Buried Sludge Monitoring								
MW11	05/26/98	0.140		0.154	0.020	< 0.010	0.400	0.564
MW12	05/26/98	0.132		0.349	0.046	< 0.010	0.349	0.708
MW13	05/26/98	0.038		1.210	< 0.020	0.067	14.500	15.777
ERB Monitoring								
CONTROL	05/26/98				0.027	< 0.010	2.480	2.490
MW01.5	05/26/98				< 0.020	< 0.010	0.700	0.710
MW02-50	05/26/98				0.026	< 0.010	13.000	13.010
MW03-50	05/26/98				0.020	< 0.010	12.700	12.710
MW04-50	05/26/98				0.024	< 0.010	0.024	0.034
MW07-50	05/26/98				< 0.020	< 0.010	0.586	0.596
Heavenly Valley Creek								
HVC-1	05/12/98			0.276	0.038	< 0.010	0.030	0.316
HVC-2	05/12/98			0.264	0.020	< 0.010	< 0.010	0.284
HVC-3	05/12/98			0.296	0.038	< 0.010	< 0.010	0.316
HVC-4	05/12/98			0.361	0.037	< 0.010	0.029	0.400
HVC-5	05/12/98							0.000
Treatment Plant Monitoring								
MW08-25	05/26/98	0.564		11.000	8.090	0.045	< 0.010	11.055

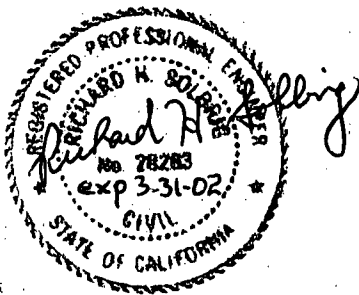
Site	Location	TDS		Cl		TKN		NO ₃ -N		Total N		Total P		SO ₄		Boron		Exch Na %	
		Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence
SW-01	Carson River, Woodfords	55		1.0	✓	0.13	✓	0.02	✓	0.15	✓	0.02	✓	2.0	✓	0.02	✓	20	✓
SW-06	Carson River, Staline	70		2.5		0.22		0.03	✓	0.25	✓	0.03		2.0	✓	0.02		20	✓
SW-02	Indian Creek, Upper	100		6.0						0.30		0.03		8.0		0.25		30	
SW-03	Indian Creek, Mid	100		6.0						0.30		0.03	✓	8.0		0.25		30	
SW-04	Indian Creek, Lower	100		6.0						0.30		0.03	✓	8.0		0.25		30	

Soil analysis for March are included. April soil results are not included; they will be sent to you when they are completed.

Certification

I hereby certify that the enclosed monitoring report was prepared under my direct supervision and that I am a duly Registered Engineer under the laws of the State of California.

Sincerely,



Richard Solbrig,
Assistant Manager/Engineer

Enclosures:

1.

April Monthly Report	Pages
Wastewater Treatment plant	2
Permit Compliance Record	1
Export pipeline inspection	1
Sample site locations	2
Monitoring wells (ERB)	1
Heavenly Valley Creek	1
Alpine County Surfacewaters, Groundwaters and Reservoirs	4
Alpine County Blue Green Algae	1
Alpine County soils, March	1
Total number of pages:	14

- cc: Calif. Dept. of Health Services, ODW - Jess Morehouse
El Dorado Co. Dept. of Environmental Health - Virginia Huber
Nevada Division of Environmental Protection - Wendel McCurry
Alpine County Health Department - Dr. Richard Botto
Alpine County Health Department - Jim Goodloe
Alpine County Board of Supervisors
EPA - Permit and Compliance Branch, W-5 - Bill Pierce
Desert Research Group (Alpine County Consultants) - Bill Albright
STPUD Board of Directors
STPUD General Manager / District Engineer - Robert G. Baer
STPUD Manager of Operations - Ross Johnson
STPUD Laboratory Director - Terry Powers
STPUD Manager of Alpine County Operations - Hal Bird

**SOUTH TAHOE PUBLIC UTILITY DISTRICT
WASTEWATER TREATMENT PLANT MONTHLY REPORT**

05/12/98
15:47:22

APRIL 1998

Date	Day	FLOW MGD			Pond Inf	PRECIP		D.O. mg/L	COD mg/L		BOD mg/L		SS mg/L	
		Inf	2-Hr Peak Inf	Pond Return		Inch	Type		Raw	Fin	Raw	Fin	Raw	Fin
04/01/98	Wed	4.69	6.3	5.65		0.14	Snow	7.73	324					
04/02/98	Thu	4.73	6.6	4.73		0.01	Snow	7.73	336					
04/03/98	Fri	4.88	6.2	5.06				6.29	329					
04/04/98	Sat	5.40	7.4	5.37				6.70	366	33.7	145	6.1	144	3.1
04/05/98	Sun	5.37	7.2	5.09				6.34	343					
04/06/98	Mon	4.99	6.0	5.13				6.49	306	30.3	145	7.3	117	4.3
04/07/98	Tue	4.71	6.0	4.22				6.96	340					
04/08/98	Wed	4.81	6.0	5.80				6.60	329					
04/09/98	Thu	4.87	6.4	4.53				7.29	343					
04/10/98	Fri	4.73	6.4	4.61				6.87	338					
04/11/98	Sat	5.50	7.6	5.46		0.09	Snow	7.07	331	30.3	152	6.7	110	3.8
04/12/98	Sun	4.88	6.0	5.13				7.20	308					
04/13/98	Mon	4.71	6.2	4.47		0.18	Snow	7.35	354					
04/14/98	Tue	4.58	6.2	4.32		0.01	Snow	7.97	306					
04/15/98	Wed	4.61	5.4	5.01				7.50	372	33.0	163	5.4	149	2.7
04/16/98	Thu	4.59	6.2	4.31				7.70	373					
04/17/98	Fri	5.03	6.2	5.15				7.39	426					
04/18/98	Sat	5.29	7.4	5.23				7.38	516	36.8	218	7.3	200	5.2
04/19/98	Sun	5.30	6.4	5.36				7.10	525					
04/20/98	Mon	4.81	5.5	4.61				7.89	315					
04/21/98	Tue	4.73	5.8	4.54				6.22	285					
04/22/98	Wed	4.70	6.2	4.94				5.92	316	40.5	137	4.5	136	2.3
04/23/98	Thu	4.70	5.6	4.60		0.02	Snow	6.72	266					
04/24/98	Fri	4.69	6.0	4.78		0.12	Snow	6.96	317					
04/25/98	Sat	5.13	7.0	4.93				6.77	250	27.2	148	4.6	80	3.6
04/26/98	Sun	5.02	7.1	5.13				6.77	276					
04/27/98	Mon	4.58	5.8	4.37				6.63	264					
04/28/98	Tue	4.48	5.8	4.41				6.57	302	35.8	109	4.8	126	2.7
04/29/98	Wed	4.41	5.8	4.90				6.32	439					
04/30/98	Thu	4.44	5.8	4.49				8.31						
PERMIT MAX		7.7								300		45		60
PERMIT MIN														
PERMIT AVE										60		30		30
TOTAL		145.36	188.5	146.33		0.57		210.74	9895	267.6	1217	46.7	1062	27.7
MAXIMUM		5.50	7.6	5.80		0.18		8.31	525	40.5	218	7.3	200	5.2
MINIMUM		4.41	5.4	4.22		0.01		5.92	250	27.2	109	4.5	80	2.3
AVERAGE		4.85	6.3	4.88		0.08		7.02	341	33.5	152	5.8	133	3.5
# Tests		30	30	30	0	0	7	30	29	8	8	8	8	8

**SOUTH TAHOE PUBLIC UTILITY DISTRICT
WASTEWATER TREATMENT PLANT MONTHLY REPORT**

05/12/98

15:47:22

APRIL 1998

Date	Day	SETTLEABLE SOLIDS mL/L		MBAS mg/L		pH Units		TURBIDITY NTU		Cl2 mg/L	FINAL COLIFORMS MPN/100 mL			TDS mg/L		ALKALINITY mg/L		
		Raw	Fin	Raw	Fin	Raw	Fin	Fin	Fin		Total	7day-	Median	Raw	Fin	Raw	Fin	
04/01/98	Wed	8.5	<	0.1	2.06	0.048	7.55	7.58	2.00	5.05	<	2	<	2			121	99
04/02/98	Thu	8.0	<	0.1			7.33	7.53	1.60	5.35	<	2	<	2			130	108
04/03/98	Fri	7.0	<	0.1			7.28	7.43	1.50	5.05	<	2	<	2			126	118
04/04/98	Sat	9.0	<	0.1			7.30	7.59	2.00	4.24	<	2	<	2			136	130
04/05/98	Sun	9.0	<	0.1			7.37	7.53	2.15	4.14	<	2	<	2			141	132
04/06/98	Mon	9.0	<	0.1			7.44	7.55	2.25	5.35	<	2	<	2	240	217	137	128
04/07/98	Tue	10.0	<	0.1			7.34	7.58	2.30	5.46	<	2	<	2			133	128
04/08/98	Wed	9.0	<	0.1			7.33	7.46	1.80	5.15	<	2	<	2			142	128
04/09/98	Thu	8.5	<	0.1			7.48	7.59	1.70	5.05	<	2	<	2			130	126
04/10/98	Fri	9.5	<	0.1			7.61	7.63	1.70	5.46	<	2	<	2			135	127
04/11/98	Sat	10.0	<	0.1			7.27	7.50	2.00	5.66	<	2	<	2			138	132
04/12/98	Sun	9.0	<	0.1			7.33	7.39	2.10	5.25	<	2	<	2			141	132
04/13/98	Mon	9.0	<	0.1			7.39	7.38	2.00	5.66	<	2	<	2			135	131
04/14/98	Tue	8.0	<	0.1			7.40	7.50	2.05	6.87	<	2	<	2			142	133
04/15/98	Wed	12.0	<	0.1			7.36	7.55	1.80	5.96	<	2	<	2			141	133
04/16/98	Thu	10.5	<	0.1			7.46	7.50	2.00	6.26	<	2	<	2	223	210	141	131
04/17/98	Fri	11.0	<	0.1			7.31	7.50	2.00	6.06	<	2	<	2			141	135
04/18/98	Sat	11.5	<	0.1			7.21	7.49	2.50	4.34	<	2	<	2			151	136
04/19/98	Sun	15.0	<	0.1			7.26	7.45	3.60	5.15	<	2	<	2			147	140
04/20/98	Mon	9.0	<	0.1			7.41	7.52	2.60	4.85	<	2	<	2			137	129
04/21/98	Tue	7.5	<	0.1			7.40	7.48	1.70	5.76	<	2	<	2			131	124
04/22/98	Wed	8.0	<	0.1			7.37	7.46	1.55	5.66	<	2	<	2	212	200	133	124
04/23/98	Thu	8.0	<	0.1			7.48	7.56	1.50	5.56	<	2	<	2			125	122
04/24/98	Fri	8.0	<	0.1			7.34	7.54	1.50	6.16	<	2	<	2			130	124
04/25/98	Sat	10.5	<	0.1			7.42	7.58	1.50	5.35	<	2	<	2			141	128
04/26/98	Sun	8.5	<	0.1			7.36	7.52	1.60	5.15	<	2	<	2			145	133
04/27/98	Mon	8.0	<	0.1			7.37	7.46	1.60	5.76	<	2	<	2			136	128
04/28/98	Tue	7.5	<	0.1			7.26	7.68	1.60	4.04	<	2	<	2	209	207	135	126
04/29/98	Wed	8.0	<	0.1			7.46	7.60	1.60	5.66	<	2	<	2			149	124
04/30/98	Thu		<	0.1				7.52	1.90	6.16	<	2	<	2				124
PERMIT MAX				0.1				8.5						240		23		
PERMIT MIN						2.0		6.5										
PERMIT AVE						1.0		10										
TOTAL		266.5		3.0	2.06	0.048	213.89	225.65	57.70	161.62		60		60	884	834	3970	3813
MAXIMUM		15.0		0.1	2.06	0.048	7.61	7.68	3.60	6.87		2		2	240	217	151	140
MINIMUM		7.0		0	2.06	0.048	7.21	7.38	1.50	4.04		2		2	209	200	121	99
AVERAGE		9.2		0.1	2.06	0.048	7.38	7.52	1.92	5.39		2		2	221	209	137	127
# Tests		29		30	1	1	29	30	30	30		30		30	4	4	29	30

**SOUTH TAHOE PUBLIC UTILITY DISTRICT
MEMORANDUM**



Date: May 13, 1998
To: Bob Baer, Diane Noble
From: Tim Rieger
Topic: Export Line Check

On April 21, 1998, Greg Schrempp and I conducted our monthly check of the District's export line from the treatment plant to station 564+06 near the Harvey Place reservoir.

Due to the heavy runoff many wet areas were checked. However, nothing positive was found.

CC Terry Powers

SAMPLE LOCATIONS

TAHOE BASIN MONITORING WELLS

<u>Site</u>	<u>Location</u>
✓ ERB	Emergency Retention Basin
✓ CONTROL	North of Post Office
MW02-25, -50	Emergency Retention Basin, S side
MW03-25, -50	Emergency Retention Basin, S side
MW04-25, -50	Emergency Retention Basin, W side
✓ MW07-25, -50	Emergency Retention Basin, N side
✓ MW08-25, -50	Pond #1, SW corner
MW11	S.E. corner of wastewater treatment plant grounds
MW12	South of Emergency Pump Building, for buried sludge
MW13	Pond 2, along Heavenly Valley Creek, for buried sludge

HEAVENLY VALLEY CREEK

HVC-1	At Pioneer Trail
HVC-2	250 ft upstream of Pond #2
✓ HVC-3	25 ft downstream of Johnson Blvd.
HVC-4	Effluent of drain pipe from Lower Shop area
HVC-5	Effluent of drainage pipe along Johnson Blvd, 10 feet upstream of Johnson Blvd.

ALPINE COUNTY MONITORING WELLS

<u>Site</u>	<u>Location</u>
ACMW-01AW	Below main dam at Harvey Place Reservoir
ACMW-01BE	Below auxiliary dam at Harvey Place Reservoir
ACMW-02, N&S	On dam access road at Diamond Valley Road
ACMW-03	Bruns ranch, east side of Highway 88
ACMW-04W	Gansberg ranch, west side of Highway 88
ACMW-05	Dressler ranch
ACMW-06, N&S	Celio ranch, on Diamond Valley Road

ALPINE SOILS

<u>Site</u>	<u>Ranch</u>
S2	Celio
S3	Hall
S4	Gansberg
S5	Gansberg
S6	Neddenriep
S7	Bruns
S8	Dressler

ALPINE GROUNDWATERS

<u>Site</u>	<u>Homeowner</u>
GW-01	Sagues
GW-03	Smith/Springmeyer
GW-04	Celio
GW-05	Neddenriep
GW-07	Gansberg, Jr.
GW-08	Arant
GW-11	Diamond Valley School
GW-14	Sierra Pines Store

ALPINE SURFACEWATERS

<u>Site</u>	<u>Location</u>
SW-01	Carson River, Woodfords
SW-02	Indian Creek, @ HWY 89
SW-03	Indian Creek, @ upper bridge
SW-04	Indian Creek, @ lower bridge
SW-05	Carson River, Paynesville
SW-06	Carson River, Stateline
SW-07	Fredericksberg Ditch, Stateline
SW-08	Irrigation Ditch along Carson River Road
SW-09	Carson River, Dressler Lane
SW-10	Indian Creek, @ Smith-Springmeyer Ranch

ALPINE COUNTY MONITORING

05/05/98

Site	Date	ID	Location	Temp C	pH	EC umhos	DO mg/L	Alk mg/L	TDS mg/L	SS mg/L	Turb NTU	Cl mg/L	SO4 mg/L
Alpine Monitoring Wells													
ACMW-01AW	04/14/98	980414-06	Main Dam	8.1	6.41	84		33	65				2.7
ACMW-01BE	04/14/98	980414-07	Secondary Dam	8.8	6.20	122		57	79				1.4
ACMW-02N	04/14/98	980414-08	Access Gate	10.4	6.57	149		68	92				3.1
ACMW-02S	04/14/98	980414-09	Access Gate	8.0	6.35	92		36	67				2.6
ACMW-04W	04/14/98	980414-10	Gansberg	11.4	5.48	214		54	144				10.5
ACMW-06N	04/14/98	980414-11	Celio	9.6	6.54	73		274	447				57.9
ACMW-06S	04/14/98	980414-12	Celio	8.9	9.52	501		102	211				78.5
Groundwaters													
GW-03	04/08/98	980408-19	Smith/Springmeyer	11.6	7.09	309		128	226				1.5
GW-04	04/08/98	980408-20	Celio	12.8	7.40	266		116	197				3.2
GW-05	04/08/98	980408-21	Neddenriep	7.9	6.49	317		61	191				33.4
GW-07	04/08/98	980408-22	Gansberg	8.3	6.15	123		53	94				1.9
GW-08	04/08/98	980408-23	Arant	9.1	6.34	278		56	176				29.3
GW-11	04/08/98	980408-24	Diamond Val. School	10.1	6.21	94		44	81				0.7
GW-14	04/08/98	980408-25	Sierra Pines	7.6	6.32	110		52	99				1.7
Reservoirs													
HPR	04/01/98	980401-13	Harvey Place Reservoir	7.6	7.54	451	8.00	114	216	0.45	4	45.1	18.8
ICR	04/01/98	980401-14	Indian Creek Reservoir	6.1	7.40	88	9.80	39	63	6.62	6.7	1.4	3.0
Surfacewaters: Carson R													
SW-01	04/01/98	980401-06	Carson R Woodfords	1.1	6.76	64	10.10	28	51	2.56	1.4	2.1	2.4
SW-05	04/01/98	980401-10	Carson R Paynesville	2.7	7.21	80	11.30	29	56	3.91	1.5	2.1	2.3
SW-06	04/01/98	980401-11	Carson R Stateline	3.1	7.11	73		32	58	5.17	1.8	2.3	2.3
SW-08	04/01/98	980401-12	Irrigation Ditch	9.1	7.33	102	9.45	57	107	32.60	7	2.4	3.6
Surfacewaters: Indian Cr													
SW-02	04/01/98	980401-07	Indian Cr Upper	2.9	7.13	66	11.50	34	63	1.35	3.3	0.9	2.8
SW-03	04/01/98	980401-08	Indian Cr Mid	2.5	7.01	81	11.00	38	70	3.37	4.5	1.7	2.8
SW-04	04/01/98	980401-09	Indian Cr Lower	3.0	7.17	94	10.20	45	76	12.20	5.1	1.9	3.2

ALPINE COUNTY MONITORING

05/05/98

Site	Date	TotalP mg/L	PO4-P mg/L	TKN mg/L	NH3-N mg/L	NO2-N mg/L	NO3-N mg/L	Total N mg/L
Alpine Monitoring Wells								
ACMW-01A	04/14/98	0.028	<	0.100	< 0.020	< 0.010	0.705	0.815
ACMW-01B	04/14/98	0.022	<	0.100	< 0.020	< 0.010	0.745	0.855
ACMW-02N	04/14/98	0.018	<	0.100	< 0.020	< 0.010	0.061	0.171
ACMW-02S	04/14/98	0.020		0.118	< 0.020	< 0.010	0.224	0.352
ACMW-04W	04/14/98	0.018		0.100	< 0.020	< 0.010	3.010	3.120
ACMW-06N	04/14/98	0.421		0.325	0.034	< 0.010	< 0.010	0.345
ACMW-06S	04/14/98	0.054		0.419	0.160	0.015	0.113	0.547
Groundwaters								
GW-03	04/08/98	0.034		0.100	0.024	< 0.010	0.703	0.813
GW-04	04/08/98	0.050	<	0.100	< 0.020	< 0.010	0.817	0.927
GW-05	04/08/98	0.022		0.118	< 0.020	< 0.010	3.430	3.558
GW-07	04/08/98	0.070	<	0.100	< 0.020	< 0.010	0.953	1.063
GW-08	04/08/98	0.028		0.115	0.021	< 0.010	5.370	5.495
GW-11	04/08/98	0.010		0.116	< 0.020	< 0.010	0.389	0.515
GW-14	04/08/98	0.046	<	0.100	< 0.020	< 0.010	0.429	0.539
Reservoirs								
HPR	04/01/98	2.150	2.360	15.400	15.600	0.068	0.959	16.427
ICR	04/01/98	0.050	< 0.010	0.699	0.040	< 0.010	0.065	0.774
Surfacewaters: Carson R								
SW-01	04/01/98	0.036	0.010	0.310	< 0.020	< 0.010	0.049	0.369
SW-05	04/01/98	0.024	0.010	0.187	0.020	< 0.010	0.063	0.260
SW-06	04/01/98	0.026	0.010	0.199	< 0.020	< 0.010	0.071	0.280
SW-08	04/01/98	0.102	0.036	0.463	0.026	< 0.010	0.357	0.830
Surfacewaters: Indian Cr								
SW-02	04/01/98	0.022	0.014	0.169	< 0.020	< 0.010	< 0.010	0.189
SW-03	04/01/98	0.040	0.024	0.223	< 0.020	< 0.010	0.037	0.270
SW-04	04/01/98	0.050	0.022	0.227	< 0.020	< 0.010	0.047	0.284

ALPINE COUNTY MONITORING

05/05/98

Site	Date	COD mg/L	BOD mg/L	O & G mg/L	Boron mg/L	Ca mg/L	Mg mg/L	Na mg/L	K mg/L	SAR	Exch Na %	Hardness mg/L	Water Level MSL or Ft
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Alpine Monitoring Wells

ACMW-01A	04/14/98												5482.3
ACMW-01B	04/14/98												5495.8
ACMW-02N	04/14/98												5459.4
ACMW-02S	04/14/98												5460.8
ACMW-04W	04/14/98												4898.4
ACMW-06N	04/14/98												5216.2
ACMW-06S	04/14/98												5205.3

Groundwaters

GW-03	04/08/98												
GW-04	04/08/98												
GW-05	04/08/98												
GW-07	04/08/98												
GW-08	04/08/98												
GW-11	04/08/98												
GW-14	04/08/98												

Reservoirs

HPR	04/01/98	18	2		0.14	13.7	3.5	37.3	8.0	2.32	57.9		54.3
ICR	04/01/98	13	2		0.04	8.6	1.9	5.2	1.9	0.42	26.2		

Surfacewaters: Carson R

SW-01	04/01/98		1	<	1		0.03	6.3	1.8	3.0	1.2	0.27	20.8
SW-05	04/01/98		1	<	1		0.03	6.9	1.9	3.5	1.4	0.31	22.3
SW-06	04/01/98		1	<	1	<	0.01	6.6	1.9	3.5	1.4	0.30	22.4
SW-08	04/01/98		1	<	1		0.03	10.9	2.9	10.0	2.6	0.70	33.9

Surfacewaters: Indian Cr

SW-02	04/01/98		1	<	1		0.01	6.0	1.8	4.3	1.1	0.40	28.4
SW-03	04/01/98		1	<	1			7.2	2.1	5.2	1.2	0.44	28.7
SW-04	04/01/98		2	<	1		0.04	8.6	2.6	5.8	1.4	0.44	27.0

**ALPINE COUNTY
BACTERIOLOGICAL MONITORING**

05/05/98

Alpine Monitoring Wells

Site	Date	Total Coliform MPN/100mL	Fecal Coliform MPN/100mL	Fecal Streptococci MPN/100mLL
ACMW-01A	04/14/98	< 1.1	< 1.1	
ACMW-01B	04/14/98	< 1.1	< 1.1	
ACMW-02N	04/14/98	< 1.1	< 1.1	
ACMW-02S	04/14/98	< 1.1	< 1.1	
ACMW-04W	04/14/98	6.9	< 1.1	
ACMW-06N	04/14/98	1.1	< 1.1	
ACMW-06S	04/14/98	9.2	< 1.1	

Groundwaters

Site	Date	Total Coliform MPN/100mL	Fecal Coliform MPN/100mL	Fecal Streptococci MPN/100mLL
GW-03	04/08/98	< 1.1	< 1.1	
GW-04	04/08/98	< 1.1	< 1.1	
GW-05	04/08/98	< 1.1	< 1.1	
GW-07	04/08/98	< 1.1	< 1.1	
GW-08	04/08/98	< 1.1	< 1.1	
GW-11	04/08/98	< 1.1	< 1.1	
GW-14	04/08/98	< 1.1	< 1.1	

Reservoirs

Site	Date	Total Coliform MPN/100mL	Fecal Coliform MPN/100mL	Fecal Streptococci MPN/100mLL
HPR	04/01/98	8	< 2	2
ICR	04/01/98	23	< 2	7

Surfacewaters: Carson R

Site	Date	Total Coliform MPN/100mL	Fecal Coliform MPN/100mL	Fecal Streptococci MPN/100mLL
SW-01	04/01/98	< 30	< 30	
SW-05	04/01/98	< 30	< 30	
SW-06	04/01/98	< 30	< 30	
SW-08	04/01/98	430	430	

Surfacewaters: Indian Cr

Site	Date	Total Coliform MPN/100mL	Fecal Coliform MPN/100mL	Fecal Streptococci MPN/100mLL
SW-02	04/01/98	40	< 30	
SW-03	04/01/98	230	230	
SW-04	04/01/98	90	< 30	

**ALPINE COUNTY
BLUE GREEN ALGAE**

ID#	Site	Location	Date	Colonies #	Colony # Cells	Filaments #	Filaments # Cells	Filaments #	Filament Length	Single Cells, #
980401-06	SW-01	Carson R Woodfords	04/01/98	0	0	0	0	0	0	0
980401-07	SW-02	Indian Cr Upper	04/01/98	0	0	0	0	0	0	0
980401-08	SW-03	Indian Cr Mid	04/01/98	0	0	0	0	0	0	0
980401-09	SW-04	Indian Cr Lower	04/01/98	0	0	0	0	0	0	0
980401-10	SW-05	Carson R Paynesville	04/01/98	0	0	0	0	0	0	0
980401-11	SW-06	Carson R Stateline	04/01/98	0	0	0	0	0	0	0
980401-12	SW-08	Irrigation Ditch	04/01/98	0	0	0	0	0	0	0

ALPINE COUNTY SOILS

05/13/98

Site	Date	Location	Type	pH	EC mmho	%Sat	TKN mg/Kg	NO3-N mg/L	Total P mg/Kg	Exch P mg/L
S2a	03/11/98	Celio	KT	8.23	1.11	59.3	1,550	0.8		2.4
S3a	03/11/98	Hall	SMB	6.89	0.24	31.8	1,190	0.7		12.4
S4a	03/11/98	Gansberg	DI	6.45	0.26	34.9	1,140	1.8		3.8
S5a	03/11/98	Gansberg	HRB	6.30	0.60	32.4	1,130	4.4		14.1
S6a	03/11/98	Neddenriep	DWB	6.54	0.17	48.1	1,640	0.9		41.3
S7a	03/11/98	Bruns	JaC	6.35	0.09	37.3	1,350	0.7		3.3
S8a	03/11/98	Dressler	SOD	6.26	0.11	17.2	225	0.8		6.1

Site	Date	Cl mg/L	SO4 mg/Kg	CEC meq/100g	Cu mg/Kg	Mo mg/Kg	Ca mg/L	Mg mg/L	Na mg/L	SAR	%Na	
S2a	03/11/98	<	1		12.0	<	1.0	48.4	23.0	132.0	3.91	4.2
S3a	03/11/98		1		12.0	<	1.0	14.3	4.2	22.8	1.36	0.7
S4a	03/11/98		2		21.0	<	1.0	12.0	2.8	32.6	2.20	1.9
S5a	03/11/98		6		16.0	<	1.0	21.1	8.6	34.4	1.60	1.0
S6a	03/11/98		2		27.0	<	1.0	2.5	0.5	29.8	4.48	5.0
S7a	03/11/98		7		24.0	<	1.0	6.6	1.5	5.4	0.49	-0.5
S8a	03/11/98		1		16.0	<	1.0	4.4	2.5	12.1	1.14	0.4

SOUTH TAZOE PUBLIC UTILITY DISTRICT

05/13/98

WATER QUALITY DATA

of

MONITORING WELLS

WELL	DATE	WATER LEVEL (MSL ft)	TEMP C	pH	EC umhos/cm	Cl mg/L	NO3-N mg/L	PO4-P mg/L	COD mg/L
CONTROL	04/21/98	6283.7	11.2	6.81	169	5.4	2.40		< 5
MW01.5	04/21/98	6269.7	10.3	7.30	157	4.8	.81		< 5
MW02-50	04/21/98	6269.5	11.2	6.58	584	57.0	14.20		< 5
MW03-50	04/21/98	6269.6	11.9	6.20	523	46.3	14.40		< 5
MW04-50	04/21/98	6270.7	8.8	6.14	82	6.4	.06		< 5
MW07-50	04/21/98	6280.6	9.6	6.34	276	28.0	.64		< 5
MW08-25	04/21/98	6249.3	9.4	6.15	938	46.2	< .01		87
MW11	04/21/98	6268.3	11.0	6.62	86	1.2	.39		< 5
MW12	04/21/98	6268.0	10.6	6.41	231	2.6	.38		10
MW13	04/21/98	6259.0	7.5	6.87	997	4.1	9.34		36

=====
Note: Samples filtered through 0.45 u filter before analysis

SOUTH TAHOE PUBLIC UTILITY DISTRICT
 WATER QUALITY DATA
 of
 HEAVENLY VALLEY CREEK

05/13/98

Sample Date: 04/08/98

SITE	TEMP C	pH	EC umhos/cm	Cl mg/L	COD mg/L	NO3-N mg/L	SS mg/L	O&G mg/L	COMMENTS
HVC-1	3.8	6.79	54	1.2	< 5	.06			
HVC-2	5.7	6.87	58	2.7	< 5	< .01			
HVC-3	4.4	6.79	69	3.1	9	.02			
HVC-4	5.2	6.77	110	.9	8	.20			
HVC-5									Dry

- =====
- HVC-1: 15 feet downstream of Pioneer Trail
 - HVC-2: 250 feet upstream of Pond #2
 - HVC-3: 25 feet downstream of Johnson Blvd crossing
 - HVC-4: Effluent of drainpipe from Lower Shop area
 - HVC-5: Effluent of drainpipe along Johnson Blvd, 10 feet upstream of Johnson Blvd

Wastewater Reclamation Permit Compliance

The West Fork, Carson River Water Quality Objectives and East Fork, Carson River limitations were exceeded as follows (a ✓ indicates objective exceeded):

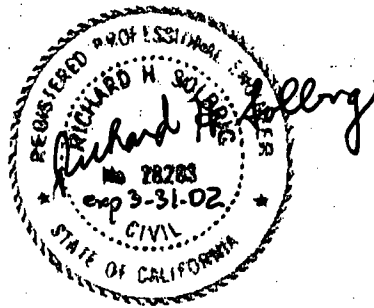
Site	Location	TDS		Cl ⁻		TKN		NO ₃ -N		Total N		Total P		SO ₄		Boron		Exch Na %	
		Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence	Limit	Exceedence
SW-01	Carson River, Woodfords	55	✓	1.0	✓	0.13		0.02	✓	0.15	✓	0.02	✓	2.0	✓	0.02	✓	20	✓
SW-06	Carson River, Stateline	70		2.5	✓	0.22		0.03	✓	0.25		0.03		2.0	✓	0.02		20	✓
SW-02	Indian Creek, Upper	100		6.0						0.30		0.03		8.0		0.25		30	✓
SW-03	Indian Creek, Mid	100	✓	6.0						0.30	✓	0.03		8.0		0.25		30	
SW-04	Indian Creek, Lower	100		6.0						0.30	✓	0.03	✓	8.0		0.25		30	

Soil analysis for January and February are included. January soils do not have results for copper and molybdenum; the samples were destroyed in a fire before analysis could be performed. March blue-green algae results are not included; they will be sent to you when they are completed.

Certification

I hereby certify that the enclosed monitoring report was prepared under my direct supervision and that I am a duly Registered Engineer under the laws of the State of California.

Sincerely,



Richard Solbrig,
Assistant Manager/Engineer

Enclosures:

1.

March Monthly Report	Pages
Wastewater Treatment plant	2
Permit Compliance Record	1
Export pipeline inspection	1
Sample site locations	2
Monitoring wells (ERB)	1
Heavenly Valley Creek	1
Alpine County Surfacewaters, Groundwaters and Reservoirs	4
Alpine County soils, January and February	2
Total number of pages:	14

- cc: Calif. Dept. of Health Services, ODW - Jess Morehouse
El Dorado Co. Dept. of Environmental Health - Virginia Huber
Nevada Division of Environmental Protection - Wendel McCurry
Alpine County Health Department - Dr. Richard Botto
Alpine County Health Department - Jim Goodloe
Alpine County Board of Supervisors
EPA - Permit and Compliance Branch, W-5 - Bill Pierce
Desert Research Group (Alpine County Consultants) - Bill Albright
STPUD Board of Directors
STPUD General Manager / District Engineer - Robert G. Baer
STPUD Manager of Operations - Ross Johnson
STPUD Laboratory Director - Terry Powers
STPUD Manager of Alpine County Operations - Hal Bird

**SOUTH TAHOE PUBLIC UTILITY DISTRICT
WASTEWATER TREATMENT PLANT MONTHLY REPORT**

04/06/98
09:10:13

MARCH 1998

Date	Day	FLOW MGD			Pond Inf	PRECIP Inch	Type	D.O. mg/L Fin	COD mg/L		BOD mg/L		SS mg/L	
		Inf	2-Hr Peak Inf	Eff					Pond Return	Raw	Fin	Raw	Fin	Raw
03/01/98	Sun	5.03	6.5	4.85			7.32	439						
03/02/98	Mon	4.50	6.5	5.07			6.61	363						
03/03/98	Tue	4.69	6.0	4.18			7.05	356						
03/04/98	Wed	4.33	6.6	4.64			6.51	377	36.6	146	5.7	145	2.8	
03/05/98	Thu	4.36	6.0	4.36		0.72	6.55	430						
03/06/98	Fri	4.65	6.8	4.17			6.41	356						
03/07/98	Sat	5.25	7.4	5.70			6.57	384	41.2	153	7.1	158	4.0	
03/08/98	Sun	5.04	8.2	4.70			6.85	393						
03/09/98	Mon	4.43	6.0	4.32			7.11	343						
03/10/98	Tue	4.47	5.6	4.73			6.55	336						
03/11/98	Wed	4.51	6.0	4.16			6.72	362	33.4	148	4.8	142	2.4	
03/12/98	Thu	4.64	6.4	4.86			6.62	322						
03/13/98	Fri	4.84	6.6	4.85		0.15	5.66	356						
03/14/98	Sat	5.49	7.8	5.70			5.69	391	42.4	166	7.8	154	4.7	
03/15/98	Sun	5.51	9.0	5.31			6.73	426						
03/16/98	Mon	5.05	6.5	5.19			6.64	396						
03/17/98	Tue	5.10	7.4	4.85			6.79	322						
03/18/98	Wed	4.80	6.6	5.39			7.54	345	32.7	113	4.7	128	2.1	
03/19/98	Thu	4.92	7.8	4.70			7.15	290						
03/20/98	Fri	5.70	7.2	6.31			6.52	333						
03/21/98	Sat	6.26	8.5	5.85		0.05	6.59	444	28.8	212	6.2	200	2.7	
03/22/98	Sun	7.01	8.6	6.32		0.05	6.75	331						
03/23/98	Mon	7.49	9.0	6.66		1.65	6.02	230	40.8	95	9.5	107	3.7	
03/24/98	Tue	8.85	11.6	6.19	0.06	1.65	6.82	216						
03/25/98	Wed	6.93	9.6	6.35		0.03	6.54	237						
03/26/98	Thu	6.25	7.9	7.61	1.96		7.36	234						
03/27/98	Fri	6.09	8.0	7.89	1.73		7.84	241						
03/28/98	Sat	6.22	8.5	7.76		0.02	7.49	301	22.8	127	4.6	103	2.0	
03/29/98	Sun	5.79	7.4	6.11			6.89	301						
03/30/98	Mon	5.07	7.2	6.02			9.17	299	26.9	124	5.2	131	2.4	
03/31/98	Tue	4.93	6.4	5.24		0.15	6.65	315						
PERMIT MAX		7.7							300		45		60	
PERMIT MIN														
PERMIT AVE									60		30		30	
TOTAL		168.20	229.6	170.04	3.75	1.65	5.09	211.71	10469	305.6	1284	55.6	1268	26.8
MAXIMUM		8.85	11.6	7.89	1.96	1.65	2.10	9.17	444	42.4	212	9.5	200	4.7
MINIMUM		4.33	5.6	4.16	0.06	1.65	0.02	5.66	216	22.8	95	4.6	103	2.0
AVERAGE		5.43	7.4	5.49	1.25	1.65	0.51	6.83	338	34.0	143	6.2	141	3.0
# Tests		31	31	31	3	1	10	31	31	9	9	9	9	9

**SOUTH TAHOE PUBLIC UTILITY DISTRICT
WASTEWATER TREATMENT PLANT MONTHLY REPORT**

04/06/98
09:10:13

MARCH 1998

Date	Day	SETTLEABLE SOLIDS mL/L		MBAS mg/L		pH Units		TURBIDITY NTU		Cl2 mg/L	FINAL COLIFORMS MPN/100 mL			TDS mg/L		ALKALINITY mg/L	
		Raw	Fin	Raw	Fin	Raw	Fin	Fin	Fin		Total	7day-	Median	Raw	Fin	Raw	Fin
03/01/98	Sun	11.0	< 0.1			7.40	7.56	2.40	3.76	<	2	<	2			164	154
03/02/98	Mon	10.0	< 0.1			7.43	7.50	2.40	3.76	<	2	<	2			153	146
03/03/98	Tue	8.5	< 0.1	2.01	0.038	7.45	7.66	1.70	4.47	<	2	<	2			142	140
03/04/98	Wed	10.0	< 0.1			7.51	7.86	1.80	5.18	<	2	<	2	220	206	143	136
03/05/98	Thu	10.0	< 0.1			7.37	7.46	2.10	5.28	<	2	<	2			145	136
03/06/98	Fri	10.0	< 0.1			7.32	7.52	1.90	4.77	<	2	<	2			150	138
03/07/98	Sat	10.0	< 0.1			7.45	7.52	2.10	4.77	<	2	<	2			160	143
03/08/98	Sun	10.0	< 0.1			7.51	7.92	2.30	4.27	<	2	<	2			162	146
03/09/98	Mon	11.0	< 0.1			7.53			4.37	<	2	<	2			147	
03/10/98	Tue	8.0	< 0.1			7.34	7.48	2.10	5.08	<	2	<	2			149	138
03/11/98	Wed	10.0	< 0.1			7.43	7.57	1.90	4.37	<	2	<	2	238	225	147	136
03/12/98	Thu	8.0	< 0.1			7.39	7.53	1.80	7.72	<	2	<	2			144	130
03/13/98	Fri	8.5	< 0.1			7.33	7.38	2.00	5.59	<	2	<	2			144	133
03/14/98	Sat	10.5	< 0.1			7.25	7.23	2.50	6.09	<	2	<	2			163	134
03/15/98	Sun	9.5	< 0.1			7.44	7.62	2.40	4.98	<	2	<	2			159	142
03/16/98	Mon	9.0	< 0.1			7.54	7.58	2.00	4.27	<	2	<	2			141	131
03/17/98	Tue	8.0	< 0.1			7.37	7.53	1.60	4.47	<	2	<	2			138	126
03/18/98	Wed	7.5	< 0.1			7.34	7.50	1.60	4.57	<	2	<	2	220	206	135	124
03/19/98	Thu	7.5	< 0.1			7.48	7.54	1.70	3.55	<	2	<	2			134	122
03/20/98	Fri	7.5	< 0.1			7.31	7.39	1.60	6.70	<	2	<	2			135	119
03/21/98	Sat	12.5	< 0.1			7.26	7.47	2.10	4.47	<	2	<	2			163	125
03/22/98	Sun	9.0	< 0.1			7.29	7.46	2.90	4.37	<	2	<	2			138	126
03/23/98	Mon	6.5	< 0.1			7.31	7.45	2.95	4.67	<	2	<	2	172	184	112	112
03/24/98	Tue	6.0	< 0.1			7.20	7.30	3.40		<						82	83
03/25/98	Wed	7.0	< 0.1			7.29	7.26	2.60	8.94	<	2	<	2			98	79
03/26/98	Thu	7.0	< 0.1			7.49	7.33	3.30	5.99	<	2	<	2			105	83
03/27/98	Fri	6.5	< 0.1			7.52	7.40	1.50	5.76	<	2	<	2			115	88
03/28/98	Sat	8.0	< 0.1			7.62	7.47	1.50	5.76	<	2	<	2			132	101
03/29/98	Sun	9.0	< 0.1			7.42	7.51	1.50	5.46	<	2	<	2			134	120
03/30/98	Mon	9.0	< 0.1			7.29	7.44	1.70	5.88	<	2	<	2	213	206	124	119
03/31/98	Tue	8.0	< 0.1			7.52	7.61	2.00	4.75	<	2	<	2			124	118
PERMIT MAX			0.1		2.0		8.5	20			240		23				
PERMIT MIN							6.5										
PERMIT AVE					1.0			10									
TOTAL		273.0	3.0	2.01	0.038	229.40	225.05	63.35	154.07		60		60	1063	1027	4282	3727
MAXIMUM		12.5	0.1	2.01	0.038	7.62	7.92	3.40	8.94		2		2	238	225	164	154
MINIMUM		6.0	0	2.01	0.038	7.20	7.23	1.50	3.55		2		2	172	184	82	79
AVERAGE		8.8	0.1	2.01	0.038	7.40	7.50	2.11	5.14		2		2	213	205	138	124
# Tests		31	30	1	1	31	30	30	30		30		30	5	5	31	30

SOUTH TAHOE PUBLIC UTILITY DISTRICT
MEMORANDUM

Date: March 18, 1998

To: Bob Baer, Diane Noble, Terry Powers

From: Greg Schrempp

Topic: Export Line Inspection

On March 17 1998, Tim (luck of the Irish) Rieger and I conducted our check of the District's export line from the treatment plant to where the "C" line daylights at Harvey Place at Station 564+04. Numerous wet spots were checked, however no leaks were found.

SAMPLE LOCATIONS

TAHOE BASIN MONITORING WELLS

<u>Site</u>	<u>Location</u>
ERB	Emergency Retention Basin
CONTROL	North of Post Office
MW02-25, -50	Emergency Retention Basin, S side
MW03-25, -50	Emergency Retention Basin, S side
MW04-25, -50	Emergency Retention Basin, W side
MW07-25, -50	Emergency Retention Basin, N side
MW08-25, -50	Pond #1, SW corner
MW11	S.E. corner of wastewater treatment plant grounds
MW12	South of Emergency Pump Building, for buried sludge
MW13	Pond 2, along Heavenly Valley Creek, for buried sludge

HEAVENLY VALLEY CREEK

HVC-1	At Pioneer Trail
HVC-2	250 ft upstream of Pond #2
HVC-3	25 ft downstream of Johnson Blvd.
HVC-4	Effluent of drain pipe from Lower Shop area
HVC-5	Effluent of drainage pipe along Johnson Blvd, 10 feet upstream of Johnson Blvd.

ALPINE COUNTY MONITORING WELLS

<u>Site</u>	<u>Location</u>
ACMW-01AW	Below main dam at Harvey Place Reservoir
ACMW-01BE	Below auxiliary dam at Harvey Place Reservoir
ACMW-02, N&S	On dam access road at Diamond Valley Road
ACMW-03	Bruns ranch, east side of Highway 88
ACMW-04W	Gansberg ranch, west side of Highway 88
ACMW-05	Dressler ranch
ACMW-06, N&S	Celio ranch, on Diamond Valley Road

ALPINE SOILS

<u>Site</u>	<u>Ranch</u>
S2	Celio
S3	Hall
S4	Gansberg
S5	Gansberg
S6	Neddenriep
S7	Bruns
S8	Dressler

ALPINE GROUNDWATERS

<u>Site</u>	<u>Homeowner</u>
GW-01	Sagues
GW-03	Smith/Springmeyer
GW-04	Celio
GW-05	Neddenriep
GW-07	Gansberg, Jr.
GW-08	Arant
GW-11	Diamond Valley School
GW-14	Sierra Pines Store

ALPINE SURFACEWATERS

<u>Site</u>	<u>Location</u>
SW-01	Carson River, Woodfords
SW-02	Indian Creek, @ HWY 89
SW-03	Indian Creek, @ upper bridge
SW-04	Indian Creek, @ lower bridge
SW-05	Carson River, Paynesville
SW-06	Carson River, Stateline
SW-07	Fredericksberg Ditch, Stateline
SW-08	Irrigation Ditch along Carson River Road
SW-09	Carson River, Dressler Lane
SW-10	Indian Creek, @ Smith-Springmeyer Ranch

SOUTH TAHOE PUBLIC UTILITY DISTRICT
WATER QUALITY DATA
of

04/01/98

MONITORING WELLS

WELL	DATE	WATER LEVEL (MSL ft)	TEMP C	pH	EC umhos/cm	Cl mg/L	NO3-N mg/L	PO4-P mg/L	COD mg/L
CONTROL	03/25/98	6283.8	9.0	6.45	164	5.4	2.31		< 5
MW01.5	03/25/98	6269.6	8.3	6.71	156	5.1	.85		< 5
MW02-50	03/25/98	6269.4	9.1	6.35	589	62.5	14.50		< 5
MW03-50	03/25/98	6269.5	9.5	6.08	521	46.3	14.80		< 5
MW04-50	03/26/98	6269.5	7.6	6.13	80	7.1	.05		< 5
MW07-50	03/25/98	6280.4	7.2	6.21	276	28.8	.64		< 5
MW08-25	03/26/98	6250.1	7.8	6.37	932	43.7	< .01		88
MW11	03/26/98	6267.8	7.9	6.56	88	1.4	.40		
MW12	03/26/98	6268.7	8.8	6.60	336	2.6	.44		
MW13	03/26/98	6259.7	6.2	6.87	749	3.7	6.27		

=====
Note: Samples filtered through 0.45 u filter before analysis

SOUTH TAHOE PUBLIC UTILITY DISTRICT
 WATER QUALITY DATA
 of
 HEAVENLY VALLEY CREEK

03/27/98

Sample Date: 03/10/98

SITE	TEMP C	pH	EC umhos/cm	Cl mg/L	COD mg/L	NO3-N mg/L	SS mg/L	O&G mg/L	COMMENTS
HVC-1	.9	6.60	58	1.2	< 5	.11			
HVC-2	.6	6.79	63	2.6	< 5	.05			
HVC-3	.1	6.86	68	2.5	< 5	.03			
HVC-4									Dry
HVC-5									Dry

=====

HVC-1: 15 feet downstream of Pioneer Trail
 HVC-2: 250 feet upstream of Pond #2
 HVC-3: 25 feet downstream of Johnson Blvd crossing
 HVC-4: Effluent of drainpipe from Lower Shop area
 HVC-5: Effluent of drainpipe along Johnson Blvd, 10 feet upstream of Johnson Blvd

ALPINE COUNTY MONITORING

03/27/98

Site	Date	ID	Location	Temp C	pH	EC umhos	DO mg/L	Alk mg/L	TDS mg/L	SS mg/L	Turb NTU	Cl mg/L	SO4 mg/L
Alpine Monitoring Wells													
ACMW-01AW	03/17/98	980317-06	Main Dam	11.2	6.24	80		34	64			2.3	
ACMW-01BE	03/17/98	980317-07	Secondary Dam	9.7	6.18	109		53	72			1.4	
ACMW-02N	03/17/98	980317-08	Access Gate	12.9	6.45	152		71	96			3.2	
ACMW-02S	03/17/98	980317-09	Access Gate	9.7	6.32	104		44	73			3.6	
ACMW-04W	03/17/98	980317-10	Gansberg	12.4	5.56	217		55	142			16.0	
ACMW-06N	03/17/98	980317-11	Celio	10.2	6.74	731		270	440			57.7	
ACMW-06S	03/17/98	980317-12	Celio	10.9	9.53	478		109	240			77.3	
Groundwaters													
GW-03	03/10/98	980310-09	Smith/Springmeyer	12.5	7.43	309		129	224			1.5	
GW-04	03/10/98	980310-10	Celio	13.0	7.35	266		118	197			3.1	
GW-05	03/10/98	980310-11	Neddenriep	9.8	6.36	302		61	192			32.6	
GW-07	03/10/98	980310-12	Gansberg	6.1	6.37	124		53	95			1.5	
GW-08	03/10/98	980310-13	Arant	7.4	6.32	274		57	172			27.7	
GW-11	03/10/98	980310-14	Diamond Val. School	10.9	6.19	98		47	79			1.0	
GW-14	03/10/98	980310-15	Sierra Pines	8.3	6.41	111		51	95			1.1	
Reservoirs													
HPR	03/03/98	980303-22	Harvey Place Reservoir	4.8	7.56	470	8.50	121	213	2.33	3.6	48.7	18.2
ICR	03/03/98	980303-23	Indian Creek Reservoir	4.7	7.46	96	10.80	44	66	13.50	3.7	1.5	2.6
Surfacewaters: Carson R													
SW-01	03/03/98	980303-15	Carson R Woodfords	2.7	7.09	79	7.50	34	58	1.13	.56	3.3	2.1
SW-05	03/03/98	980303-19	Carson R Paynesville	4.4	7.43	77	10.80	37	49	1.52	.61	3.1	2.6
SW-06	03/03/98	980303-20	Carson R Stateline	4.9	7.57	86	10.40	38	62	2.42	.69	3.2	2.4
SW-08	03/03/98	980303-21	Irrigation Ditch	12.7	7.58	122	8.10	55	96	25.70	2.2	2.4	4.2
Surfacewaters: Indian Cr													
SW-02	03/03/98	980303-16	Indian Cr Upper	1.6	7.18	82	10.70	39	67	4.17	2.1	2.5	2.5
SW-03	03/03/98	980303-17	Indian Cr Mid	5.2	6.82	156	10.00	66	106	3.23	4.7	4.7	6.4
SW-04	03/03/98	980303-18	Indian Cr Lower	4.3	7.21	117	10.80	57	95	18.50	3.5	3.0	2.9

ALPINE COUNTY MONITORING

03/27/98

Site	Date	TotalP mg/L	PO4-P mg/L	TKN mg/L	NH3-N mg/L	NO2-N mg/L	NO3-N mg/L	Total N mg/L
Alpine Monitoring Wells								
ACMW-01A	03/17/98	0.033	<	0.100	< 0.020	< 0.010	0.293	0.403
ACMW-01B	03/17/98	0.022	<	0.100	< 0.020	< 0.010	0.214	0.324
ACMW-02N	03/17/98	0.024	<	0.100	< 0.020	< 0.010	0.066	0.176
ACMW-02S	03/17/98	0.020		0.124	0.029	< 0.010	0.323	0.457
ACMW-04W	03/17/98	0.022		0.115	< 0.020	< 0.010	2.920	3.045
ACMW-06N	03/17/98	0.311		0.314	0.041	< 0.010	< 0.010	0.334
ACMW-06S	03/17/98	0.036	<	0.100	0.130	0.021	0.083	0.204
Groundwaters								
GW-03	03/10/98	0.036	<	0.100	< 0.020	< 0.010	0.686	0.796
GW-04	03/10/98	0.058	<	0.100	< 0.020	< 0.010	0.774	0.884
GW-05	03/10/98	0.032	<	0.100	< 0.020	< 0.010	3.110	3.220
GW-07	03/10/98	0.076	<	0.100	< 0.020	< 0.010	1.100	1.210
GW-08	03/10/98	0.040		0.100	0.031	< 0.010	4.930	5.040
GW-11	03/10/98	0.030	<	0.100	0.028	< 0.010	0.322	0.432
GW-14	03/10/98	0.064		0.100	0.020	< 0.010	0.416	0.526
Reservoirs								
HPR	03/03/98	2.360		18.000	17.000	< 0.100	1.190	19.290
ICR	03/03/98	0.086	< 0.010	0.822	0.071	< 0.010	0.148	0.980
Surfacewaters: Carson R								
SW-01	03/03/98	0.030	< 0.010	0.131	< 0.020	< 0.010	0.030	0.171
SW-05	03/03/98	0.016	< 0.010	0.196	< 0.020	< 0.010	0.050	0.256
SW-06	03/03/98	0.016	0.010	0.169	< 0.020	< 0.010	0.045	0.224
SW-08	03/03/98	0.106	0.032	0.340	< 0.020	< 0.010	0.359	0.709
Surfacewaters: Indian Cr								
SW-02	03/03/98	0.022	0.010	0.195	< 0.020	< 0.010	0.010	0.215
SW-03	03/03/98	0.032	0.032	0.368	< 0.020	< 0.010	0.080	0.458
SW-04	03/03/98	0.120	0.022	0.439	< 0.020	< 0.010	0.057	0.506

ALPINE COUNTY MONITORING

03/27/98

Site	Date	COD mg/L	BOD mg/L	O & G mg/L	Boron mg/L	Ca mg/L	Mg mg/L	Na mg/L	K mg/L	SAR	Exch Na %	Hardness mg/L	Water Level MSL or Ft
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Alpine Monitoring Wells

ACMW-01A	03/17/98												5482.6
ACMW-01B	03/17/98												5495.1
ACMW-02N	03/17/98												5459.5
ACMW-02S	03/17/98												5461.3
ACMW-04W	03/17/98												4898.3
ACMW-06N	03/17/98												5216.9
ACMW-06S	03/17/98												5205.8

Groundwaters

GW-03	03/10/98												
GW-04	03/10/98												
GW-05	03/10/98												
GW-07	03/10/98												
GW-08	03/10/98												
GW-11	03/10/98												
GW-14	03/10/98												

Reservoirs

HPR	03/03/98	27	3		0.19	15.8	3.6	42.5	8.4	2.51	58.8		49.0
ICR	03/03/98	18	3		0.02	10.5	2.0	6.1	2.0	0.45	26.3		

Surfacewaters: Carson R

SW-01	03/03/98		2	<	1	0.04	8.1	2.1	4.4	1.4	0.36		23.9
SW-05	03/03/98		2	<	1	0.02	8.2	2.4	5.0	1.5	0.39		25.1
SW-06	03/03/98		2	<	1	0.02	9.0	2.4	5.2	1.6	0.40		24.8
SW-08	03/03/98		1	<	1	0.02	11.5	2.7	10.0	2.3	0.69		33.6

Surfacewaters: Indian Cr

SW-02	03/03/98		1	<	1	0.02	7.9	2.1	6.1	1.2	0.50		30.8
SW-03	03/03/98		2	<	1	0.03	15.1	3.7	10.4	2.0	0.62		29.0
SW-04	03/03/98		1	<	1	0.02	11.9	3.6	7.6	1.8	0.49		26.0

**ALPINE COUNTY
BACTERIOLOGICAL MONITORING**

03/27/98

Alpine Monitoring Wells

Site	Date		Total Coliform MPN/100mL		Fecal Coliform MPN/100mL		Fecal Streptococci MPN/100mLL
ACMW-01A	03/17/98		1.1	<	1.1		
ACMW-01B	03/17/98	<	1.1	<	1.1		
ACMW-02N	03/17/98	<	1.1	<	1.1		
ACMW-02S	03/17/98		9.2	<	1.1		
ACMW-04W	03/17/98	<	1.1	<	1.1		
ACMW-06N	03/17/98		6.9	<	1.1		
ACMW-06S	03/17/98	>	23	<	1.1		

Groundwaters

Site	Date		Total Coliform MPN/100mL		Fecal Coliform MPN/100mL		Fecal Streptococci MPN/100mLL
GW-03	03/10/98	<	1.1	<	1.1		
GW-04	03/10/98	<	1.1	<	1.1		
GW-05	03/10/98	<	1.1	<	1.1		
GW-07	03/10/98	<	1.1	<	1.1		
GW-08	03/10/98	<	1.1	<	1.1		
GW-11	03/10/98	<	1.1	<	1.1		
GW-14	03/10/98	<	1.1	<	1.1		

Reservoirs

Site	Date		Total Coliform MPN/100mL		Fecal Coliform MPN/100mL		Fecal Streptococci MPN/100mLL
HPR	03/03/98		8	<	2		2
ICR	03/03/98		7	<	2		8

Surfacewaters: Carson R

Site	Date		Total Coliform MPN/100mL		Fecal Coliform MPN/100mL		Fecal Streptococci MPN/100mLL
SW-01	03/03/98	<	30	<	30		
SW-05	03/03/98		40	<	30		
SW-06	03/03/98	<	30	<	30		
SW-08	03/03/98		230		40		

Surfacewaters: Indian Cr

Site	Date		Total Coliform MPN/100mL		Fecal Coliform MPN/100mL		Fecal Streptococci MPN/100mLL
SW-02	03/03/98		150	<	30		
SW-03	03/03/98		90	<	30		
SW-04	03/03/98		40		40		

ALPINE COUNTY SOILS

03/27/98

Site	Date	Location	Type	pH	EC mmho	%Sat	TKN mg/Kg	NO3-N mg/L	Total P mg/Kg	Exch P mg/L
S2a	01/08/98	Celio	KT	8.23	1.02	74.9	1,960	0.6		14.3
S3a	01/08/98	Hall	SMB	5.42	0.52	33.3	623	0.7		13.1
S4a	01/08/98	Gansberg	DI	6.54	0.45	37.4	665	2.8		6.4
S5a	01/08/98	Gansberg	HRB	5.83	0.44	36.0	963	8.4		5.6
S6a	01/08/98	Neddenriep	DWB	5.32	0.15	37.2	564	0.7		30.9
S7a	01/08/98	Bruns	JaC	6.29	0.09	39.3	1,060	1.5		7.1
S8a	01/08/98	Dressler	SOD	5.99	0.14	22.8	235	0.6		7.1

Site	Date	Cl mg/L	SO4 mg/Kg	CEC meq/100g	Cu mg/Kg	Mo mg/Kg	Ca mg/L	Mg mg/L	Na mg/L	SAR	%Na
S2a	01/08/98		38				53.4	24.8	102.0	2.89	2.8
S3a	01/08/98		13				34.6	13.6	27.2	0.99	0.2
S4a	01/08/98		4				20.1	4.4	50.8	2.67	2.5
S5a	01/08/98		2				22.2	3.6	47.8	2.48	2.3
S6a	01/08/98		11				5.0	1.3	13.4	1.38	0.7
S7a	01/08/98		3				7.2	1.6	7.1	0.62	-0.4
S8a	01/08/98		1				4.5	2.6	12.1	1.12	0.4

ALPINE COUNTY SOILS

04/06/98

Site	Date	Location	Type	pH	EC mmho	%Sat	TKN mg/Kg	NO3-N mg/L	Total P mg/Kg	Exch P mg/L
S2a	02/04/98	Celio	KT	8.00	1.56	59.5	2,980	4.1		6.6
S3a	02/04/98	Hall	SMB	6.11	0.49	37.4	1,160	0.6		12.7
S4a	02/04/98	Gansberg	DI	6.19	0.79	34.0	897	8.0		8.6
S5a	02/04/98	Gansberg	HRB	6.24	0.31	34.5	1,200	6.6		8.0
S6a	02/04/98	Neddenriep	DWB	5.56	0.21	36.1	1,100	1.7		28.1
S7a	02/04/98	Bruns	JaC	6.14	0.11	39.8	1,350	1.9		3.1

Site	Date	Cl mg/L	SO4 mg/Kg	CEC meq/100g	Cu mg/Kg	Mo mg/Kg	Ca mg/L	Mg mg/L	Na mg/L	SAR	%Na	
S2a	02/04/98		120		18.0	<	2.0	71.2	37.7	197.0	4.70	5.3
S3a	02/04/98		26		14.0	<	2.0	34.5	12.8	35.1	1.30	0.6
S4a	02/04/98		6		29.0	<	2.0	54.9	12.3	47.2	1.50	0.9
S5a	02/04/98		3		22.0	<	2.0	28.2	5.3	23.6	1.07	0.3
S6a	02/04/98		9		31.0	<	2.0	8.2	2.1	21.7	1.74	1.2
S7a	02/04/98		4		35.0	<	2.0	10.0	2.2	9.3	0.70	-0.3

Wastewater Reclamation Permit Compliance

The West Fork, Carson River Water Quality Objectives and East Fork, Carson River limitations were exceeded as follows (a ✓ indicates objective exceeded):

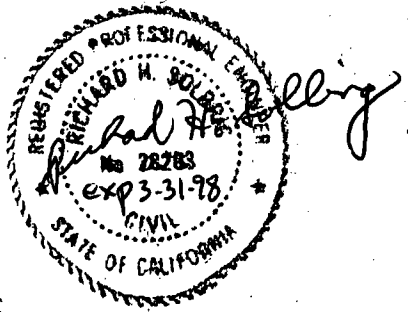
Site	Location	TDS		Cl ⁻		TKN		NO ₃ -N		Total N		Total P		SO ₄		Boron		Exch Na %	
		Limit	Exceedance	Limit	Exceedance	Limit	Exceedance	Limit	Exceedance	Limit	Exceedance	Limit	Exceedance	Limit	Exceedance	Limit	Exceedance	Limit	Exceedance
SW-01	Carson River, Woodfords	55	✓	1.0	✓	0.13	✓	0.02	✓	0.15	✓	0.02		2.0	✓	0.02		20	✓
SW-06	Carson River, Stateline	70	✓	2.5	✓	0.22	✓	0.03	✓	0.25	✓	0.03		2.0	✓	0.02		20	✓
SW-02	Indian Creek, Upper	100		6.0						0.30	✓	0.03		8.0		0.25		30	
SW-03	Indian Creek, Mid	100		6.0						0.30	✓	0.03	✓	8.0		0.25		30	
SW-04	Indian Creek, Lower	100		6.0						0.30	✓	0.03	✓	8.0		0.25		30	

Soil analysis for January and Blue Green Algae analysis for January have not yet been completed; the results will be sent to you as soon as they are available. November and December, 1997 soils results are included.

Certification

I hereby certify that the enclosed monitoring report was prepared under my direct supervision and that I am a duly Registered Engineer under the laws of the State of California.

Sincerely,



Richard Solbrig,
Assistant Manager/Engineer

Enclosures:

1.

January Monthly Report	Pages
Wastewater Treatment plant	2
Permit Compliance Record	1
Export pipeline inspection	1
Sample site locations	2
Monitoring wells (ERB)	1
Heavenly Valley Creek	1
Alpine County Surfacewaters, Groundwaters and Reservoirs	4
Alpine County Soils: November and December, 1997	1
Total number of pages:	13

cc: Calif. Dept. of Health Services, ODW - Jess Morehouse
El Dorado Co. Dept. of Environmental Health - Virginia Huber
Nevada Division of Environmental Protection - Wendel McCurry
Alpine County Health Department - Dr. Richard Botto
Alpine County Health Department - Jim Goodloe
Alpine County Board of Supervisors
EPA - Permit and Compliance Branch, W-5 - Bill Pierce
Desert Research Group (Alpine County Consultants) - Bill Albright
STPUD Board of Directors
STPUD General Manager / District Engineer - Robert G. Baer
STPUD Manager of Operations - Ross Johnson
STPUD Laboratory Director - Terry Powers
STPUD Manager of Alpine County Operations - Hal Bird

**SOUTH TAHOE PUBLIC UTILITY DISTRICT
WASTEWATER TREATMENT PLANT MONTHLY REPORT**

02/09/98
10:57:55

JANUARY, 1998

Date	Day	FLOW MGD			Pond Inf	PRECIP Inch	Type	D.O. mg/L Fin	COD mg/L		BOD mg/L		SS mg/L		
		Inf	2-Hr Peak Inf	Pond Return Eff					Raw	Fin	Raw	Fin	Raw	Fin	
01/01/98	Thu	6.29	9.3	5.52			0.07	Rain	7.22	490					
01/02/98	Fri	4.40	9.4	5.56			0.44	Snow	7.30	483					
01/03/98	Sat	5.11	8.0	5.19					5.92	452	44.1	220	5.6	158	2.4
01/04/98	Sun	4.48	6.6	4.54			0.34	Snow	6.76	492					
01/05/98	Mon	3.87	6.0	4.49					6.78						
01/06/98	Tue	3.92	6.0	4.45			0.02	Snow	6.68	428					
01/07/98	Wed	3.93	5.8	4.05			0.01	Snow	6.98	478	25.4	181	3.3	189	1.5
01/08/98	Thu	4.04	5.9	3.40					8.75	396					
01/09/98	Fri	4.01	6.4	4.36					6.50	407					
01/10/98	Sat	4.41	6.4	4.45			0.03	Snow	6.49	422	26.9	172	4.8	172	1.3
01/11/98	Sun	4.46	6.9	4.45			0.12	Rain	6.45	373					
01/12/98	Mon	4.60	7.6	4.73			0.75	Rain	6.60	329					
01/13/98	Tue	3.96	5.8	3.71					8.46	308					
01/14/98	Wed	4.78	6.2	4.67			0.53	Rain	7.17	401	36.4	172	6.1	178	3.8
01/15/98	Thu	5.75	8.2	6.17			0.50	Rain	6.41	352					
01/16/98	Fri	5.22	3.8	4.48			0.08	Snow	7.89	301					
01/17/98	Sat	5.97	8.4	6.28					7.14	400	23.8	166	5.1	130	2.6
01/18/98	Sun	5.46	8.1	3.99			1.17	Snow	6.73	354					
01/19/98	Mon	4.66	6.8	6.61					7.61	345					
01/20/98	Tue	4.02	5.8	5.36					7.81	329					
01/21/98	Wed	4.22	6.2	4.27					6.67	368	29.0	168	6.0	156	2.5
01/22/98	Thu	4.10	6.0	4.13					6.79	400					
01/23/98	Fri	4.37	5.4	4.32					6.70	508					
01/24/98	Sat	4.92	7.0	4.52					7.60	298	36.1	153	7.7	76	1.3
01/25/98	Sun	4.85	7.0	4.76					7.37	370					
01/26/98	Mon	4.19	6.1	4.39					6.77						
01/27/98	Tue	4.12	5.6	4.15					6.60	518					
01/28/98	Wed	4.09	5.5	4.17					6.96	795	46.8	273	11.4	313	4.7
01/29/98	Thu	4.10	6.1	3.93			0.12	Snow	7.28	732					
01/30/98	Fri	4.37	5.8	4.53			0.25	Snow	6.62	552					
01/31/98	Sat	4.73	6.7	4.59					6.88	430	54.2	248	11.7	172	6.8
PERMIT MAX		7.7									300		45		60
PERMIT MIN											60		30		30
PERMIT AVE															
TOTAL		141.40	204.8	144.22			4.43		218.89	12511	322.7	1753	61.4	1544	27.0
MAXIMUM		6.29	9.4	6.61			1.17		8.75	795	54.2	273	11.7	313	6.8
MINIMUM		3.87	3.8	3.40			0.01		5.92	298	23.8	153	3.3	76	1.3
AVERAGE		4.56	6.6	4.65			0.32		7.06	431	35.9	195	6.8	172	3.0
# Tests		31	31	31	0	0	14		31	29	9	9	9	9	9

**SOUTH TAHOE PUBLIC UTILITY DISTRICT
WASTEWATER TREATMENT PLANT MONTHLY REPORT**

02/09/98
10:57:55

JANUARY, 1998

Date	Day	SETTLEABLE SOLIDS mL/L		MBAS mg/L		pH Units		TURBIDITY NTU		Cl2 mg/L	FINAL COLIFORMS MPN/100 mL			TDS mg/L		ALKALINITY mg/L		
		Raw	Fin	Raw	Fin	Raw	Fin	Raw	Fin		Total	7day-	Median	Raw	Fin	Raw	Fin	
01/01/98	Thu	11.5	<	0.1			7.56	7.63	3.30	5.48	<	2	<	2			179	151
01/02/98	Fri	10.5	<	0.1			7.60	7.64	2.60	6.20	<	2	<	2			187	158
01/03/98	Sat	10.5	<	0.1			7.23	7.78	2.00	4.16	<	2	<	2			172	160
01/04/98	Sun	9.5	<	0.1			7.56	7.58	1.90	4.98	<	2	<	2			175	155
01/05/98	Mon		<	0.1				7.70	1.55	4.77	<	2	<	2				150
01/06/98	Tue	12.0	<	0.1	1.25	0.04	7.41	7.54	1.30	4.98	<	2	<	2			166	148
01/07/98	Wed	9.5	<	0.1			7.34	7.64	1.20	6.86	<	2	<	2	257	233	163	148
01/08/98	Thu	8.5	<	0.1			7.55	7.69	1.00	2.95	<	2	<	2			158	148
01/09/98	Fri	10.0	<	0.1			7.31	7.45	1.15	5.08	<	2	<	2			160	144
01/10/98	Sat	11.0	<	0.1			7.44	7.68	1.20	5.69	<	2	<	2			172	148
01/11/98	Sun	10.0	<	0.1			7.52	7.60	1.70	4.73	<	2	<	2			164	149
01/12/98	Mon	8.5	<	0.1			7.59	7.64	2.80	3.55	<	2	<	2			140	138
01/13/98	Tue	8.5	<	0.1			7.65	7.72	2.50	4.06	<	2	<	2			150	129
01/14/98	Wed	10.0	<	0.1			7.27	7.56	3.40	4.16	<	2	<	2	229	224	144	133
01/15/98	Thu	8.0	<	0.1			7.38	7.49	4.45	3.66	<	2	<	2			111	110
01/16/98	Fri	8.0	<	0.1			7.45	7.56	2.15	5.89	<	2	<	2			132	102
01/17/98	Sat	10.5	<	0.1			7.41	7.42	1.90	5.48	<	2	<	2			148	118
01/18/98	Sun	10.5	<	0.1			7.36	7.60	1.40	5.38	<	2	<	2			157	123
01/19/98	Mon	9.0	<	0.1			7.38	7.46	1.40	5.08	<	2	<	2			154	134
01/20/98	Tue	9.0	<	0.1			7.29	7.48	2.30	9.24	<	2	<	2			145	130
01/21/98	Wed	10.0	<	0.1			7.34	7.58	1.95	5.28	<	2	<	2	232	218	148	128
01/22/98	Thu	11.0	<	0.1			7.51	7.58	2.20	5.28	<	2	<	2			150	129
01/23/98	Fri	12.0	<	0.1			7.29	7.44	2.60	7.92	<	2	<	2			157	135
01/24/98	Sat	10.0	<	0.1			7.33	7.55	2.50	8.63	<	2	<	2			159	138
01/25/98	Sun	12.0	<	0.1			7.73	7.55	2.90	8.12	<	2	<	2			176	148
01/26/98	Mon		<	0.1				7.56	2.90	6.40	<	2	<	2				144
01/27/98	Tue	15.0	<	0.1			7.35	7.53	3.45	5.89	<	2	<	2			160	144
01/28/98	Wed	24.0	<	0.1			7.23	7.76	3.50	6.50	<	2	<	2	237	224	157	140
01/29/98	Thu	29.0	<	0.1			7.32	7.56	6.55	5.48	<	2	<	2			154	142
01/30/98	Fri	15.0	<	0.1			7.28	7.52	6.30	5.59	<	2	<	2			155	145
01/31/98	Sat	10.0	<	0.1			7.35	7.58	4.60	5.28	<	2	<	2			157	146
PERMIT MAX				0.1				8.5						240		23		
PERMIT MIN								6.5										
PERMIT AVE							1.0			10								
TOTAL		333.0		3.1	1.25	0.04	215.03	235.07	80.65	172.75		62		62	955	899	4550	4315
MAXIMUM		29.0		0.1	1.25	0.04	7.73	7.78	6.55	9.24		2		2	257	233	187	160
MINIMUM		8.0		0	1.25	0.04	7.23	7.42	1.00	2.95		2		2	229	218	111	102
AVERAGE		11.5		0.1	1.25	0.04	7.41	7.58	2.60	5.57		2		2	239	225	157	139
# Tests		29		31	1	1	29	31	31	31		31		31	4	4	29	31

SOUTH TAHOE PUBLIC UTILITY DISTRICT
MEMORANDUM

Date: January 21, 1998

To: Bob Baer, Diane Noble, Terry Powers

From: Greg Schrempp

Topic: Export Line Inspection

On January 20 and 21 1998, Tim Rieger and I conducted our check of the District's export line from the treatment plant to where the "C" line daylights at Harvey Place at Station 564+04. A couple of wet spots were checked, however no leaks were found.

SAMPLE LOCATIONS

TAHOE BASIN MONITORING WELLS

<u>Site</u>	<u>Location</u>
ERB	Emergency Retention Basin
CONTROL	North of Post Office
MW02-25, -50	Emergency Retention Basin, S side
MW03-25, -50	Emergency Retention Basin, S side
MW04-25, -50	Emergency Retention Basin, W side
MW07-25, -50	Emergency Retention Basin, N side
MW08-25, -50	Pond #1, SW corner
MW11	S.E. corner of wastewater treatment plant grounds
MW12	South of Emergency Pump Building, for buried sludge
MW13	Pond 2, along Heavenly Valley Creek, for buried sludge

HEAVENLY VALLEY CREEK

HVC-1	At Pioneer Trail
HVC-2	250 ft upstream of Pond #2
HVC-3	25 ft downstream of Johnson Blvd.
HVC-4	Effluent of drain pipe from Lower Shop area
HVC-5	Effluent of drainage pipe along Johnson Blvd, 10 feet upstream of Johnson Blvd.

ALPINE COUNTY MONITORING WELLS

<u>Site</u>	<u>Location</u>
ACMW-01AW	Below main dam at Harvey Place Reservoir
ACMW-01BE	Below auxiliary dam at Harvey Place Reservoir
ACMW-02, N&S	On dam access road at Diamond Valley Road
ACMW-03	Bruns ranch, east side of Highway 88
ACMW-04W	Gansberg ranch, west side of Highway 88
ACMW-05	Dressler ranch
ACMW-06, N&S	Celio ranch, on Diamond Valley Road

ALPINE SOILS

<u>Site</u>	<u>Ranch</u>
S2	Celio
S3	Hall
S4	Gansberg
S5	Gansberg
S6	Neddenriep
S7	Bruns
S8	Dressler

ALPINE GROUNDWATERS

<u>Site</u>	<u>Homeowner</u>
GW-01	Sagues
GW-03	Smith/Springmeyer
GW-04	Celio
GW-05	Neddenriep
GW-07	Gansberg, Jr.
GW-08	Arant
GW-11	Diamond Valley School
GW-14	Sierra Pines Store

ALPINE SURFACEWATERS

<u>Site</u>	<u>Location</u>
SW-01	Carson River, Woodfords
SW-02	Indian Creek, @ HWY 89
SW-03	Indian Creek, @ upper bridge
SW-04	Indian Creek, @ lower bridge
SW-05	Carson River, Paynesville
SW-06	Carson River, Stateline
SW-07	Fredericksberg Ditch, Stateline
SW-08	Irrigation Ditch along Carson River Road
SW-09	Carson River, Dressler Lane <i>Casthorne</i>
SW-10	Indian Creek, @ Smith-Springmeyer Ranch

SOUTH TAZOE PUBLIC UTILITY DISTRICT

02/05/98

WATER QUALITY DATA

of

MONITORING WELLS

WELL	DATE	WATER LEVEL (MSL ft)	TEMP C	pH	EC umhos/cm	Cl mg/L	NO3-N mg/L	PO4-P mg/L	COD mg/L
CONTROL	01/27/98	6284.1	10.3	6.68	162	4.9	2.50		< 5
MW01.5	01/27/98	6269.6	9.1	7.03	166	4.9	.78		< 5
MW02-50	01/27/98	6269.4	9.3	6.70	611	62.2	15.30		< 5
MW03-50	01/27/98	6269.4	10.2	5.84	553	49.5	17.60		< 5
MW04-50	01/27/98	6269.4	8.6	6.22	805	6.2	.04		< 5
MW07-50	01/27/98	6280.0	8.4	6.39	274	28.9	.58		< 5
MW08-25	01/27/98	6246.4	10.0	6.09	1036	55.0	< .01		81
MW11	01/27/98	6267.8	9.0	6.78	88	1.3	.39		
MW12	01/27/98	6265.1	9.6	6.36	198	2.9	.53		
MW13	01/27/98	6258.1	5.6	6.58	480	1.7	.53		

=====
Note: Samples filtered through 0.45 u filter before analysis

SOUTH TAHOE PUBLIC UTILITY DISTRICT
 WATER QUALITY DATA
 of
 HEAVENLY VALLEY CREEK

02/05/98

Sample Date: 01/13/98

SITE	TEMP C	pH	EC umhos/cm	Cl mg/L	COD mg/L	NO3-N mg/L	SS mg/L	O&G mg/L	COMMENTS
HVC-1	2.6	7.51	49	1.1	< 5	.06			
HVC-2	1.1	7.04	52	1.8	5	.01			
HVC-3	.7	7.19	54	1.9	5	.01			

- =====
- HVC-1: 15 feet downstream of Pioneer Trail
 - HVC-2: 250 feet upstream of Pond #2
 - HVC-3: 25 feet downstream of Johnson Blvd crossing
 - HVC-4: Effluent of drainpipe from Lower Shop area
 - HVC-5: Effluent of drainpipe along Johnson Blvd, 10 feet upstream of Johnson Blvd

ALPINE COUNTY MONITORING

02/03/98

Site	Date	ID	Location	Temp C	pH	EC umhos	DO mg/L	Alk mg/L	TDS mg/L	SS mg/L	Turb NTU	Cl mg/L	SO4 mg/L
Alpine Monitoring Wells													
ACMW-01AW	01/20/98	980120-06	Main Dam	11.4	6.16	90		41	75			1.5	
ACMW-01BE	01/20/98	980120-07	Secondary Dam	9.3	6.32	121		55	82			1.5	
ACMW-02N	01/20/98	980120-08	Access Gate	11.3	6.62	167		72	109			4.9	
ACMW-02S	01/20/98	980120-09	Access Gate	10.4	6.29	126		61	85			1.9	
ACMW-04W	01/20/98	980120-10	Gansberg	11.7	5.97	221		54	151			16.4	
ACMW-06N	01/20/98	980120-11	Celio	12.2	6.79	745		275	459			59.9	
Groundwaters													
GW-03	01/13/98	980113-06	Smith/Springmeyer	12.5	7.44	309		129	225			1.5	
GW-04	01/13/98	980113-07	Celio	12.9	7.49	267		120	191			2.9	
GW-05	01/13/98	980113-08	Neddenriep	8.6	6.42	300		61	189			33.2	
GW-07	01/13/98	980113-09	Gansberg	7.2	6.39	123		54	94			1.2	
GW-08	01/13/98	980113-10	Arant	7.2	6.88	267		58	167			25.4	
GW-11	01/13/98	980113-11	Diamond Val. School	9.1	6.28	97		47	80			1.0	
GW-14	01/13/98	980113-12	Sierra Pines	5.1	6.81	110		53	99			1.2	
Reservoirs													
HPR	01/06/98	980106-13	Harvey Place Reservoir	0.9	7.62	515	7.30	128	244	3.52	3.4	59.2	21.2
ICR	01/06/98	980106-14	Indian Creek Reservoir	0.6	7.42	109	8.40	51	70	1.74	1.7	1.9	2.5
Surfacewaters: Carson R													
SW-01	01/06/98	980106-06	Carson R Woodfords	1.0	7.39	73	7.60	35	68	0.24	.38	1.1	2.3
SW-05	01/06/98	980106-10	Carson R Paynesville	0.1	7.42	96	9.70	45	80	2.40	.53	1.6	3.3
SW-06	01/06/98	980106-11	Carson R Stateline	0.0	7.56	100	10.80	46	79	0.76	.56	2.6	3.8
SW-08	01/06/98	980106-12	Irrigation Ditch	8.2	7.40	117	9.00	56	96	12.50	2.5	1.9	3.7
Surfacewaters: Indian Cr													
SW-02	01/06/98	980106-07	Indian Cr Upper	0.8	7.51	100	10.50	54	83	2.98	2.1	0.9	2.6
SW-03	01/06/98	980106-08	Indian Cr Mid	1.6	7.10	130	9.90	66	94	2.22	3.9	3.7	4.4
SW-04	01/06/98	980106-09	Indian Cr Lower	0.1	6.85	100	10.40	48	82	3.64	2.4	1.8	2.6

ALPINE COUNTY MONITORING

02/03/98

Site	Date	TotalP mg/L	PO4-P mg/L	Org-N mg/L	NH3-N mg/L	TKN mg/L	NO2-N mg/L	NO3-N mg/L	Total N mg/L
Alpine Monitoring Wells									
ACMW-01A	01/20/98	0.026			< 0.020	0.100	< 0.010	0.108	0.218
ACMW-01B	01/20/98	0.020			< 0.020	0.100	< 0.010	0.500	0.610
ACMW-02N	01/20/98	0.020			< 0.020	0.100	< 0.010	0.098	0.208
ACMW-02S	01/20/98	0.016			< 0.020	0.100	< 0.010	0.010	0.120
ACMW-04W	01/20/98	0.033			< 0.020	0.100	0.010	2.880	2.990
ACMW-06N	01/20/98	0.340			0.031	0.240	0.010	< 0.010	0.260
Groundwaters									
GW-03	01/13/98	0.042			0.020	0.111	< 0.010	0.689	0.810
GW-04	01/13/98	0.062			0.024	0.100	< 0.010	0.773	0.883
GW-05	01/13/98	0.028			0.025	0.122	< 0.010	2.950	3.082
GW-07	01/13/98	0.074			< 0.020	0.100	< 0.010	0.948	1.058
GW-08	01/13/98	0.048			0.021	0.117	< 0.010	4.930	5.057
GW-11	01/13/98	0.032			< 0.020	0.100	< 0.010	0.322	0.432
GW-14	01/13/98	0.058			0.032	0.111	< 0.010	0.412	0.533
Reservoirs									
HPR	01/06/98	2.310	2.400	0.900	18.400	19.300	0.252	1.500	21.052
ICR	01/06/98	0.030	< 0.010	0.773	0.407	1.180	< 0.010	0.138	1.328
Surfacewaters: Carson R									
SW-01	01/06/98	0.024	0.010		0.020	0.216	< 0.010	0.127	0.353
SW-05	01/06/98	0.022	0.010		< 0.020	0.268	< 0.010	0.186	0.464
SW-06	01/06/98	0.022	0.010		< 0.020	0.267	< 0.010	0.243	0.520
SW-08	01/06/98	0.078	0.034		0.020	0.349	< 0.010	0.453	0.812
Surfacewaters: Indian Cr									
SW-02	01/06/98	0.028	0.010		< 0.020	0.200	< 0.010	0.099	0.309
SW-03	01/06/98	0.080	0.030		< 0.020	0.275	< 0.010	0.129	0.414
SW-04	01/06/98	0.050	0.014		0.020	0.308	< 0.010	0.098	0.416

ALPINE COUNTY MONITORING

02/03/98

Site	Date	COD mg/L	BOD mg/L	O & G mg/L	Boron mg/L	Ca mg/L	Mg mg/L	Na mg/L	K mg/L	SAR	Exch Na %	Hardness mg/L	Water Level MSL or Ft
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Alpine Monitoring Wells

ACMW-01A	01/20/98												5481.5
ACMW-01B	01/20/98												5490.3
ACMW-02N	01/20/98												5458.2
ACMW-02S	01/20/98												5458.0
ACMW-04W	01/20/98												4898.0
ACMW-06N	01/20/98												5217.6

Groundwaters

GW-03	01/13/98												
GW-04	01/13/98												
GW-05	01/13/98												
GW-07	01/13/98												
GW-08	01/13/98												
GW-11	01/13/98												
GW-14	01/13/98												

Reservoirs

HPR	01/06/98	18	4		0.16	16.0	3.0	44.3	8.9	2.66	60.1		39.0
ICR	01/06/98	12	2			11.0	1.5	6.5	2.3	0.48	27.6		44.0

Surfacewaters: Carson R

SW-01	01/06/98		1	<	1	0.01	7.0	1.9	4.1	1.5	0.35	24.6	
SW-05	01/06/98		1	<	1	<	0.01	8.9	2.4	5.5	1.9	0.42	25.9
SW-06	01/06/98		1	<	1		0.01	9.8	2.6	5.6	1.9	0.41	24.6
SW-08	01/06/98		1	<	1		0.01	9.9	2.1	9.0	2.1	0.68	35.2

Surfacewaters: Indian Cr

SW-02	01/06/98		1	<	1	<	0.01	9.9	2.6	6.9	1.3	0.51	29.0
SW-03	01/06/98		1	<	1		0.02	11.2	3.3	8.3	1.8	0.56	29.2
SW-04	01/06/98		1	<	1		0.05	9.4	2.8	5.6	1.6	0.41	24.8

**ALPINE COUNTY
BACTERIOLOGICAL MONITORING**

02/03/98

Alpine Monitoring Wells

Site	Date	Total Coliform MPN/100mL		Fecal Coliform MPN/100mL	Fecal Streptococci MPN/100mLL
ACMW-01A	01/20/98	3.6		< 1.1	
ACMW-01B	01/20/98	1.1		< 1.1	
ACMW-02N	01/20/98	< 1.1		< 1.1	
ACMW-02S	01/20/98	1.1		< 1.1	
ACMW-04W	01/20/98	6.9		< 1.1	
ACMW-06N	01/20/98	> 23		< 1.1	

Groundwaters

Site	Date	Total Coliform MPN/100mL		Fecal Coliform MPN/100mL	Fecal Streptococci MPN/100mLL
GW-03	01/13/98	< 1.1		< 1.1	
GW-04	01/13/98	3.6		< 1.1	
GW-05	01/13/98	< 1.1		< 1.1	
GW-07	01/13/98	1.1		< 1.1	
GW-08	01/13/98	< 1.1		< 1.1	
GW-11	01/13/98	< 1.1		< 1.1	
GW-14	01/13/98	< 1.1		< 1.1	

Reservoirs

Site	Date	Total Coliform MPN/100mL		Fecal Coliform MPN/100mL	Fecal Streptococci MPN/100mLL
HPR	01/06/98	900		4	500
ICR	01/06/98	13	<	2	< 2

Surfacewaters: Carson R

Site	Date	Total Coliform MPN/100mL		Fecal Coliform MPN/100mL	Fecal Streptococci MPN/100mLL
SW-01	01/06/98	40		< 30	
SW-05	01/06/98	40		< 30	
SW-06	01/06/98	< 30		< 30	
SW-08	01/06/98	70		< 30	

Surfacewaters: Indian Cr

Site	Date	Total Coliform MPN/100mL		Fecal Coliform MPN/100mL	Fecal Streptococci MPN/100mLL
SW-02	01/06/98	230		< 30	
SW-03	01/06/98	430		< 30	
SW-04	01/06/98	< 30		< 30	

ALPINE COUNTY SOILS

02/05/98

Site	Date	Location	Type	pH	EC mmho	%Sat	TKN mg/Kg	NO3-N mg/L	Total P mg/Kg	Exch P mg/L
S2a	11/14/97	Celio	KT	8.06	1.05	92.6	3,490	1.2	760	6.8
S3a	11/14/97	Hall	SMB	5.16	0.48	34.2	1,120	0.9	730	25.8
S4a	11/14/97	Gansberg	DI	6.17	0.42	38.2	1,530	7.6	330	7.2
S5a	11/14/97	Gansberg	HRB	6.18	0.34	36.2	1,310	8.9	430	8.1
S6a	11/14/97	Neddenriep	DWB	5.85	0.20	43.7	1,300	0.6	610	25.1
S7a	11/14/97	Bruns	JaC	6.27	0.07	40.4	1,580	2.0	520	3.6
S8a	11/14/97	Dressler	SOD	6.36	0.10	18.6	336	1.4	240	10.8
S2a	12/11/97	Celio	KT	8.26	1.39	87.6	2,740	2.5	860	
S3a	12/11/97	Hall	SMB	5.73	0.71	32.4	735	0.4	710	
S4a	12/11/97	Gansberg	DI	6.35	0.63	37.3	1,260	10.5	440	
S5a	12/11/97	Gansberg	HRB	5.63	0.54	30.5	1,010	9.8	490	
S6a	12/11/97	Neddenriep	DWB	5.41	0.18	38.5	901	2.6	450	
S7a	12/11/97	Bruns	JaC	6.08	0.09	39.2	1,426	1.9	640	
S8a	12/11/97	Dressler	SOD	6.16	0.15	18.9	305	1.6	280	

Site	Date	Cl mg/L	SO4 mg/Kg	CEC meq/100g	Cu mg/Kg	Mo mg/Kg	Ca mg/L	Mg mg/L	Na mg/L	SAR	%Na		
S2a	11/14/97	143.0	138	35.9	8.6	<	1.0	63.0	100.0	26.0	0.47	-0.6	
S3a	11/14/97	58.8	18	15.4	9.8	<	1.0	32.0	12.0	27.0	1.03	0.2	
S4a	11/14/97	39.6	9	15.8	12.0	<	1.0	20.0	5.1	36.0	1.86	1.4	
S5a	11/14/97	22.1	<	1	11.8	13.0	<	1.0	26.0	5.1	29.0	1.36	0.7
S6a	11/14/97	30.4	<	9	11.1	22.0	<	1.0	16.0	1.5	13.0	0.83	-0.1
S7a	11/14/97	4.0	<	1	11.6	20.0	<	1.0	5.7	1.4	5.7	0.55	-0.5
S8a	11/14/97	5.4	<	1	5.7	5.8	<	1.0	8.2	3.4	4.4	0.33	-0.8
S2a	12/11/97		144		7.1	<	1.0	53.0	36.0	150.0	3.89	4.2	
S3a	12/11/97		17		9.2	<	1.0	49.0	21.0	36.0	1.08	0.3	
S4a	12/11/97		2		12.0	<	1.0	32.0	7.2	78.0	3.24	3.3	
S5a	12/11/97	<	1		8.1	<	1.0	38.0	6.5	48.0	1.89	1.5	
S6a	12/11/97		6		20.0	<	1.0	8.0	2.3	16.0	1.28	0.6	
S7a	12/11/97	<	1		16.0	<	1.0	6.8	1.6	7.3	0.65	-0.3	
S8a	12/11/97	<	1		6.4	<	1.0	7.1	3.1	16.0	1.26	0.6	

The following limitations of the East Fork of the Carson River were exceeded:

Site	Location	TDS	Cl	Total N	Total P	SO ₄	Boron	Exchangeable Sodium
SW-02	Indian Cr, Upper			✓	✓			
SW-03	Indian Cr, Mid	✓	✓	✓	✓	✓		✓
SW-04	Indian Cr, Lower			✓	✓			

Soil analysis for November and December and Blue Green Algae analysis for December have not yet been completed; the results will be sent to you as soon as they are available.

Emergency Retention Basin (ERB)

No wastewater was pumped to the ERB during the month of December. There was no wastewater remaining in the ERB on December 31, 1997.

Export Pipeline

The District's Final effluent export pipeline route was visually inspected during the month of December from the treatment plant to station 507+13A, in Woodfords. No leaks or problems were detected.

Certification

I hereby certify that the enclosed monitoring report was prepared under my direct supervision and that I am a duly Registered Engineer under the laws of the State of California.

Sincerely,



Richard Solbrig,
Assistant Manager/Engineer

Enclosures:

1.

December Monthly Report	Pages
Wastewater Treatment plant	2
Permit Compliance Record	1
Export pipeline inspection	1
Harvey Place Reservoir (HPR)	2
Indian Creek Reservoir (ICR)	2
Sample site locations	2
Monitoring wells (ERB)	1
Heavenly Valley Creek	1
Alpine County Monitoring Wells	2
Alpine County Groundwaters	2
Alpine County Surfacewaters	4
Alpine County Soils October	1
Alpine County Blue-Green Algae November	1
Total number of pages:	22

cc: Calif. Dept. of Health Services, ODW - Jess Morehouse
 El Dorado Co. Dept. of Environmental Health - Virginia Huber
 Nevada Division of Environmental Protection - Wendel McCurry
 Alpine County Health Department - Dr. Richard Botto
 Alpine County Health Department - Jim Goodloe
 Alpine County Board of Supervisors
 EPA - Permit and Compliance Branch, W-5 - Bill Pierce
 Desert Research Group (Alpine County Consultants) - Bill Albright
 STPUD Board of Directors
 STPUD General Manager / District Engineer - Robert G. Baer
 STPUD Manager of Operations - Ross Johnson
 STPUD Laboratory Director - Terry Powers
 STPUD Manager of Alpine County Operations - Hal Bird

**SOUTH TAHOE PUBLIC UTILITY DISTRICT
WASTEWATER TREATMENT PLANT MONTHLY REPORT**

01/09/98

DECEMBER, 1997

Date	Day	FLOW MGD			Pond Inf	PRECIP		D.O. mg/L Fin	COD mg/L		BOD mg/L		SS mg/L	
		2-Hr Peak Inf	2-Hr Peak Inf	Eff		Pond Return	Inch		Type	Raw	Fin	Raw	Fin	Raw
12/01/97	Mon	3.55	5.0	3.30				5.97	430					
12/02/97	Tue	3.56	4.8	4.17				6.22	361					
12/03/97	Wed	3.47	5.4	3.28				6.37	414	30.8	167	4.4	164	2.2
12/04/97	Thu	3.47	5.2	3.52				6.94	442					
12/05/97	Fri	3.46	5.0	3.49			0.20	6.22	377					
12/06/97	Sat	3.84	5.6	3.72			0.07	6.38	385	27.1	209	4.3	146	1.9
12/07/97	Sun	3.79	5.8	4.29			0.80	5.75	361					
12/08/97	Mon	3.56	5.2	3.28			0.12	6.60	370					
12/09/97	Tue	3.47	4.8	3.52				6.75	368					
12/10/97	Wed	3.54	5.4	3.62				6.66		28.1		4.0		1.2
12/11/97	Thu	3.43	5.4	3.41				6.83	513					
12/12/97	Fri	3.64	5.5	3.64				6.55	506					
12/13/97	Sat	4.07	5.8	3.99				6.28	400	26.4	230	3.9	136	1.6
12/14/97	Sun	3.81	6.0	4.24			0.17	5.90	389					
12/15/97	Mon	3.59	4.8	3.87				6.31						
12/16/97	Tue	3.65	4.6	3.69				7.31	446					
12/17/97	Wed	3.58	5.6	3.49				6.27	388	24.0	156	4.8	132	1.5
12/18/97	Thu	3.62	5.0	3.93				6.23	414					
12/19/97	Fri	3.61	5.8	3.66				6.50						
12/20/97	Sat	4.01	6.0	4.17				6.45	482	30.3	178	7.3	167	2.3
12/21/97	Sun	4.20	6.0	4.19				6.41	426					
12/22/97	Mon	4.21	6.4	4.20				6.43	423					
12/23/97	Tue	4.23	7.0	4.34				6.14	520					
12/24/97	Wed	4.38	6.4	4.43			0.02	6.24	491	53.8	203	11.9	156	3.6
12/25/97	Thu	4.75	6.8	4.76				6.70	591					
12/26/97	Fri	5.32	7.8	5.12				6.12	578					
12/27/97	Sat	5.54	8.8	5.83				6.50	582	65.8	221	16.7	179	5.3
12/28/97	Sun	5.29	8.8	5.30				6.29	479					
12/29/97	Mon	5.22	8.0	4.97				7.96	439					
12/30/97	Tue	5.21	7.8	4.48				6.44	476	71.7	194	14.7	174	13.2
12/31/97	Wed	4.28	8.8	5.99				5.99	525					
PERMIT MAX		7.7								300		45		60
PERMIT MIN														
PERMIT AVE										60		30		30
TOTAL		125.35	189.3	127.89			1.38	199.71	12576	358.0	1558	72.0	1254	32.7
MAXIMUM		5.54	8.8	5.99			0.80	7.96	591	71.7	230	16.7	179	13.2
MINIMUM		3.43	4.6	3.28			0.02	5.75	361	24.0	156	3.9	132	1.2
AVERAGE		4.04	6.1	4.13			0.23	6.44	449	39.8	195	8.0	157	3.6
# Tests		31	31	31	0	0	6	31	28	9	8	9	8	9

**SOUTH TAHOE PUBLIC UTILITY DISTRICT
WASTEWATER TREATMENT PLANT MONTHLY REPORT**

01/09/98

DECEMBER, 1997

Date	Day	SETTLEABLE SOLIDS mL/L		MBAS mg/L		pH Units		TURBIDITY NTU		Cl2 mg/L	FINAL COLIFORMS MPN/100 mL			TDS mg/L		ALKALINITY mg/L	
		Raw	Fin	Raw	Fin	Raw	Fin	Fin	Fin		Total	7day-	Median	Raw	Fin	Raw	Fin
12/01/97	Mon	11.0	< 0.1			7.71	7.76	2.50	9.06	<	2	<	2			163	138
12/02/97	Tue	9.5	< 0.1			7.51	7.64	1.60	7.04	<	2	<	2			152	133
12/03/97	Wed	13.0	< 0.1	3.96	0.05	7.54	7.82	1.60	8.29	<	2	<	2	229	220	162	131
12/04/97	Thu	10.0	< 0.1			7.46	7.58	1.60	6.17	<	2	<	2			160	134
12/05/97	Fri	9.0	< 0.1			7.61	7.66	1.50	7.33	<	2	<	2			158	132
12/06/97	Sat	9.5	< 0.1			7.40	7.74	1.60	8.58	<	2	<	2			158	138
12/07/97	Sun	8.0	< 0.1			7.50	7.62	1.50	7.33	<	2	<	2			161	136
12/08/97	Mon	10.5	< 0.1			7.68	7.76	1.80	8.68	<	2	<	2			156	131
12/09/97	Tue	10.0	< 0.1			7.53	7.66	1.50	8.10	<	2	<	2			159	130
12/10/97	Wed		< 0.1				7.64	1.40	6.56	<	2	<	2	230			126
12/11/97	Thu	19.3	< 0.1			7.72	7.67	1.40	6.46	<	2	<	2			161	123
12/12/97	Fri	9.0	< 0.1			7.75	7.70	1.50	5.60	<	2	<	2			158	126
12/13/97	Sat	9.0	< 0.1			7.56	7.78		6.00	<	2	<	2			163	130
12/14/97	Sun	9.0	< 0.1			7.60	7.74	1.40	4.30	<	2	<	2			167	136
12/15/97	Mon		< 0.1				7.64	1.40	5.70	<	2	<	2				133
12/16/97	Tue	9.0	< 0.1			7.50	7.74	1.75	5.60	<	2	<	2			161	130
12/17/97	Wed	8.5	< 0.1			7.52	7.74	1.50	5.59	<	2	<	2	253	232	157	130
12/18/97	Thu	9.5	< 0.1			7.71	7.66	1.60	3.55	<	2	<	2			157	133
12/19/97	Fri		< 0.1				7.56	1.70	4.77	<	2	<	2				132
12/20/97	Sat	10.0	< 0.1			7.53	7.60	2.00	4.98	<	2	<	2			167	134
12/21/97	Sun	11.0	< 0.1			7.82	7.66	2.50	4.47	<	2	<	2			170	143
12/22/97	Mon	8.5	< 0.1			7.42	7.74	2.70	3.96	<	2	<	2			170	148
12/23/97	Tue	11.5	< 0.1			7.40	7.58	3.30	4.37	<	2	<	2			171	146
12/24/97	Wed	10.0	< 0.1			7.53	7.68	4.00	4.57	<	2	<	2	260	242	162	144
12/25/97	Thu	11.5	< 0.1			7.43	7.48	3.80	8.02	<	2	<	2			172	142
12/26/97	Fri	15.0	< 0.1			7.63	7.65	4.30	5.99	<	2	<	2			183	151
12/27/97	Sat	13.5	< 0.1			7.53	7.68	5.40	3.96	<	2	<	2			178	158
12/28/97	Sun	11.0	< 0.1			7.46	7.62	5.85	4.37	<	2	<	2			182	155
12/29/97	Mon	9.5	< 0.1			7.48	7.64	6.10	7.31	<	2	<	2			180	152
12/30/97	Tue	11.0	< 0.1			7.46	7.65	8.40	5.79	<	2	<	2	261	258	183	143
12/31/97	Wed	11.0	< 0.1			7.51	7.33	5.90	8.84	<	2	<	2			183	146
PERMIT MAX			0.1		2.0		8.5	20			240		23				
PERMIT MIN							6.5										
PERMIT AVE					1.0			10									
TOTAL		297.3	3.1	3.96	0.05	211.50	237.42	83.10	191.34		62		62	1003	1182	4654	4264
MAXIMUM		19.3	0.1	3.96	0.05	7.82	7.82	8.40	9.06		2		2	261	258	183	158
MINIMUM		8.0	0	3.96	0.05	7.40	7.33	1.40	3.55		2		2	229	220	152	123
AVERAGE		10.6	0.1	3.96	0.05	7.55	7.66	2.77	6.17		2		2	251	236	166	138
# Tests		28	31	1	1	28	31	30	31		31		31	4	5	28	31

**SOUTH TAHOE PUBLIC UTILITY DISTRICT
MEMORANDUM**

Date: December 31, 1997
To: Bob Baer, Diane Noble
From: Tim Rieger
Topic: Export Line Check



On December 30, 1997, Greg Schrempp and I conducted our monthly check of the District's export line from the treatment plant to it's end at station 564+06 near the Harvey Place reservoir.

Several wet spots were checked, however nothing positive was found. No damage to the pipe was found. Two station marker signs were found missing or damaged. We will work to get these replaced.

CC Terry Powers

SOUTH TAHOE PUBLIC UTILITY DISTRICT
HARVEY PLACE RESERVOIR DATA SUMMARY

01/02/98

From: January 1, 1997
To: December 31, 1997

Date	pH	Temp	NH3+	NH3-N mg/L	Org-N mg/L	TKN mg/L	NO3-N mg/L	NO2-N mg/L	PO4-P mg/L	Total P mg/L	Alk mg/L	MBAS mg/L	D.O.	D.O.	COD mg/L	BOD mg/L
		C	NH4 mg/L										mg/L	% Sat		
01-07-97	7.38	4.8	10.60	0.03	0.90	11.50	1.35	0.11	1.51	1.53	90	0.03	10.10	97.15	20.9	1.83
02-04-97	7.82	4.4	9.88	0.08	0.10	9.12	0.99	0.08	1.35	1.41	83	0.04	10.00	95.17	18.2	1.99
03-04-97	7.72	4.7	10.90	0.07	0.50	11.40	0.86	0.05	1.26	1.46	86	0.03	11.00	105.53	15.5	1.77
04-08-97	7.67	10.1	11.50	0.10	1.80	13.30	0.93	0.05	1.15	1.55	90	0.02	8.50	93.20	14.8	1.94
05-06-97	7.63	15.4	11.40	0.14	0.10	11.50	0.91	0.09	1.60	1.70	94	0.02	8.20	101.26	20.6	3.20
06-03-97	7.70	17.9	12.10	0.20	0.10	9.89	1.28	0.26	1.73	1.69	94	0.03	7.15	93.03	15.8	3.46
07-01-97	7.76	18.5	11.40	0.23	0.90	12.30	1.57	0.26	1.66	3.44	93	0.03	6.40	84.32	22.0	2.67
08-05-97	7.80	22.0	11.90	0.33	0.90	12.80	1.71	0.33	1.99	2.04	101	0.02	6.00	84.75	17.9	2.41
09-02-97	7.90	19.7	13.70	0.41	3.10	16.80	1.58	0.32	2.16	2.33	110	0.02	4.50	60.80	26.7	3.89
10-14-97	7.57	13.2	13.00	0.11	1.90	14.90	1.40	0.37	2.24	2.50	118	0.04	4.60	54.16	22.3	4.79
11-11-97	7.76	9.6	15.10	0.16	0.10	13.40	2.20	0.48	2.32	2.32	119	0.02	5.50	59.60	10.4	3.96
12-02-97	7.75	6.4	15.60	0.12	0.10	10.40	1.70	0.38	2.30	2.43	118	0.06	7.80	78.16	17.5	3.27
Maximum	7.90	22.0	15.60	0.41	3.10	16.80	2.20	0.48	2.32	3.44	119	0.06	11.00	105.53	26.7	4.79
Minimum	7.38	4.4	9.88	0.03	0.10	9.12	0.86	0.05	1.15	1.41	83	0.02	4.50	54.16	10.4	1.77
Average	7.71	12.2	12.26	0.17	0.88	12.28	1.37	0.23	1.77	2.03	100	0.03	7.48	83.93	18.6	2.93

Date	Chloride mg/L	TDS mg/L	SS mg/L	Turb NTU	EC umhos	H2S mg/L	Ca mg/L	Na mg/L	Mg mg/L	SAR Ratio	Level Ft.	Flow Acre-Ft	% Ice Cover	Algae	Weeds
01-07-97	37.4	193	5.40	17.00	363		15.00	34.00	3.00	2.09	48.50		0	No	No
02-04-97	34.4	169	4.84	14.00	334		7.10	15.00	1.50	1.33	55.00		0	No	No
03-04-97	36.3	178	3.44	7.30	348		10.00	23.00	2.40	1.69	54.80		1	No	No
04-08-97	39.1	187	2.91	4.00	377		14.00	30.00	3.10	1.89	57.00		0	Yes	No
05-06-97	41.5	186	0.80	3.10	389		14.00	34.00	3.30	2.12	58.40		0	Yes	Yes
06-03-97	43.4	203	11.60	6.30	405		16.00	38.00	3.80	2.21	58.50		0	Yes	Yes
07-01-97	43.8	196	3.30	2.60	402		16.00	42.00	3.90	2.44	53.50		0	Yes	Yes
08-05-97	47.4	209	0.32	1.20	428		15.00	48.00	3.90	2.85	46.50		0	Yes	No
09-02-97	50.1	222	29.20	6.90	462		18.00	50.00	3.80	2.79	39.00		0	Yes	No
10-14-97	51.2	233	4.36	5.00	488		18.00	49.00	3.90	2.73	17.00		0	Yes	No
11-11-97	55.3	240	14.30	2.50	482		17.00	46.00	3.90	2.61	25.90		0	No	No
12-02-97	54.1	238	4.36	1.90	498		17.00	47.00	4.00	2.66	31.20		0	Yes	Yes
Maximum	55.3	240	29.20	17.00	498	ERR	18.00	50.00	4.00	2.85	58.50		1		
Minimum	34.4	169	0.32	1.20	334	ERR	7.10	15.00	1.50	1.33	17.00		0		
Average	44.5	205	7.07	5.98	415		14.76	38.00	3.38	2.28	45.44		0		

SOUTH TAHOE PUBLIC UTILITY DISTRICT
HARVEY PLACE RESERVOIR DATA SUMMARY

From: January 1, 1997
To: December 31, 1997

Date	Chloro-Phyll ug/L	Secci Disc m	Coliforms Total MPN	Fecal MPN	Fecal Strep MPN	Air Temp C	Total N mg/L	SO4 mg/L	Boron mg/L	Comments
01-07-97			500	<	2	23	5.9	12.96	17.80	0.08
02-04-97			17	<	2	17	7.1	10.19	15.40	0.14
03-04-97			30	<	2	<	5.9	12.31	13.10	0.11
04-08-97			11	<	2	4	8.9	14.28	15.50	0.11
05-06-97			170	<	2	14	15.6	12.50	14.10	0.13
06-03-97			130		13	130	16.2	11.43	16.80	0.13
07-01-97			1600	<	2	17	17.1	14.13	16.20	0.12
08-05-97			4	<	2	2	26.5	14.84	17.00	0.18
09-02-97			80		2	110	18.0	18.70	18.60	0.18
10-14-97			80		4	2	18.3	16.67	22.70	0.18
11-11-97			2	<	2	2	12.5	16.08	21.90	0.13
12-02-97			36		2		6.7	12.48		0.15
Maximum	0	ERR	1600		13	130	26.5	18.70	22.70	0.18
Minimum	0	ERR	< 2	<	2	<	5.9	10.19	13.10	0.08
Average			222		3	29	13.2	13.88	17.19	0.14

SOUTH TAHOE PUBLIC UTILITY DISTRICT
INDIAN CREEK RESERVOIR

01/02/98

From: January 1, 1997
To: December 31, 1997

Date	pH	Temp C	NH3+		Org-N mg/L	TKN mg/L	NO3-N mg/L	NO2-N mg/L	PO4-P mg/L	Total P mg/L	Alk mg/L	MBAS mg/L	D.O. mg/L	D.O. % Sat	COD mg/L	BOD mg/L
			NH4 mg/L	NH3-N mg/L												
01-07-97	8.25	3.7	0.48	0.01	0.70	1.18	0.01	0.22	0.05	0.09	41	0.02	10.20	95.29	15.5	0.96
02-04-97	7.72	4.8	0.35	< 0.01	0.40	0.75	0.25	0.01	0.05	0.07	36	0.02	11.00	105.81	12.1	1.28
03-04-97	7.50	4.8	0.24	< 0.01	0.40	0.64	0.20	0.01	0.02	0.08	36	0.02	11.70	112.34	11.4	1.20
04-08-97	9.70	11.8	0.02	< 0.01	0.72	0.74	0.18	0.01	0.01	0.06	36	0.02	12.00	137.00	14.5	4.85
05-06-97	8.51	16.4	0.08	0.01	1.03	1.11	0.07	0.01	0.01	0.04	39	0.02	11.40	143.83	15.2	2.26
06-03-97	8.84	17.4	0.03	< 0.01	0.73	0.76	0.01	0.01	0.01	0.05	40	0.02	8.25	106.23	14.5	2.44
07-01-97	9.75	19.3	0.03	0.02	0.77	0.80	0.02	0.01	0.01	0.05	40	0.02	7.40	99.13	20.9	1.17
08-05-97	10.14	27.6	0.04	0.04	0.98	1.02	0.03	0.02	0.01	0.05	39	0.02	5.70	89.29	37.6	5.89
09-02-97	9.96	17.0	0.02	0.02	2.10	2.12	0.01	0.01	0.01	0.10	41	0.02	6.40	81.70	35.6	8.57
10-14-97	8.23	14.2	0.28	0.01	1.00	1.28	0.07	0.02	0.01	0.07	42	0.02	6.50	78.18	27.1	2.23
11-11-97	8.75	8.1	0.28	0.02	0.94	1.22	0.10	0.01	0.01	0.05	43	0.02	8.50	88.80	14.8	3.15
12-02-97	7.93	4.7	0.37	< 0.01	0.83	1.20	0.05	0.01	0.01	0.03	46	0.02	9.55	91.62	10.4	1.63
Maximum	10.14	27.6	0.48	0.04	2.10	2.12	0.25	0.22	0.05	0.10	46	0.02	12.00	143.83	37.6	8.57
Minimum	7.50	3.7	0.02	0.01	0.40	0.64	0.01	0.01	0.01	0.03	36	0.02	5.70	78.18	10.4	0.96
Average	8.77	12.5	0.19	0.02	0.88	1.07	0.08	0.03	0.02	0.06	40	0.02	9.05	102.44	19.1	2.97

Date	Chloride mg/L	TDS mg/L	SS mg/L	Turb NTU	EC umhos	H2S mg/L	Ca mg/L	Na mg/L	Mg mg/L	SAR Ratio	Level Ft.	Flow Acre-Ft	% Ice Cover	Algae	Weeds
01-07-97	1.5	74	2.76	7.20	91		10.00	5.40	1.80	0.41			0	No	No
02-04-97	1.2	58	3.40	7.70	80		8.80	4.40	1.60	0.36	49.60		25	No	No
03-04-97	1.4	70	3.50	7.80	83		8.90	5.20	1.80	0.42			0	Yes	Yes
04-08-97	1.5	59	25.60	7.70	83		8.60	4.50	1.70	0.37	48.80		0	No	No
05-06-97	1.3	53	1.32	1.90	84		9.10	4.80	1.80	0.38	49.20		0		No
06-03-97	1.5	67	53.80	5.90	89		11.00	5.80	2.20	0.42			0	Yes	Yes
07-01-97	1.2	60	4.66	2.60	90		10.00	5.70	2.10	0.43	47.00		0	Yes	Yes
08-05-97	1.4	60	19.00	3.90	107		9.20	6.20	1.80	0.49	46.00		0	Yes	Yes
09-02-97	2.0	65	23.20	20.00	89		9.80	6.00	1.90	0.46	46.00		0	Yes	Yes
10-14-97	1.5	67	4.68	3.10	95		10.00	5.90	2.00	0.44	45.50		0	Yes	Yes
11-11-97	1.5	66	9.92	3.30	100		10.00	5.80	2.10	0.43			0	Yes	Yes
12-02-97	1.6	67	2.48	1.80	103		11.00	6.40	2.10	0.46			1	Yes	No
Maximum	2.0	74	53.80	20.00	107	ERR	11.00	6.40	2.20	0.49	49.60		25		
Minimum	1.2	53	1.32	1.80	80	ERR	8.60	4.40	1.60	0.36	45.50		0		
Average	1.5	64	12.86	6.08	91		9.70	5.51	1.91	0.42	47.44		2		

SOUTH TAHOE PUBLIC UTILITY DISTRICT
INIDAN CREEK RESERVOIR

Fro January 1, 1997
To: December 31, 1997

Date	Chloro-Phyll ug/L	Secci Disc m	Coliforms Total MPN	Fecal MPN	Fecal Strep MPN	Air Temp C	Total N mg/L	SO4 mg/L	Boron mg/L	Comments
01-07-97			23	< 2	4	4.4	1.41	3.58	< 0.01	
02-04-97			27	< 2	2	5.0	1.01	3.70	0.06	
03-04-97			13	< 2	< 2	7.2	0.85	3.56	< 0.01	
04-08-97			4	< 2	4	15.3	0.93	4.18	< 0.01	
05-06-97			8	< 2	4	25.0	1.19	4.15	0.05	
06-03-97			50	< 2	30	13.3	0.78	3.93	0.02	
07-01-97			500	< 2	500	23.9	0.83	3.87	< 0.01	
08-05-97			11	11	300	36.0	1.07	3.88	0.01	
09-02-97			240	50	220	16.4	2.14	2.28	< 0.01	
10-14-97		<	2	< 2	4	24.7	1.37	2.98	0.05	
11-11-97			8	4	240	8.2	1.33	2.25	0.02	
12-02-97			13	< 2		1.7	1.26	2.83	< 0.01	
Maximum	ERR	ERR	500	50	500	36.0	2.14	4.18	0.06	
Minimum	ERR	ERR	< 2	< 2	< 2	1.7	0.78	2.25	0.01	
Average			75	7	119	15.1	1.18	3.43	0.02	

SAMPLE LOCATIONS

TAHOE BASIN MONITORING WELLS

<u>Site</u>	<u>Location</u>
ERB	Emergency Retention Basin
CONTROL	North of Post Office
MW02-25, -50	Emergency Retention Basin, S side
MW03-25, -50	Emergency Retention Basin, S side
MW04-25, -50	Emergency Retention Basin, W side
MW07-25, -50	Emergency Retention Basin, N side
MW08-25, -50	Pond #1, SW corner
MW11	S.E. corner of wastewater treatment plant grounds
MW12	South of Emergency Pump Building, for buried sludge
MW13	Pond 2, along Heavenly Valley Creek, for buried sludge

HEAVENLY VALLEY CREEK

HVC-1	At Pioneer Trail
HVC-2	250 ft upstream of Pond #2
HVC-3	25 ft downstream of Johnson Blvd.
HVC-4	Effluent of drain pipe from Lower Shop area
HVC-5	Effluent of drainage pipe along Johnson Blvd, 10 feet upstream of Johnson Blvd.

ALPINE COUNTY MONITORING WELLS

<u>Site</u>	<u>Location</u>
ACMW-01AW	Below main dam at Harvey Place Reservoir
ACMW-01BE	Below auxiliary dam at Harvey Place Reservoir
ACMW-02, N&S	On dam access road at Diamond Valley Road
ACMW-03	Bruns ranch, east side of Highway 88
ACMW-04W	Gansberg ranch, west side of Highway 88
ACMW-05	Dressler ranch
ACMW-06, N&S	Celio ranch, on Diamond Valley Road

ALPINE SOILS

<u>Site</u>	<u>Ranch</u>
S2	Celio
S3	Hall
S4	Gansberg
S5	Gansberg
S6	Neddenriep
S7	Bruns
S8	Dressler

ALPINE GROUNDWATERS

<u>Site</u>	<u>Homeowner</u>
GW-01	Sagues
GW-03	Smith/Springmeyer
GW-04	Celio
GW-05	Neddenriep
GW-07	Gansberg, Jr.
GW-08	Arant
GW-11	Diamond Valley School
GW-14	Sierra Pines Store

ALPINE SURFACEWATERS

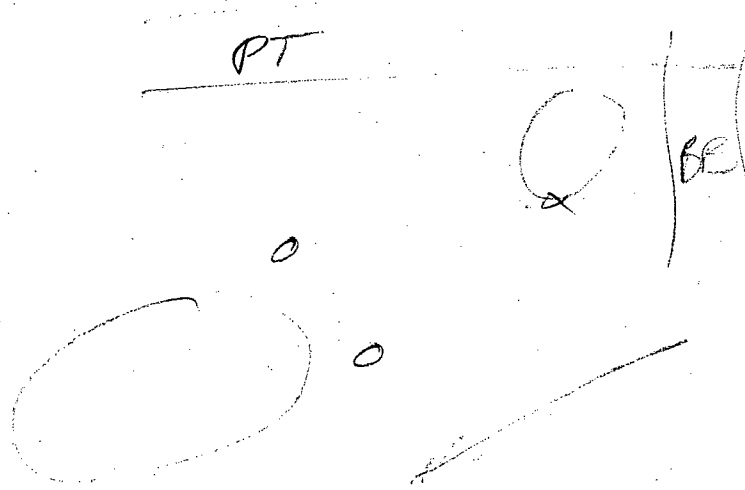
<u>Site</u>	<u>Location</u>
SW-01	Carson River, Woodfords
SW-02	Indian Creek, @ HWY 89
SW-03	Indian Creek, @ upper bridge
SW-04	Indian Creek, @ lower bridge
SW-05	Carson River, Paynesville
SW-06	Carson River, Stateline
SW-07	Fredericksberg Ditch, Stateline
SW-08	Irrigation Ditch along Carson River Road
SW-09	Carson River, Dressler Lane
SW-10	Indian Creek, @ Smith-Springmeyer Ranch

SOUTH TAHOE PUBLIC UTILITY DISTRICT
 WATER QUALITY DATA
 of
 MONITORING WELLS

01/01/98

WELL	DATE	WATER LEVEL (MSL ft)	TEMP C	pH	EC umhos/cm	Cl mg/L	NO3-N mg/L	PO4-P mg/L	COD mg/L
CONTROL	12/22/97	6284.4	8.4	7.01	165	4.8	2.75		5
MW01.5	12/22/97	6269.7	7.9	7.37	171	5.5	.84		10
MW02-50	12/22/97	6269.5	8.6	6.73	617	61.9	15.00		< 5
MW03-50	12/22/97	6269.5	9.0	6.32	563	49.2	18.70		< 5
MW04-50	12/22/97	6269.5	7.1	6.54	79	6.4	.13		< 5
MW07-50	12/22/97	6280.1	6.5	6.66	279	28.2	.63		< 5
MW08-25	12/22/97	6247.1	10.0	6.46	1068	59.5	< .01		53
MW11	12/22/97	6268.1	9.0	6.89	88	1.4	.27		
MW12	12/22/97	6265.1	10.0	6.57	194	2.8	.54		
MW13	12/22/97	6257.4	4.4	7.12	340	1.8	.16		

=====
 Note: Samples filtered through 0.45 u filter before analysis



X

SOUTH TAHOE PUBLIC UTILITY DISTRICT
 WATER QUALITY DATA
 of
 HEAVENLY VALLEY CREEK

01/01/98

Sample Date: 12/09/97

SITE	TEMP C	pH	EC umhos/cm	Cl mg/L	COD mg/L	NO3-N mg/L	SS mg/L	O&G mg/L	COMMENTS
HVC-1	1.7	7.12	50	1.2	< 5	.10			
HVC-2		5.91	55	1.9	5	< .01			
HVC-3	.1	6.05	57	1.9	< 5	.01			

=====

HVC-1: 15 feet downstream of Pioneer Trail
 HVC-2: 250 feet upstream of Pond #2
 HVC-3: 25 feet downstream of Johnson Blvd crossing
 HVC-4: Effluent of drainpipe from Lower Shop area
 HVC-5: Effluent of drainpipe along Johnson Blvd, 10 feet upstream of Johnson Blvd

SOUTH TAHOE PUBLIC UTILITY DISTRICT
ALPINE COUNTY MONITORING WELLS
WATER QUALITY DATA

01/01/98

SITE	SAMPLE DATE	TEMP C	pH	TOTAL ALK mg/L	TURB- IDITY NTU	EC umhos	TDS mg/L	SO4 mg/L	Cl mg/L	COD mg/L	HARD NESS mg/L
ACMW-01AW	12/16/97	12.1	6.36	42		90	66		1.5		
ACMW-01BE	12/16/97	9.9	6.33	60		127	86		1.4		
ACMW-02N	12/16/97	11.8	6.55	70		162	110		6.1		
ACMW-02S	12/16/97	11.9	6.20	56		120	80		1.7		
ACMW-04W	12/16/97	12.1	5.91	53		220	150		17.6		
ACMW-06N	12/16/97	11.5	6.82	276		764	466		67.3		
ACMW-06S	12/16/97	11.3	9.44	188		556	326		73.3		

=====

Recommended Maximum:

5 900 500 250 250

=====

Note: Alkalinity and Hardness expressed as CaCO3.

SITE	SAMPLE DATE	ORGANIC N mg/L	NH3 N mg/L	NO2 N mg/L	NO3 N mg/L	TOTAL N mg/L	TOTAL P mg/L	WATER LEVEL ft
ACMW-01AW	12/16/97	< .10	< .02	< .01	.12	.25	.03	5480.4
ACMW-01BE	12/16/97	< .10	< .02	< .01	.72	.85	.03	5489.4
ACMW-02N	12/16/97	< .10	< .02	< .01	.12	.25	.02	5455.8
ACMW-02S	12/16/97	< .10	< .02	< .01	.01	.14	.02	5459.7
ACMW-04W	12/16/97	< .10	< .02	< .01	2.62	2.75	.02	4899.7
ACMW-06N	12/16/97	.18	.04	.01	< .01	.24	.37	5217.1
ACMW-06S	12/16/97	.51	.25	.10	.02	.88	.04	5205.8

=====

Title 22 Maximum:

10

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SOUTH TAHOE PUBLIC UTILITY DISTRICT
ALPINE COUNTY GROUNDWATERS
WATER QUALITY DATA

01/01/98

SITE	SAMPLE DATE	TEMP C	pH	TOTAL ALK mg/L	TURB- IDITY NTU	EC umhos	TDS mg/L	COLOR UNITS	Cl mg/L	COD mg/L	HARD NESS mg/L
GW-03	12/09/97	14.4	7.31	129		310	220		1.6		
GW-04	12/09/97	12.2	7.55	119		266	196		3.2		
GW-05	12/09/97	8.6	6.45	61		300	182		32.3		
GW-07	12/09/97	6.0	5.97	53		122	90		1.6		
GW-08	12/09/97	9.6	6.37	59		270	136		25.0		
GW-11	12/09/97	10.4	6.52	46		97	65		1.0		
GW-14	12/09/97	6.4	6.77	52		112	89		1.3		

=====

Recommended Maximum:

5 900 500 15 250

Recommended Minimum: 6.50

=====

Note: Alkalinity and Hardness expressed as CaCO3.

SITE	SAMPLE DATE	ORGANIC N mg/L	NH3 N mg/L	NO2 N mg/L	NO3 N mg/L	TOTAL N mg/L	P mg/L
GW-03	12/09/97	< .10	.02	< .01	.68	.81	.04
GW-04	12/09/97	< .10	< .02	< .01	.77	.90	.09
GW-05	12/09/97	< .10	< .02	< .01	3.01	3.14	.03
GW-07	12/09/97	< .10	< .02	< .01	.95	1.08	.01
GW-08	12/09/97	< .10	< .02	< .01	5.21	5.34	.08
GW-11	12/09/97	< .10	< .02	< .01	.33	.46	.03
GW-14	12/09/97	< .10	< .02	< .04	.41	.57	.06

=====

Title 22 Maximum:

10

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SOUTH TAHOE PUBLIC UTILITY DISTRICT
ALPINE COUNTY GROUNDWATERS
WATER QUALITY DATA

01/01/98

SITE	SAMPLE DATE	LOCATION	TOTAL COLIFORM MPN/100 mL	FECAL COLIFORM MPN/100 mL	FECAL STREPTOCOCCUS MPN/100 mL
GW-03	12/09/97	Smith/Springmeyer	< 1	< 1	
GW-04	12/09/97	Celio	< 1	< 1	
GW-05	12/09/97	Neddenriep	< 1	< 1	
GW-07	12/09/97	Gansberg	< 1	< 1	
GW-08	12/09/97	Arant	< 1	< 1	
GW-11	12/09/97	Diamond Val. School	< 1	< 1	
GW-14	12/09/97	Sierra Pines	< 1	< 1	
=====					
Recommended Maximum:			< 2.2	<2.2	<2.2
=====					

Note: For coliform tests, 2 = 2.2; 5 = 5.1; 9 = 9.2. All other results are true values.

SOUTH TAHOE PUBLIC UTILITY DISTRICT
ALPINE COUNTY SURFACE WATERS
WATER QUALITY DATA

01/02/98

SYSTEM: CARSON RIVER

SITE	SAMPLE DATE	TEMP C	pH	TOTAL ALK mg/L	TURB- IDITY NTU	EC umhos	TDS mg/L	SS mg/L	Cl mg/L	DO mg/L	HARD- NESS mg/L	OIL & GREASE mg/L
SW-01	12/02/97	1.1	7.39	34	.24	75	57	1	1.0	9.80		< 1
SW-05	12/02/97	2.3	7.29	40	.49	87	66	9	1.3	10.30		< 1
SW-06	12/02/97	2.5	7.46	42	.76	93	73	3	1.7	9.50		< 1
SW-08	12/02/97	7.3	7.21	57	3.70	124	100	24	1.9	9.00		< 1

=====

WOODFORDS OBJECTIVES:

55

1.0

STATELINE OBJECTIVES:

70

2.5

=====

Note: Stated objectives are for the West Fork, Carson River

SYSTEM: INDIAN CREEK

SITE	SAMPLE DATE	TEMP C	pH	TOTAL ALK mg/L	TURB- IDITY NTU	EC umhos	TDS mg/L	SS mg/L	Cl mg/L	DO mg/L	HARD- NESS mg/L	OIL & GREASE mg/L
SW-02	12/02/97	3.5	7.35	56	18.00	110	79	128	1.1	9.65		< 1
SW-03	12/02/97	4.7	7.17	69	.24	154	111	1	4.4	9.75		< 1
SW-04	12/02/97	1.7	7.23	44	.79	93	69	2	1.4	10.00		< 1

=====

90th Percentile:

100

6.0

Annual Average:

80

4.0

=====

Note: Stated objectives are for the East Fork, Carson River Hydrologic Unit

Note: Alkalinity and Hardness expressed as CaCO3.

SYSTEM: CARSON RIVER

SITE	SAMPLE	DATE	ORGANIC	NH3	TKN	NO2	NO3	TOTAL	P	PO4-P	COD	BOD	SO4
SW-01		12/02/97	.10	.05	.15	< .01	.03	.19	.01	.01		1	2.43
SW-05		12/02/97	.05	< .02	.07	< .01	.06	.14	.02	.01		1	2.72
SW-06		12/02/97	.13	< .02	.15	< .01	.11	.27	.02	.01		1	3.03
SW-08		12/02/97	.34	.02	.36	< .01	.41	.78	.11	.03		1	2.85

WOODFORDS OBJECTIVES: 0.13
 STATELINE OBJECTIVES: 0.22

Note: Stated objectives are for the West Fork, Carson River

SYSTEM: INDIAN CREEK

SITE	SAMPLE	DATE	ORGANIC	NH3	TKN	NO2	NO3	TOTAL	P	PO4-P	COD	BOD	SO4
SW-02		12/02/97	.92	.03	.95	< .01	.02	.98	.27	.01		2	2.79
SW-03		12/02/97	.21	.02	.23	< .01	.06	.30	.08	.03		1	4.10
SW-04		12/02/97	.17	< .02	.19	< .01	.01	.21	.03	.01		1	2.66

90th Percentile: 8.0
 Annual Average: 4.0

Note: Stated objectives are for the West Fork, Carson River Hydrologic Unit

SOUTH TAHOE PUBLIC UTILITY DISTRICT
ALPINE COUNTY SURFACE WATERS
WATER QUALITY DATA

01/02/98

SYSTEM: CARSON RIVER

SITE	SAMPLE DATE	STREAM	TOTAL COLIFORM MPN/100 mL	FECAL COLIFORM MPN/100 mL	FECAL STREPTOCOCCUS MPN/100 mL
SW-01	12/02/97	Carson R Woodfords	< 30	< 30	
SW-05	12/02/97	Carson R Paynesville	230	< 30	
SW-06	12/02/97	Carson R Stateline	150	< 30	
SW-08	12/02/97	Irrigation Ditch	1500	90	

=====

SYSTEM: INDIAN CREEK

SITE	SAMPLE DATE	STREAM	TOTAL COLIFORM MPN/100 mL	FECAL COLIFORM MPN/100 mL	FECAL STREPTOCOCCUS MPN/100 mL
SW-02	12/02/97	Indian Cr Upper	230	< 30	
SW-03	12/02/97	Indian Cr Mid	> 90	40	
SW-04	12/02/97	Indian Cr Lower	2400	40	

=====

SOUTH TAHOE PUBLIC UTILITY DISTRICT
ALPINE COUNTY SOILS DATA

01/02/98

SAMPLE DATE: 10/03/97

SITE	RANCH	SOIL TYPE	DEPTH Inch	pH	EC mmhos	TKN mg/kg	NH3-N mg/kg	NO3-N mg/kg	TOT-P mg/kg	K2O mg/kg	Mo mg/kg	Cu mg/kg	SO4 mg/kg
2a	Celio	KT	6	8.15	1.34	2240		3.8	850		< 1.0	6.1	11
3a	Hall	SMB	6	5.88	.62	1750		4.3	770		< 1.0	7.4	25
4a	Gansberg	DI	6	6.27	.60	1590		9.5	470		< 1.0	13.0	4
5a	Gansberg	HRB	6	6.19	.36	1340		7.0	600		< 1.0	7.3	1
6a	Neddenriep	DWB	6	5.95	.34	1290		3.0	570		< 1.0	14.0	10
7a	Bruns	JaC	6	5.83	.13	1440		1.6	640		< 1.0	11.0	1
8a	Dressler	SoD	6	6.38	.13	208		1.4	270		< 1.0	3.8	

SITE	RANCH	SOIL TYPE	DEPTH Inchs	SATURATION %	CEC me/100g	Ca mg/L	Na mg/L	Mg mg/L	SAR	Ex-Na %	Cl mg/L	Ex-P mg/Kg
2a	Celio	KT	6	63.2		67	170	33	4.24	4.8		
3a	Hall	SMB	6	42.6		43	45	19	1.43	< 1.0		
4a	Gansberg	DI	6	40.6		41	37	10	1.34	< 1.0		
5a	Gansberg	HRB	6	33.4		28	34	6	1.51	< 1.0		
6a	Neddenriep	DWB	6	41.9		6	66	1	6.56	7.8		
7a	Bruns	JaC	6	40.3		15	8	4	.47	< 1.0		
8a	Dressler	SoD	6	17.2		7	13	3	1.03	< 1.0		

Note: Ca, Mg, Na, SAR, Ex-Na, and Cl results are from soil extract.

SOUTH TAHOE PUBLIC UTILITY DISTRICT
ALPINE COUNTY SURFACE WATERS
WATER QUALITY DATA

01/10/98

BLUE GREEN ALGAE

SYSTEM: CARSON RIVER

SITE	SAMPLE DATE	STREAM	COLONIES		FILAMENTS		FILAMENTS		SINGLE CELLS
			#	# OF CELLS	#	# OF CELLS	#	LENGTH (um)	
SW-01	11/05/97	Carson R Woodfords	0	0	0	0	0	0	0
SW-05	11/05/97	Carson R Paynesville	0	0	0	0	0	0	0
SW-06	11/05/97	Carson R Stateline	0	0	0	0	0	0	0
SW-08	11/05/97	Irrigation Ditch	0	0	0	0	0	0	0
SW-09	11/05/97	Carson R Dressler Ln	0	0	0	0	0	0	0

=====

SYSTEM: INDIAN CREEK

SITE	SAMPLE DATE	STREAM	COLONIES		FILAMENTS		FILAMENTS		SINGLE CELLS
			#	# OF CELLS	#	# OF CELLS	#	LENGTH (um)	
SW-02	11/05/97	Indian Cr Upper	0	0	0	0	0	0	0
SW-03	11/05/97	Indian Cr Mid	0	0	0	0	0	0	0
SW-04	11/05/97	Indian Cr Lower	0	0	0	0	0	0	0
SW-10	11/05/97	Indian Cr at Bruns	0	0	0	0	0	0	0

=====

Note: Results are per 5 ml

The following limitations of the East Fork of the Carson River were exceeded:

Site	Location	TDS	Cl ⁻	Total N	Total P	SO ₄	Boron	Exchangeable Sodium
SW-02	Indian Cr, Upper	✓		✓	✓			
SW-03	Indian Cr, Mid	✓	✓	✓	✓	✓		✓
SW-04	Indian Cr, Lower			✓	✓			
SW-10	Indian Cr, Smith/Springmeyer							

Soils and Blue Green Algae analysis for November have not yet been completed; the results will be sent to you as soon as they are available.

Emergency Retention Basin (ERB)

During the month of November, 1.5 MG of wastewater were pumped to the ERB. There was no wastewater remaining in the ERB on November 30, 1997.

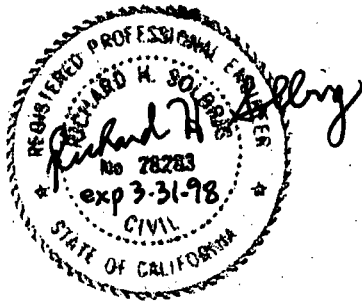
Export Pipeline

The District's Final effluent export pipeline route was visually inspected during the month of November from the treatment plant to station 507+13A, in Woodfords. No leaks or problems were detected.

Certification

I hereby certify that the enclosed monitoring report was prepared under my direct supervision and that I am a duly Registered Engineer under the laws of the State of California.

Sincerely,



Richard Solbrig,
Assistant Manager/Engineer

Enclosures:

1.

November Monthly Report	Pages
Wastewater Treatment plant	2
Permit Compliance Record	1
Export pipeline inspection	1
Harvey Place Reservoir (HPR)	2
Indian Creek Reservoir (ICR)	2
Sample site locations	2
Monitoring wells (ERB)	1
Heavenly Valley Creek	1
Alpine County Monitoring Wells	2
Alpine County Groundwaters	2
Alpine County Surfacewaters	4
Total number of pages:	20

- cc: Calif. Dept. of Health Services, ODW - Jess Morehouse
El Dorado Co. Dept. of Environmental Health - Virginia Huber
Nevada Division of Environmental Protection - Wendel McCurry
Alpine County Health Department - Dr. Richard Botto
Alpine County Health Department - Jim Goodloe
Alpine County Board of Supervisors
EPA - Permit and Compliance Branch, W-5 - Bill Pierce
Desert Research Group (Alpine County Consultants) - Bill Albright
STPUD Board of Directors
STPUD General Manager / District Engineer - Robert G. Baer
STPUD Manager of Operations - Ross Johnson
STPUD Laboratory Director - Terry Powers
STPUD Manager of Alpine County Operations - Hal Bird

**SOUTH TAHOE PUBLIC UTILITY DISTRICT
WASTEWATER TREATMENT PLANT MONTHLY REPORT**

12/05/97
3:54 PM

NOVEMBER, 1997

Date	Day	2-Hr Peak		FLOW MGD			PRECIP		D.O.	COD		BOD		SS	
		Inf	Inf	Eff	Pond Return	Pond Inf	Inch	Type	mg/L Fin	Raw	Fin	Raw	Fin	Raw	Fin
11/01/97	Sat	3.59	5.8	4.05					6.48	364	36.8	164	3.1	172	1.8
11/02/97	Sun	3.77	5.0	3.45					6.41	451					
11/03/97	Mon	3.52	4.6	3.85					5.96	378	30.0	157	6.5	185	2.2
11/04/97	Tue	3.50	5.5	3.70					7.22	400					
11/05/97	Wed	3.46	5.6	3.45					5.99	386					
11/06/97	Thu	3.47	5.0	3.97					5.95	458					
11/07/97	Fri	3.46	5.3	3.04					6.52	409					
11/08/97	Sat	3.98	5.6	4.15					7.72	450	35.8	203	6.2	203	3.6
11/09/97	Sun	3.79	5.2	3.64					5.93	419					
11/10/97	Mon	3.51	4.6	3.78			0.02	Snow	6.74	384					
11/11/97	Tue	3.75	5.3	2.17		1.50	0.07	Snow	6.38	370					
11/12/97	Wed	4.20	6.0	4.05	1.50				6.06	370	36.1	148	5.6	145	3.7
11/13/97	Thu	3.97	5.8	4.34					5.79	465					
11/14/97	Fri	3.51	5.5	3.44					6.52	426					
11/15/97	Sat	3.53	5.4	3.85					7.33	410	42.4	200	9.1	154	6.3
11/16/97	Sun	3.76	4.9	3.89					7.48	409					
11/17/97	Mon	3.37	5.4	3.69					7.31	356					
11/18/97	Tue	3.48	5.0	3.80			0.13	Rain	7.43	412					
11/19/97	Wed	3.64	5.5	3.54			0.01	Rain	7.54	352	47.3	118	6.4	133	4.2
11/20/97	Thu	3.37	5.0	3.05					7.39	426					
11/21/97	Fri	3.39	5.1	3.42					6.19	389					
11/22/97	Sat	3.78	6.0	3.91			0.03	Rain	6.10	436	32.7	233	5.5	167	2.9
11/23/97	Sun	3.59	6.0	3.73					5.72	416					
11/24/97	Mon	3.60	5.6	3.96			0.27	Rain	6.76	352					
11/25/97	Tue	3.76	5.5	3.42			0.39	Rain	7.67	379					
11/26/97	Wed	3.81	5.5	4.12			0.35	Snow	6.05	421	49.8	160	10.4	164	6.5
11/27/97	Thu	4.27	6.5	4.17					6.20	479					
11/28/97	Fri	4.59	7.0	4.40					6.02	453					
11/29/97	Sat	4.64	7.6	4.85					5.69	446	46.6	106	9.9	166	5.8
11/30/97	Sun	4.21	6.9	4.19					5.88	393					
PERMIT MAX		7.7									300		45		60
PERMIT MIN															
PERMIT AVE											60		30		30
TOTAL		112.27	167.7	113.07	1.50	1.50	1.27		196.43	12259	357.5	1489	62.7	1489	36.8
MAXIMUM		4.64	7.6	4.85	1.50	1.50	0.39		7.72	479	49.8	233	10.4	203	6.5
MINIMUM		3.37	4.6	2.17	1.50	1.50	0.01		5.69	352	30.0	106	3.1	133	1.8
AVERAGE		3.74	5.6	3.77	1.50	1.50	0.16		6.55	409	39.7	165	7.0	165	4.1
# Tests		30	30	30	1	1	8		30	30	9	9	9	9	9

**SOUTH TAHOE PUBLIC UTILITY DISTRICT
WASTEWATER TREATMENT PLANT MONTHLY REPORT**

12/05/97
3:54 PM

NOVEMBER, 1997

Date	Day	SETTLEABLE SOLIDS mL/L		MBAS mg/L		pH Units		TURBIDITY NTU		Cl2 mg/L	FINAL COLIFORMS MPN/100 mL			TDS mg/L		ALKALINITY mg/L	
		Raw	Fin	Raw	Fin	Raw	Fin	Fin	Fin		Total	7day-	Median	Raw	Fin	Raw	Fin
11/01/97	Sat	9.0	< 0.1			7.51	7.99	1.80	3.57	<	2	<	2			164	104
11/02/97	Sun	9.0	< 0.1			7.60	7.46	2.15	7.14	<	2	<	2			160	110
11/03/97	Mon	11.0	< 0.1			7.85	7.70	2.05	2.99	<	2	<	2	211	232	158	113
11/04/97	Tue	9.0	< 0.1			7.66	7.64	2.10	4.44	<	2	<	2			155	110
11/05/97	Wed	10.0	< 0.1			7.46	7.48	2.10	5.01	<	2	<	2			157	108
11/06/97	Thu	11.0	< 0.1			7.50	7.50	2.50	4.05	<	2	<	2			157	108
11/07/97	Fri	9.5	< 0.1			7.54	7.53	2.40	6.07	<	2	<	2			157	110
11/08/97	Sat	11.0	< 0.1			7.49	7.54	2.60	6.17	<	2	<	2			164	114
11/09/97	Sun	10.0	< 0.1			7.49	7.67	2.30	5.01	<	2	<	2			167	122
11/10/97	Mon	10.5	< 0.1			7.69	7.76	2.70	4.24	<	2	<	2			164	121
11/11/97	Tue	11.0	< 0.1	1.14	0.07	7.49	7.36	4.70	5.50	<	2	<	2			164	106
11/12/97	Wed	10.0	< 0.1			7.52	7.54	2.40	7.62	<	2	<	2	237	233	165	114
11/13/97	Thu	12.0	< 0.1			7.44	7.36	2.25	5.88	<	2	<	2			162	116
11/14/97	Fri	10.5	< 0.1			7.60	7.75	2.80	6.27	<	2	<	2			160	115
11/15/97	Sat	11.0	< 0.1			7.56	7.91	3.90	7.33	<	2	<	2			163	117
11/16/97	Sun	11.0	< 0.1			7.41	7.58	3.40	7.04	<	2	<	2			166	124
11/17/97	Mon	8.5	< 0.1			7.55	7.48	2.50	5.30	<	2	<	2			160	122
11/18/97	Tue	10.0	< 0.1			7.69	7.64	2.65	7.04	<	2	<	2			157	120
11/19/97	Wed	9.5	< 0.1			7.57	7.78	2.45	5.79	<	2	<	2	237	229	153	118
11/20/97	Thu	9.0	< 0.1			7.52	7.50	2.60	6.46	<	2	<	2			156	118
11/21/97	Fri	9.5	< 0.1			7.56	7.50	2.10	4.15	<	2	<	2			159	120
11/22/97	Sat	8.5	< 0.1			7.51	7.86	1.80	5.50	<	2	<	2			165	123
11/23/97	Sun	8.5	< 0.1			7.53	7.58	2.00	6.94	<	2	<	2			165	128
11/24/97	Mon	8.0	< 0.1			7.50	7.61	2.60	6.65	<	2	<	2			159	130
11/25/97	Tue	8.0	< 0.1			7.48	7.50	2.10	5.88	<	2	<	2			152	126
11/26/97	Wed	9.5	< 0.1			7.45	7.64	4.10	6.85	<	2	<	2	237	231	158	129
11/27/97	Thu	11.0	< 0.1			7.32	7.74	4.00	6.75	<	2	<	2			163	134
11/28/97	Fri	11.0	< 0.1			7.47	7.62	3.25	6.85	<	2	<	2			180	142
11/29/97	Sat	11.0	< 0.1			7.50	7.68	3.70	6.27	<	2	<	2			183	152
11/30/97	Sun	8.5	< 0.1			7.49	7.55	3.10	6.56	<	2	<	2			169	148
PERMIT MAX			0.1		2.0		8.5	20			240	23					
PERMIT MIN							6.5										
PERMIT AVE					1.0			10									
TOTAL		296.0	3.0	1.14	0.07	225.95	228.45	81.10	175.32		60	60	922	925	4862	3622	
MAXIMUM		12.0	0.1	1.14	0.07	7.85	7.99	4.70	7.62		2	2	237	233	183	152	
MINIMUM		8.0	0	1.14	0.07	7.32	7.36	1.80	2.99		2	2	211	229	152	104	
AVERAGE		9.9	0.1	1.14	0.07	7.53	7.62	2.70	5.84		2	2	231	231	162	121	
# Tests		30	30	1	1	30	30	30	30		30	30	4	4	30	30	

SOUTH TAHOE PUBLIC UTILITY DISTRICT
MEMORANDUM

Date: November 13, 1997

To: Bob Baer, Diane Noble, Terry Powers

From: Greg Schrempp

Topic: Export Line Inspection

On November 12, 1997, Tim Rieger and I conducted our check of the District's export line from the treatment plant to where the "C" line daylights at Harvey Place at Station 564+04. A couple of wet spots were checked, however no leaks were found.

SOUTH TAHOE PUBLIC UTILITY DISTRICT
HARVEY PLACE RESERVOIR DATA SUMMARY

12/05/97

From: January 1, 1997
To: December 31, 1997

Date	pH	Temp C	NH3+ NH4 mg/L	NH3-N mg/L	Org-N mg/L	TKN mg/L	NO3-N mg/L	NO2-N mg/L	PO4-P mg/L	Total P mg/L	Alk mg/L	MBAS mg/L	D.O. mg/L	D.O. % Sat	COD mg/L	BOD mg/L
01-07-97	7.38	4.8	10.60	0.03	0.90	11.50	1.35	0.11	1.51	1.53	90	0.03	10.10	97.15	20.9	1.83
02-04-97	7.82	4.4	9.88	0.08	-0.76	9.12	0.99	0.08	1.35	1.41	83	0.04	10.00	95.17	18.2	1.99
03-04-97	7.72	4.7	10.90	0.07	0.50	11.40	0.86	0.05	1.26	1.46	86	0.03	11.00	105.53	15.5	1.77
04-08-97	7.67	10.1	11.50	0.10	1.80	13.30	0.93	0.05	1.15	1.55	90	0.02	8.50	93.20	14.8	1.94
05-06-97	7.63	15.4	11.40	0.14	0.10	11.50	0.91	0.09	1.60	1.70	94	0.02	8.20	101.26	20.6	3.20
06-03-97	7.70	17.9	12.10	0.20	-2.21	9.89	1.28	0.26	1.73	1.69	94	0.03	7.15	93.03	15.8	3.46
07-01-97	7.76	18.5	11.40	0.23	0.90	12.30	1.57	0.26	1.66	3.44	93	0.03	6.40	84.32	22.0	2.67
08-05-97	7.80	22.0	11.90	0.33	0.90	12.80	1.71	0.33	1.99	2.04	101	0.02	6.00	84.75	17.9	2.41
09-02-97	7.90	19.7	13.70	0.41	3.10	16.80	1.58	0.32	2.16	2.33	110	0.02	4.50	60.80	26.7	3.89
10-14-97	7.57	13.2	13.00	0.11	1.90	14.90	1.40	0.37	2.24	2.50	118	0.04	4.60	54.16	22.3	4.79
11-11-97	7.76	9.6	15.10	0.16	-1.70	13.40	2.20	0.48	2.32	2.32	119	0.02	5.50	59.60	10.4	3.96
Maximum	7.90	22.0	15.10	0.41	3.10	16.80	2.20	0.48	2.32	3.44	119	0.04	11.00	105.53	26.7	4.79
Minimum	7.38	4.4	9.88	0.03	-2.21	9.12	0.86	0.05	1.15	1.41	83	0.02	4.50	54.16	10.4	1.77
Average	7.70	12.8	11.95	0.17	0.49	12.45	1.34	0.22	1.72	2.00	98	0.03	7.45	84.45	18.6	2.90

Date	Chloride mg/L	TDS mg/L	SS mg/L	Turb NTU	EC umhos	H2S mg/L	Ca mg/L	Na mg/L	Mg mg/L	SAR Ratio	Level Ft.	Flow Acre-Ft	% Ice Cover	Algae	Weeds
01-07-97	37.4	193	5.40	17.00	363		15.00	34.00	3.00	2.09	48.50		0	No	No
02-04-97	34.4	169	4.84	14.00	334		7.10	15.00	1.50	1.33	55.00		0	No	No
03-04-97	36.3	178	3.44	7.30	348		10.00	23.00	2.40	1.69	54.80		1	No	No
04-08-97	39.1	187	2.91	4.00	377		14.00	30.00	3.10	1.89	57.00		0	Yes	No
05-06-97	41.5	186	0.80	3.10	389		14.00	34.00	3.30	2.12	58.40		0	Yes	Yes
06-03-97	43.4	203	11.60	6.30	405		16.00	38.00	3.80	2.21	58.50		0	Yes	Yes
07-01-97	43.8	196	3.30	2.60	402		16.00	42.00	3.90	2.44	53.50		0	Yes	Yes
08-05-97	47.4	209	0.32	1.20	428		15.00	48.00	3.90	2.85	46.50		0	Yes	No
09-02-97	50.1	222	29.20	6.90	462		18.00	50.00	3.80	2.79	39.00		0	Yes	No
10-14-97	51.2	233	4.36	5.00	488		18.00	49.00	3.90	2.73	17.00		0	Yes	No
11-11-97	55.3	240	14.30	2.50	482		17.00	46.00	3.90	2.61	25.90		0	No	No
Maximum	55.3	240	29.20	17.00	488	ERR	18.00	50.00	3.90	2.85	58.50		1		
Minimum	34.4	169	0.32	1.20	334	ERR	7.10	15.00	1.50	1.33	17.00		0		
Average	43.6	201	7.32	6.35	407		14.55	37.18	3.32	2.25	46.74		0		

SOUTH TAHOE PUBLIC UTILITY DISTRICT
HARVEY PLACE RESERVOIR DATA SUMMARY

Fro January 1, 1997
To: December 31, 1997

Date	Chloro-Phyll ug/L	Secci Disc m	Coliforms Total MPN	Fecal MPN	Fecal Strep MPN	Air Temp C	Total N mg/L	SO4 mg/L	Boron mg/L	Comments
01-07-97			500	<	2	23	5.9	12.96	17.80	0.08
02-04-97			17	<	2	17	7.1	10.19	15.40	0.14
03-04-97			30	<	2	2	5.9	12.31	13.10	0.11
04-08-97			11	<	2	4	8.9	14.28	15.50	0.11
05-06-97			170	<	2	14	15.6	12.50	14.10	0.13
06-03-97			130		13	130	16.2	11.43	16.80	0.13
07-01-97			1600	<	2	17	17.1	14.13	16.20	0.12
08-05-97			4	<	2	2	26.5	14.84	17.00	0.18
09-02-97			80		2	110	18.0	18.70	18.60	0.18
10-14-97			80		4	2	18.3	16.67	22.70	0.18
11-11-97			2	<	2	2	12.5	16.08	21.90	0.13
Maximum	0	ERR	1600		13	130	26.5	18.70	22.70	0.18
Minimum	0	ERR	< 2	<	2	< 2	5.9	10.19	13.10	0.08
Average			239		3	29	13.8	14.01	17.19	0.14

SOUTH TAHOE PUBLIC UTILITY DISTRICT
INDIAN CREEK RESERVOIR

12/05/97

From: January 1, 1997
To: December 31, 1997

Date	pH	Temp C	NH3+		Org-N mg/L	TKN mg/L	NO3-N mg/L	NO2-N mg/L	PO4-P mg/L	Total P mg/L	Alk mg/L	MBAS mg/L	D.O. mg/L	D.O. % Sat	COD mg/L	BOD mg/L
			NH4 mg/L	NH3-N mg/L												
01-07-97	8.25	3.7	0.48	0.01	0.70	1.18	0.01	0.22	0.05	0.09	41	0.02	10.20	95.29	15.5	0.96
02-04-97	7.72	4.8	0.35	< 0.01	0.40	0.75	0.25	0.01	0.05	0.07	36	0.02	11.00	105.81	12.1	1.28
03-04-97	7.50	4.8	0.24	< 0.01	0.40	0.64	0.20	0.01	0.02	0.08	36	0.02	11.70	112.34	11.4	1.20
04-08-97	9.70	11.8	0.02	< 0.01	0.72	0.74	0.18	0.01	0.01	0.06	36	0.02	12.00	137.00	14.5	4.85
05-06-97	8.51	16.4	0.08	0.01	1.03	1.11	0.07	0.01	0.01	0.04	39	0.02	11.40	143.83	15.2	2.26
06-03-97	8.84	17.4	0.03	< 0.01	0.73	0.76	0.01	0.01	0.01	0.05	40	0.02	8.25	106.23	14.5	2.44
07-01-97	9.75	19.3	0.03	0.02	0.77	0.80	0.02	0.01	0.01	0.05	40	0.02	7.40	99.13	20.9	1.17
08-05-97	10.14	27.6	0.04	0.04	0.98	1.02	0.03	0.02	0.01	0.05	39	0.02	5.70	89.29	37.6	5.89
09-02-97	9.96	17.0	0.02	0.02	2.10	2.12	0.01	0.01	0.01	0.10	41	0.02	6.40	81.70	35.6	8.57
10-14-97	8.23	14.2	0.28	0.01	1.00	1.28	0.07	0.02	0.01	0.07	42	0.02	6.50	78.18	27.1	2.23
11-11-97	8.75	8.1	0.28	0.02	0.94	1.22	0.10	0.01	0.01	0.05	43	0.02	8.50	88.80	14.8	3.15
Maximum	10.14	27.6	0.48	0.04	2.10	2.12	0.25	0.22	0.05	0.10	43	0.02	12.00	143.83	37.6	8.57
Minimum	7.50	3.7	0.02	0.01	0.40	0.64	0.01	0.01	0.01	0.04	36	0.02	5.70	78.18	11.4	0.96
Average	8.85	13.2	0.17	0.02	0.89	1.06	0.09	0.03	0.02	0.06	39	0.02	9.00	103.42	19.9	3.09

Date	Chloride mg/L	TDS mg/L	SS mg/L	Turb NTU	EC umhos	H2S mg/L	Ca mg/L	Na mg/L	Mg mg/L	SAR Ratio	Level Ft.	Flow Acre-Ft.	% Ice Cover	Algae	Weeds
02-04-97	1.2	58	3.40	7.70	80		8.80	4.40	1.60	0.36	49.60		25	No	No
03-04-97	1.4	70	3.50	7.80	83		8.90	5.20	1.80	0.42			0	Yes	Yes
04-08-97	1.5	59	25.60	7.70	83		8.60	4.50	1.70	0.37	48.80		0	No	No
05-06-97	1.3	53	1.32	1.90	84		9.10	4.80	1.80	0.38	49.20		0		No
06-03-97	1.5	67	53.80	5.90	89		11.00	5.80	2.20	0.42			0	Yes	Yes
07-01-97	1.2	60	4.66	2.60	90		10.00	5.70	2.10	0.43	47.00		0	Yes	Yes
08-05-97	1.4	60	19.00	3.90	107		9.20	6.20	1.80	0.49	46.00		0	Yes	Yes
09-02-97	2.0	65	23.20	20.00	89		9.80	6.00	1.90	0.46	46.00		0	Yes	Yes
10-14-97	1.5	67	4.68	3.10	95		10.00	5.90	2.00	0.44	45.50		0	Yes	Yes
11-11-97	1.5	66	9.92	3.30	100		10.00	5.80	2.10	0.43			0	Yes	Yes
Maximum	2.0	74	53.80	20.00	107	ERR	11.00	6.20	2.20	0.49	49.60		25		
Minimum	1.2	53	1.32	1.90	80	ERR	8.60	4.40	1.60	0.36	45.50		0		
Average	1.5	64	13.80	6.46	90		9.58	5.43	1.89	0.42	47.44		2		

SOUTH TAHOE PUBLIC UTILITY DISTRICT
INIDAN CREEK RESERVOIR

From: January 1, 1997
To: December 31, 1997

Date	Chloro-Phyll ug/L	Secci Disc m	Coliforms Total MPN	Fecal MPN	Fecal Strep MPN	Air Temp C	Total N mg/L	SO4 mg/L	Boron mg/L	Comments
01-07-97			23	<	2	4	4.4	1.41	3.58	< 0.01
02-04-97			27	<	2	2	5.0	1.01	3.70	0.06
03-04-97			13	<	2	<	2	0.85	3.56	< 0.01
04-08-97			4	<	2	4	15.3	0.93	4.18	< 0.01
05-06-97			8	<	2	4	25.0	1.19	4.15	0.05
06-03-97			50	<	2	30	13.3	0.78	3.93	0.02
07-01-97			500	<	2	500	23.9	0.83	3.87	< 0.01
08-05-97			11		11	300	36.0	1.07	3.88	0.01
09-02-97			240		50	220	16.4	2.14	2.28	< 0.01
10-14-97			< 2	<	2	4	24.7	1.37	2.98	0.05
11-11-97			8		4	240	8.2	1.33	2.25	0.02
Maximum	ERR	ERR	500		50	500	36.0	2.14	4.18	0.06
Minimum	ERR	ERR	< 2	<	2	< 2	4.4	0.78	2.25	0.01
Average			81		7	119	16.3	1.17	3.49	0.02

SAMPLE LOCATIONS

TAHOE BASIN MONITORING WELLS

<u>Site</u>	<u>Location</u>
ERB	Emergency Retention Basin
CONTROL	North of Post Office
MW02-25, -50	Emergency Retention Basin, S side
MW03-25, -50	Emergency Retention Basin, S side
MW04-25, -50	Emergency Retention Basin, W side
MW07-25, -50	Emergency Retention Basin, N side
MW08-25, -50	Pond #1, SW corner
MW11	S.E. corner of wastewater treatment plant grounds
MW12	South of Emergency Pump Building, for buried sludge
MW13	Pond 2, along Heavenly Valley Creek, for buried sludge

HEAVENLY VALLEY CREEK

HVC-1	At Pioneer Trail
HVC-2	250 ft upstream of Pond #2
HVC-3	25 ft downstream of Johnson Blvd.
HVC-4	Effluent of drain pipe from Lower Shop area
HVC-5	Effluent of drainage pipe along Johnson Blvd, 10 feet upstream of Johnson Blvd.

ALPINE COUNTY MONITORING WELLS

<u>Site</u>	<u>Location</u>
ACMW-01AW	Below main dam at Harvey Place Reservoir
ACMW-01BE	Below auxiliary dam at Harvey Place Reservoir
ACMW-02, N&S	On dam access road at Diamond Valley Road
ACMW-03	Bruns ranch, east side of Highway 88
ACMW-04W	Gansberg ranch, west side of Highway 88
ACMW-05	Dressler ranch
ACMW-06, N&S	Celio ranch, on Diamond Valley Road

ALPINE SOILS

<u>Site</u>	<u>Ranch</u>
S2	Celio
S3	Hall
S4	Gansberg
S5	Gansberg
S6	Neddenriep
S7	Bruns
S8	Dressler

ALPINE GROUNDWATERS

<u>Site</u>	<u>Homeowner</u>
GW-01	Sagues
GW-03	Smith/Springmeyer
GW-04	Celio
GW-05	Neddenriep
GW-07	Gansberg, Jr.
GW-08	Arant
GW-11	Diamond Valley School
GW-14	Sierra Pines Store

ALPINE SURFACEWATERS

<u>Site</u>	<u>Location</u>
SW-01	Carson River, Woodfords
SW-02	Indian Creek, @ HWY 89
SW-03	Indian Creek, @ upper bridge
SW-04	Indian Creek, @ lower bridge
SW-05	Carson River, Paynesville
SW-06	Carson River, Stateline
SW-07	Fredericksberg Ditch, Stateline
SW-08	Irrigation Ditch along Carson River Road
SW-09	Carson River, Dressler Lane
SW-10	Indian Creek, @ Smith-Springmeyer Ranch

SOUTH TAHOE PUBLIC UTILITY DISTRICT
WATER QUALITY DATA
of

12/09/97

MONITORING WELLS

WELL	DATE	WATER LEVEL (MSL ft)	TEMP C	pH	EC umhos/cm	Cl mg/L	NO3-N mg/L	PO4-P mg/L	COD mg/L
CONTROL	11/24/97	6284.8	10.4	6.61	182	6.4	2.49		< 5
MW01.5	11/24/97	6269.8	8.7	7.18	173	6.2	.91		< 5
MW02-50	11/24/97	6269.6	8.7	6.19	616	63.1	14.70		< 5
MW03-50	11/24/97	6269.6	9.0	6.04	572	51.3	19.30		8
MW04-50	11/24/97	6269.5	7.4	6.15	78	5.5	.06		< 5
MW07-50	11/24/97	6280.3	7.6	6.52	279	29.9	.59		< 5
MW08-25	11/24/97	6246.8	10.4	6.20	1067	60.2	< .01		81
MW11	11/24/97	6268.3	9.4	6.61	87	1.4	.18		
MW12	11/24/97	6265.0	10.1	6.42	205	3.1	.58		
MW13	11/24/97	6257.4	7.3	6.88	412	1.7	.23		

=====
Note: Samples filtered through 0.45 u filter before analysis

SOUTH TAHOE PUBLIC UTILITY DISTRICT
 WATER QUALITY DATA
 of
 HEAVENLY VALLEY CREEK

12/05/97

Sample Date: 11/19/97

SITE	TEMP C	pH	EC umhos/cm	Cl mg/L	COD mg/L	NO3-N mg/L	SS mg/L	O&G mg/L	COMMENTS
HVC-1	3.2	7.34	50	.9	< 5	.05	2	< 1	Storm Event
HVC-2	3.1	7.14	73	6.2	< 5	< .01	2	< 1	Storm Event
HVC-3	1.9	6.90	75	6.3	5	.01	3	< 1	Storm Event
HVC-4	5.1	6.95	125	2.3	234	.03	492	1	Storm Event

=====

HVC-1: 15 feet downstream of Pioneer Trail
 HVC-2: 250 feet upstream of Pond #2
 HVC-3: 25 feet downstream of Johnson Blvd crossing
 HVC-4: Effluent of drainpipe from Lower Shop area
 HVC-5: Effluent of drainpipe along Johnson Blvd, 10 feet upstream of Johnson Blvd

SOUTH TAHOE PUBLIC UTILITY DISTRICT
ALPINE COUNTY MONITORING WELLS
WATER QUALITY DATA

12/05/97

SITE	SAMPLE DATE	TEMP C	pH	TOTAL ALK mg/L	TURB- IDITY NTU	EC umhos	TDS mg/L	SO4 mg/L	Cl mg/L	COD mg/L	HARD NESS mg/L	
ACMW-01AW	11/18/97	12.2	6.64	48	4.40	109	84	2.64	2.4	< 2	45	
ACMW-01BE	11/18/97	9.7	6.25	70	1.60	150	100	2.28	2.0	6	60	
ACMW-02N	11/18/97	11.3	6.63	68	.74	162	106	5.01	5.9	< 2	57	
ACMW-02S	11/18/97	11.6	6.77	55	.64	114	81	2.17	1.8	5	45	
ACMW-04W	11/18/97	11.8	5.80	53	.95	223	150	13.80	19.5	< 2	59	
ACMW-06N	11/18/97	11.3	6.58	283	15.00	788	482	31.90	66.0	11	284	
ACMW-06S	11/18/97	11.0	7.05	226	5.50	741	408	25.70	74.0	17	246	
=====												
Recommended Maximum:					5	900	500	250	250			
=====												

Note: Alkalinity and Hardness expressed as CaCO3.

SITE	SAMPLE DATE	ORGANIC N mg/L	NH3 N mg/L	NO2 N mg/L	NO3 N mg/L	TOTAL N mg/L	TOTAL P mg/L	WATER LEVEL ft
ACMW-01AW	11/18/97	< .10	.19	< .01	.33	.63	.03	5480.8
ACMW-01BE	11/18/97	< .10	< .02	< .01	.71	.84	.02	5491.4
ACMW-02N	11/18/97	< .10	< .02	.01	.09	.22	.02	5457.8
ACMW-02S	11/18/97	< .10	< .02	< .01	< .01	.14	.02	5457.3
ACMW-04W	11/18/97	< .10	< .02	< .01	2.47	2.60	.03	4900.9
ACMW-06N	11/18/97	.21	.04	.01	< .01	.27	.28	5216.1
ACMW-06S	11/18/97	.78	.36	.07	.02	1.23	.08	5205.1
=====								
Title 22 Maximum:					10			
=====								

SOUTH TAHOE PUBLIC UTILITY DISTRICT
ALPINE COUNTY MONITORING WELLS
WATER QUALITY DATA

12/05/97

SITE	SAMPLE DATE	ID#	TOTAL COLIFORMS MPN/100 mL	FECAL COLIFORMS MPN/100 mL	FECAL STREPTOCOCCUS MPN/100 mL
ACMW-01AW	11/18/97	971118-08	3	< 1	1
ACMW-01BE	11/18/97	971118-09	< 1	< 1	1
ACMW-02N	11/18/97	971118-10	< 1	< 1	1
ACMW-02S	11/18/97	971118-11	2	< 1	1
ACMW-04W	11/18/97	971118-12	> 23	1	1
ACMW-06N	11/18/97	971118-13	12	< 1	1
ACMW-06S	11/18/97	971118-14	> 23	< 1	1
=====					
Recommended Maximum:			< 2.2	< 2.2	< 2.2
=====					

Note: For coliform tests, 2 = 2.2; 5 = 5.1; 9 = 9.2. All other results are true values.

SOUTH TAHOE PUBLIC UTILITY DISTRICT
ALPINE COUNTY GROUNDWATERS
WATER QUALITY DATA

12/05/97

SITE	SAMPLE DATE	TEMP C	pH	TOTAL ALK mg/L	TURB- IDITY NTU	EC umhos	TDS mg/L	COLOR UNITS	Cl mg/L	COD mg/L	HARD NESS mg/L
GW-03	11/11/97	12.9	7.44	129	.11	308	222	< 5	1.5	< 5	123
GW-04	11/11/97	14.2	7.52	120	.26	266	195	< 5	2.9	< 5	101
GW-05	11/11/97	10.2	6.74	60	.23	304	193	< 5	33.0	< 5	100
GW-07	11/11/97	8.9	6.45	53	.12	123	95	< 5	1.4	< 5	48
GW-08	11/11/97	11.6	6.66	59	.34	275	170	< 5	25.6	< 5	51
GW-11	11/11/97	15.9	6.55	43	.15	92	73	< 5	.6	< 5	34
GW-14	11/11/97	9.7	6.75	52	.10	112	95	< 5	1.2	< 5	34

=====

Recommended Maximum:

6.50

5

900

500

15

250

Recommended Minimum:

=====

Note: Alkalinity and Hardness expressed as CaCO3.

SITE	SAMPLE DATE	ORGANIC N mg/L	NH3 N mg/L	NO2 N mg/L	NO3 N mg/L	TOTAL N mg/L	P mg/L
GW-03	11/11/97	.11	< .02	< .01	.69	.83	.04
GW-04	11/11/97	< .10	< .02	< .01	.78	.91	.06
GW-05	11/11/97	.10	.03	< .01	3.50	3.64	.03
GW-07	11/11/97	< .10	.02	< .01	.96	1.09	.08
GW-08	11/11/97	< .10	< .02	< .01	5.87	6.00	.04
GW-11	11/11/97	.10	< .02	< .01	.30	.43	.02
GW-14	11/11/97	.10	.02	< .01	.43	.56	.06

=====

Title 22 Maximum:

10

SOUTH TAHOE PUBLIC UTILITY DISTRICT
ALPINE COUNTY GROUNDWATERS
WATER QUALITY DATA

12/05/97

SITE	SAMPLE DATE	LOCATION	TOTAL COLIFORM MPN/100 mL	FECAL COLIFORM MPN/100 mL	FECAL STREPTOCOCCUS MPN/100 mL
GW-03	11/11/97	Smith/Springmeyer	< 1	< 1	
GW-04	11/11/97	Celio	< 1	< 1	
GW-05	11/11/97	Neddenriep	< 1	< 1	
GW-07	11/11/97	Gansberg	5	< 1	
GW-08	11/11/97	Arant	< 1	< 1	
GW-11	11/11/97	Diamond Val. School	< 1	< 1	
GW-14	11/11/97	Sierra Pines	< 1	< 1	
=====					
Recommended Maximum:			< 2.2	<2.2	<2.2
=====					

Note: For coliform tests, 2 = 2.2; 5 = 5.1; 9 = 9.2. All other results are true values.

SOUTH TAHOE PUBLIC UTILITY DISTRICT
ALPINE COUNTY SURFACE WATERS
WATER QUALITY DATA

12/05/97

SYSTEM: CARSON RIVER

SITE	SAMPLE DATE	TEMP C	pH	TOTAL ALK mg/L	TURB- IDITY NTU	EC umhos	TDS mg/L	SS mg/L	Cl mg/L	DO mg/L	HARD- NESS mg/L	OIL & GREASE mg/L
SW-01	11/05/97	5.4	7.02	34	.20	76	52	1	.6	7.30	29	40
SW-05	11/05/97	7.6	7.79	40	.31	87	67	11	.9	8.60	33	< 1
SW-06	11/05/97	7.3	7.96	42	4.10	92	68	1	1.4	9.30	37	< 1
SW-08	11/05/97	12.5	7.38	56	4.20	125	102	15	1.5	8.10	43	< 1
SW-09	11/05/97	8.0	7.12	50	.43	120	84	1	3.6	9.00	42	< 1

=====

WOODFORDS OBJECTIVES:

55

1.0

STATELINE OBJECTIVES:

70

2.5

=====

Note: Stated objectives are for the West Fork, Carson River.

SYSTEM: INDIAN CREEK

SITE	SAMPLE DATE	TEMP C	pH	TOTAL ALK mg/L	TURB- IDITY NTU	EC umhos	TDS mg/L	SS mg/L	Cl mg/L	DO mg/L	HARD- NESS mg/L	OIL & GREASE mg/L
SW-02	11/05/97	9.6	7.77	73	1.40	139	104	1	.6	6.60	56	19
SW-03	11/05/97	12.6	7.50	91	3.40	219	145	2	9.3	9.10	75	1
SW-04	11/05/97	8.1	7.44	45	1.50	74	76	2	1.4	8.50	39	1
SW-10	11/05/97	6.2	7.29	48	1.70	95	79	2	1.4	8.60	43	< 1

=====

90th Percentile:

100

6.0

Annual Average:

80

4.0

=====

Note: Stated objectives are for the East Fork, Carson River Hydrologic Unit

Note: Alkalinity and Hardness expressed as CaCO3.

SOUTH TAHOE PUBLIC UTILITY DISTRICT
ALPINE COUNTY SURFACE WATERS
WATER QUALITY DATA

12/05/97

SYSTEM: CARSON RIVER

SITE	SAMPLE DATE	ORGANIC	NH3	TKN	NO2	NO3	TOTAL	P	PO4-P	COD	BOD	SO4
		N mg/L	N mg/L	N mg/L	N mg/L	N mg/L	N mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW-01	11/05/97	.10	< .02	.12	< .01	.24	.37	.02	.01	< 5	< 1	2.18
SW-05	11/05/97	.15	< .02	.17	< .01	.17	.35	.02	.01	< 5	1	2.26
SW-06	11/05/97	.28	< .02	.30	< .01	.26	.57	.02	< .01	< 5	< 1	2.26
SW-08	11/05/97	.36	< .02	.38	< .01	.62	1.01	.09	.03	6	1	3.68
SW-09	11/05/97	.25	< .02	.27	< .01	.01	.29	.02	.01	< 5	1	5.10

```

=====
WOODFORDS OBJECTIVES:                0.13                0.02                0.15                0.02                2.0
STATELINE OBJECTIVES:                0.22                0.03                0.25                0.03                2.0
=====

```

Note: Stated objectives are for the West Fork, Carson River

SYSTEM: INDIAN CREEK

SITE	SAMPLE DATE	ORGANIC	NH3	TKN	NO2	NO3	TOTAL	P	PO4-P	COD	BOD	SO4
		N mg/L	N mg/L	N mg/L	N mg/L	N mg/L	N mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SW-02	11/05/97	.20	< .02	.22	< .01	.34	.57	.03	.01	6	1	2.75
SW-03	11/05/97	.16	< .02	.18	< .01	.29	.48	.09	.04	< 5	1	7.98
SW-04	11/05/97	.20	< .02	.22	< .01	.17	.40	.05	.02	< 5	< 1	2.69
SW-10	11/05/97	.31	< .02	.33	< .01	.01	.35	.06	.03	< 5	1	2.70

```

=====
90th Percentile:                0.30                0.03                0.30                0.03                8.0
Annual Average:                0.20                0.02                0.20                0.02                4.0
=====

```

Note: Stated objectives are for the West Fork, Carson River Hydrologic Unit

SOUTH TAHOE PUBLIC UTILITY DISTRICT
ALPINE COUNTY SURFACE WATERS
WATER QUALITY DATA

12/05/97

SYSTEM: CARSON RIVER

SITE	SAMPLE DATE	STREAM	TOTAL COLIFORM MPN/100 mL	FECAL COLIFORM MPN/100 mL	FECAL STREPTOCOCCUS MPN/100 mL
SW-01	11/05/97	Carson R Woodfords	< 30	< 30	< 30
SW-05	11/05/97	Carson R Paynesville	40	< 30	40
SW-06	11/05/97	Carson R Stateline	90	< 30	< 30
SW-08	11/05/97	Irrigation Ditch	2400	2400	230
SW-09	11/05/97	Carson R Dressler Ln	930	40	40

=====

SYSTEM: INDIAN CREEK

SITE	SAMPLE DATE	STREAM	TOTAL COLIFORM MPN/100 mL	FECAL COLIFORM MPN/100 mL	FECAL STREPTOCOCCUS MPN/100 mL
SW-02	11/05/97	Indian Cr Upper	230	90	40
SW-03	11/05/97	Indian Cr Mid	150	< 30	< 30
SW-04	11/05/97	Indian Cr Lower	210	40	< 30
SW-10	11/05/97	Indian Cr at Bruns	150	40	90

=====

SOUTH TAHOE PUBLIC UTILITY DISTRICT
ALPINE COUNTY SURFACE WATERS
WATER QUALITY DATA

12/05/97

SYSTEM: CARSON RIVER

SITE	SAMPLE DATE	STREAM	B mg/L	K mg/L	CALCIUM mg/L	MAGNESIUM mg/L	SODIUM mg/L	SAR	EXCHANGEABLE SODIUM PERCENTAGE
SW-01	11/05/97	Carson R Woodfords	.01	1.40	7.50	2.20	3.90	.32	22.3
SW-05	11/05/97	Carson R Paynesville	.01	1.70	8.80	2.50	4.80	.36	23.2
SW-06	11/05/97	Carson R Stateline	< .01	1.90	9.20	2.70	4.90	.36	22.6
SW-08	11/05/97	Irrigation Ditch	.04	2.10	12.00	3.00	9.10	.60	30.5
SW-09	11/05/97	Carson R Dressler Ln	.02	2.00	11.00	3.50	7.60	.51	27.1

=====

WOODFORDS OBJECTIVES:	0.02	20.0
STATELINE OBJECTIVES:	0.02	20.0

=====

Note: Objectives are for West Fork, Carson River

SYSTEM: INDIAN CREEK

SITE	SAMPLE DATE	STREAM	B mg/L	K mg/L	CALCIUM mg/L	MAGNESIUM mg/L	SODIUM mg/L	SAR	EXCHANGEABLE SODIUM PERCENTAGE
SW-02	11/05/97	Indian Cr Upper	< .01	1.90	16.00	4.10	9.00	.51	24.8
SW-03	11/05/97	Indian Cr Mid	.04	2.40	20.00	6.20	16.00	.80	30.7
SW-04	11/05/97	Indian Cr Lower	.02	1.60	9.60	3.00	5.30	.38	23.1
SW-10	11/05/97	Indian Cr at Bruns	.04	1.70	10.00	3.20	6.00	.42	24.4

=====

90th Percentile:	0.25	30
Annual Average:	0.12	25

=====

Note: Objectives are for the East Fork, Carson River Hydrologic Unit

The following limitations of the East Fork of the Carson River were exceeded:

Site	Location	TDS	Cl	Total N	Total P	SO ₄	Boron	Exchangeable Sodium
SW-02	Indian Cr, Upper	✓		✓	✓			
SW-03	Indian Cr, Mid	✓	✓	✓	✓	✓		✓
SW-04	Indian Cr, Lower	✓		✓	✓			

Results for September's soils analyses are included. Blue green algae results for September and October are also included. Soils analysis for October have not yet been completed; the results will be sent to you as soon as they are available.

Emergency Retention Basin (ERB)

During the month of October, no wastewater was pumped to the ERB. There was no wastewater remaining in the ERB on October 31, 1997.

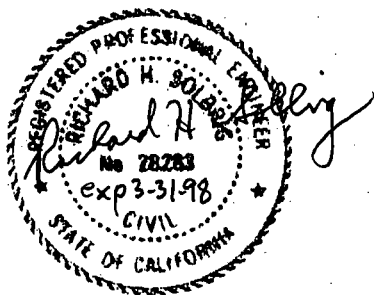
Export Pipeline

The District's Final effluent export pipeline route was visually inspected during the month of October from the treatment plant to station 507+13A, in Woodfords. No leaks or problems were detected.

Certification

I hereby certify that the enclosed monitoring report was prepared under my direct supervision and that I am a duly Registered Engineer under the laws of the State of California.

Sincerely,



Richard Solbrig,
Assistant Manager/Engineer

Enclosures:

1.

October Monthly Report	Pages
Wastewater Treatment plant	2
Permit Compliance Record	1
Export pipeline inspection	1
Harvey Place Reservoir (HPR)	2
Indian Creek Reservoir (ICR)	2
Sample site locations	2
Monitoring wells (ERB)	1
Heavenly Valley Creek	1
Alpine County Monitoring Wells	2
Alpine County Groundwaters	2
Alpine County Surfacewaters	5
Alpine County Soils, September 1997	1
Alpine County Blue green algae, September 1997	1
Total number of pages:	23

cc: Calif. Dept. of Health Services, ODW - Jess Morehouse
El Dorado Co. Dept. of Environmental Health - Virginia Huber
Nevada Division of Environmental Protection - Wendel McCurry
Alpine County Health Department - Dr. Richard Botto
Alpine County Health Department - Jim Goodloe
Alpine County Board of Supervisors
EPA - Permit and Compliance Branch, W-5 - Bill Pierce
Desert Research Group (Alpine County Consultants) - Bill Albright
STPUD Board of Directors
STPUD General Manager / District Engineer - Robert G. Baer
STPUD Manager of Operations - Ross Johnson
STPUD Laboratory Director - Terry Powers
STPUD Manager of Alpine County Operations - Hal Bird

**SOUTH TAHOE PUBLIC UTILITY DISTRICT
WASTEWATER TREATMENT PLANT MONTHLY REPORT**

11/07/97

October 1997

Date	Day	FLOW MGD			Pond Inf	PRECIP		D.O. mg/L Fin	COD mg/L		BOD mg/L		SS mg/L	
		Inf	2-Hr Peak Inf	Eff		Pond Return	Inch		Type	Raw	Fin	Raw	Fin	Raw
10/01/97	Wed	3.85	5.8	4.08				5.39		18.0		4.0		2.5
10/02/97	Thu	3.69	5.6	3.92		0.06	Rain	5.29	294					
10/03/97	Fri	3.92	5.0	4.13				6.35	338					
10/04/97	Sat	4.11	6.6	3.90				5.49	292	31.2	145	3.4	143	1.6
10/05/97	Sun	4.13	6.0	4.12				6.41	386					
10/06/97	Mon	3.88	6.0	4.54				5.03	363					
10/07/97	Tue	3.68	5.8	3.59				7.02						
10/08/97	Wed	3.68	5.8	3.88		0.12	Rain	7.25	358	45.6	181	12.6	141	6.5
10/09/97	Thu	3.89	5.8	4.13		0.19	Rain	6.22	377					
10/10/97	Fri	3.81	5.4	4.12		0.03	Rain	7.62	354					
10/11/97	Sat	4.17	6.4	3.42				7.44	402	24.5	193	5.5	144	1.6
10/12/97	Sun	4.29	5.4	4.45				4.30	465					
10/13/97	Mon	3.81	5.2	4.19				4.34	393					
10/14/97	Tue	3.57	5.6	3.91				5.10	384					
10/15/97	Wed	3.60	6.0	3.60				5.01		25.6		4.0		1.4
10/16/97	Thu	3.80	5.6	3.59				4.73	412					
10/17/97	Fri	3.81	5.9	4.03				4.76	428					
10/18/97	Sat	4.17	6.2	4.13				4.89	400	29.6	150	4.6	128	1.3
10/19/97	Sun	4.02	5.7	3.97				4.55	426					
10/20/97	Mon	3.74	5.0	4.15				4.45	339	32.2	145	3.5	131	1.0
10/21/97	Tue	3.69	4.7	3.41				5.60	340					
10/22/97	Wed	3.71	6.0	4.19				5.23						
10/23/97	Thu	3.63	5.6	3.75				5.53	361					
10/24/97	Fri	3.64	5.8	3.50				5.19	393					
10/25/97	Sat	3.95	6.2	3.92				6.55	432	26.4	201	4.9	172	2.0
10/26/97	Sun	3.99	5.6	4.78				4.48	423					
10/27/97	Mon	3.39	6.4	3.09				7.32	485					
10/28/97	Tue	3.37	5.8	3.37				5.23						
10/29/97	Wed	3.43	6.3	3.36				5.10	420	29.2	138	4.0	148	1.4
10/30/97	Thu	3.41	5.2	3.41				6.08	315					
10/31/97	Fri	3.60	5.6	3.38				6.00	400					
PERMIT MAX		7.7								300		45		60
PERMIT MIN														
PERMIT AVE										60		30		30
TOTAL		117.43	178.0	120.01			0.40	173.95	9980	262.3	1153	46.4	1007	19.2
MAXIMUM		4.29	6.6	4.78			0.19	7.62	485	45.6	201	12.6	172	6.5
MINIMUM		3.37	4.7	3.09			0.03	4.30	292	18.0	138	3.4	128	1.0
AVERAGE		3.79	5.7	3.87			0.10	5.61	384	29.1	165	5.2	144	2.1
# Tests		31	31	31	0	0	4	31	26	9	7	9	7	9

**SOUTH TAHOE PUBLIC UTILITY DISTRICT
WASTEWATER TREATMENT PLANT MONTHLY REPORT**

11/07/97

October 1997

Date	Day	SETTLEABLE SOLIDS mL/L		MBAS mg/L		pH Units		TURBIDITY NTU		Cl2 mg/L	FINAL COLIFORMS MPN/100 mL			TDS mg/L		ALKALINITY mg/L	
		Raw	Fin	Raw	Fin	Raw	Fin	Raw	Fin		Fin	Total	7day-	Median	Raw	Fin	Raw
10/01/97	Wed		< 0.1				7.72	1.50	7.14	<	2	<	2		219		134
10/02/97	Thu	10.0	< 0.1			7.48	7.63	1.45	5.01	<	2	<	2			147	132
10/03/97	Fri	10.0	< 0.1			7.50	7.63	1.15	4.05	<	2	<	2			152	132
10/04/97	Sat	9.0	< 0.1			7.57	7.82	0.84	3.66	<	2	<	2			156	136
10/05/97	Sun	11.0	< 0.1			7.57	7.68	1.50	2.70	<	2	<	2			161	143
10/06/97	Mon	9.0	< 0.1			7.54	7.61	1.85	3.86		2	<	2			149	136
10/07/97	Tue		< 0.1				7.56	3.05	9.45	<	2	<	2				134
10/08/97	Wed	9.0	< 0.1			7.61	7.79	5.80	5.21	<	2	<	2	234	232	152	131
10/09/97	Thu	10.0	< 0.1			7.52	7.64	3.00	2.70		2	<	2			146	124
10/10/97	Fri	11.0	< 0.1			7.57	7.56	1.90	3.28	<	2	<	2			148	123
10/11/97	Sat	10.0	< 0.1			7.49	7.62	1.60	4.63	<	2	<	2			152	128
10/12/97	Sun	12.5	< 0.1			7.69	7.63	1.50	5.11	<	2	<	2			162	130
10/13/97	Mon	9.5	< 0.1			7.70	7.70	1.45	4.53		8	<	2			155	130
10/14/97	Tue	11.0	< 0.1	3.26	0.05	7.63	7.66	1.75	4.63		4	<	2			162	124
10/15/97	Wed		< 0.1				7.68	1.45	4.63	<	2		2	236			120
10/16/97	Thu	10.5	< 0.1			7.78	7.66	1.40	6.56	<	2		2			158	124
10/17/97	Fri	12.0	< 0.1			7.79	7.66	1.40	4.53		2	<	2			159	123
10/18/97	Sat	10.5	< 0.1			7.73	7.68	1.50	3.95		4	<	2			163	128
10/19/97	Sun	10.5	< 0.1			7.73	7.70	1.50	5.21	<	2	<	2			164	131
10/20/97	Mon	10.0	< 0.1			7.60	7.68	1.50	4.15	<	2	<	2	257	244	163	127
10/21/97	Tue	9.0	< 0.1			7.47	7.57	1.55	5.98		2	<	2			155	126
10/22/97	Wed		< 0.1				7.65	1.60	3.95	<	2	<	2				123
10/23/97	Thu	9.0	< 0.1			7.52	7.56	1.75	1.45	<	2	<	2			157	121
10/24/97	Fri	11.0	< 0.1			7.52	7.47	1.90	2.74		2	<	2			150	117
10/25/97	Sat	10.0	< 0.1			7.60	7.65	1.80	4.92	<	2	<	2			164	127
10/26/97	Sun	10.0	< 0.1			7.59	7.48	1.60	3.76	<	2	<	2			164	129
10/27/97	Mon	15.0	< 0.1			7.77	7.46	1.80	3.95	<	2	<	2			166	122
10/28/97	Tue		< 0.1				7.43	1.75	4.05	<	2	<	2				120
10/29/97	Wed	9.0	< 0.1			7.60	7.82	1.90	4.72	<	2	<	2			155	120
10/30/97	Thu	11.0	< 0.1			7.78	7.60	1.70	4.05	<	2	<	2	242	227	162	112
10/31/97	Fri	9.0	< 0.1			7.43	7.45	1.90	4.53	<	2	<	2			158	108
PERMIT MAX			0.1		2.0		8.5	20			240		23				
PERMIT MIN							6.5										
PERMIT AVE					1.0			10									
TOTAL		268.5	3.1	3.26	0.05	197.78	236.45	56.34	139.09		72		62	733	1158	4080	3915
MAXIMUM		15.0	0.1	3.26	0.05	7.79	7.82	5.80	9.45		8		2	257	244	166	143
MINIMUM		9.0	0	3.26	0.05	7.43	7.43	0.84	1.45		2		2	234	219	146	108
AVERAGE		10.3	0.1	3.26	0.05	7.61	7.63	1.82	4.49		2		2	244	232	157	126
# Tests		26	31	1	1	26	31	31	31		31		31	3	5	26	31

**SOUTH TAHOE PUBLIC UTILITY DISTRICT
MEMORANDUM**

Date: October 21, 1997
To: Bob Baer, Diane Noble
From: Tim Rieger
Topic: Export Line Check



On October 8 & 16, 1997, and Greg Schrempp and I conducted our monthly check of the District's export line from the treatment plant to it's end at station 564+06 near the Harvey Place reservoir.

No damage to the pipe was found. Several wet spots were checked, however nothing positive was found.

CC Terry Powers

SOUTH TAHOE PUBLIC UTILITY DISTRICT
HARVEY PLACE RESERVOIR DATA SUMMARY

11/07/97

From: January 1, 1997
To: December 31, 1997

Date	pH	Temp C	NH3+ NH4 mg/L	NH3-N mg/L	Org-N mg/L	TKN mg/L	NO3-N mg/L	NO2-N mg/L	PO4-P mg/L	Total P mg/L	Alk mg/L	MBAS mg/L	D.O. mg/L	D.O. % Sat	COD mg/L	BOD mg/L
01-07-97	7.38	4.8	10.60	0.03	0.90	11.50	1.35	0.11	1.51	1.53	90	0.03	10.10	97.15	20.9	1.83
02-04-97	7.82	4.4	9.88	0.08	-0.76	9.12	0.99	0.08	1.35	1.41	83	0.04	10.00	95.17	18.2	1.99
03-04-97	7.72	4.7	10.90	0.07	0.50	11.40	0.86	0.05	1.26	1.46	86	0.03	11.00	105.53	15.5	1.77
04-08-97	7.67	10.1	11.50	0.10	1.80	13.30	0.93	0.05	1.15	1.55	90	0.02	8.50	93.20	14.8	1.94
05-06-97	7.63	15.4	11.40	0.14	0.10	11.50	0.91	0.09	1.60	1.70	94	0.02	8.20	101.26	20.6	3.20
06-03-97	7.70	17.9	12.10	0.20	-2.21	9.89	1.28	0.26	1.73	1.69	94	0.03	7.15	93.03	15.8	3.46
07-01-97	7.76	18.5	11.40	0.23	0.90	12.30	1.57	0.26	1.66	3.44	93	0.03	6.40	84.32	22.0	2.67
08-05-97	7.80	22.0	11.90	0.33	0.90	12.80	1.71	0.33	1.99	2.04	101	0.02	6.00	84.75	17.9	2.41
09-02-97	7.90	19.7	13.70	0.41	3.10	16.80	1.58	0.32	2.16	2.33	110	0.02	4.50	60.80	26.7	3.89
10-14-97	7.57	13.2	13.00	0.11	1.90	14.90	1.40	0.37	2.24	2.50	118	0.04	4.60	54.16	22.3	4.79
Maximum	7.90	22.0	13.70	0.41	3.10	16.80	1.71	0.37	2.24	3.44	118	0.04	11.00	105.53	26.7	4.79
Minimum	7.38	4.4	9.88	0.03	-2.21	9.12	0.86	0.05	1.15	1.41	83	0.02	4.50	54.16	14.8	1.77
Average	7.69	13.1	11.64	0.17	0.71	12.35	1.26	0.19	1.67	1.97	96	0.03	7.64	86.94	19.5	2.80

Date	Chloride mg/L	TDS mg/L	SS mg/L	Turb NTU	EC umhos	H2S mg/L	Ca mg/L	Na mg/L	Mg mg/L	SAR Ratio	Level Ft.	Flow Acre-Ft	% Ice Cover	Algae	Weeds
01-07-97	37.4	193	5.40	17.00	363		15.00	34.00	3.00	2.09	48.50		0	No	No
02-04-97	34.4	169	4.84	14.00	334		7.10	15.00	1.50	1.33	55.00		0	No	No
03-04-97	36.3	178	3.44	7.30	348		10.00	23.00	2.40	1.69	54.80		1	No	No
04-08-97	39.1	187	2.91	4.00	377		14.00	30.00	3.10	1.89	57.00		0	Yes	No
05-06-97	41.5	186	0.80	3.10	389		14.00	34.00	3.30	2.12	58.40		0	Yes	Yes
06-03-97	43.4	203	11.60	6.30	405		16.00	38.00	3.80	2.21	58.50		0	Yes	Yes
07-01-97	43.8	196	3.30	2.60	402		16.00	42.00	3.90	2.44	53.50		0	Yes	Yes
08-05-97	47.4	209	0.32	1.20	428		15.00	48.00	3.90	2.85	46.50		0	Yes	No
09-02-97	50.1	222	29.20	6.90	462		18.00	50.00	3.80	2.79	39.00		0	Yes	No
10-14-97	51.2	233	4.36	5.00	488		18.00	49.00	3.90	2.73	17.00		0	Yes	No
Maximum	51.2	233	29.20	17.00	488	ERR	18.00	50.00	3.90	2.85	58.50		1		
Minimum	34.4	169	0.32	1.20	334	ERR	7.10	15.00	1.50	1.33	17.00		0		
Average	42.5	198	6.62	6.74	400		14.31	36.30	3.26	2.21	48.82		0		

SOUTH TAHOE PUBLIC UTILITY DISTRICT
HARVEY PLACE RESERVOIR DATA SUMMARY

From: January 1, 1997
To: December 31, 1997

Date	Chloro-Phyll ug/L	Secci Disc m	Coliforms Total MPN	Fecal MPN	Fecal Strep MPN	Air Temp C	Total N mg/L	SO4 mg/L	Boron mg/L	Comments
01-07-97			500	<	2	23	5.9	12.96	17.80	0.08
02-04-97			17	<	2	17	7.1	10.19	15.40	0.14
03-04-97			30	<	2	< 2	5.9	12.31	13.10	0.11
04-08-97			11	<	2	4	8.9	14.28	15.50	0.11
05-06-97			170	<	2	14	15.6	12.50	14.10	0.13
06-03-97			130		13	130	16.2	11.43	16.80	0.13
07-01-97			1600	<	2	17	17.1	14.13	16.20	0.12
08-05-97			4	<	2	2	26.5	14.84	17.00	0.18
09-02-97			80		2	110	18.0	18.70	18.60	0.18
10-14-97			80		4	2	18.3	16.67	22.70	0.18
Maximum	0	ERR	1600		13	130	26.5	18.70	22.70	0.18
Minimum	0	ERR	< 4	<	2	< 2	5.9	10.19	13.10	0.08
Average			262		3	32	14.0	13.80	16.72	0.14

SOUTH TAHOE PUBLIC UTILITY DISTRICT
INDIAN CREEK RESERVOIR

11/07/97

From: January 1, 1997
To: December 31, 1997

Date	pH	Temp C	NH3+		Org-N mg/L	TKN mg/L	NO3-N mg/L	NO2-N mg/L	PO4-P mg/L	Total P mg/L	Alk mg/L	MBAS mg/L	D.O. mg/L	D.O. % Sat	COD mg/L	BOD mg/L
			NH4 mg/L	NH3-N mg/L												
01-07-97	8.25	3.7	0.48	0.01	0.70	1.18	0.01	0.22	0.05	0.09	41	0.02	10.20	95.29	15.5	0.96
02-04-97	7.72	4.8	0.35	< 0.01	0.40	0.75	0.25	0.01	0.05	0.07	36	0.02	11.00	105.81	12.1	1.28
03-04-97	7.50	4.8	0.24	< 0.01	0.40	0.64	0.20	0.01	0.02	0.08	36	0.02	11.70	112.34	11.4	1.20
04-08-97	9.70	11.8	0.02	< 0.01	0.72	0.74	0.18	0.01	0.01	0.06	36	0.02	12.00	137.00	14.5	4.85
05-06-97	8.51	16.4	0.08	0.01	1.03	1.11	0.07	0.01	0.01	0.04	39	0.02	11.40	143.83	15.2	2.26
06-03-97	8.84	17.4	0.03	< 0.01	0.73	0.76	0.01	0.01	0.01	0.05	40	0.02	8.25	106.23	14.5	2.44
07-01-97	9.75	19.3	0.03	0.02	0.77	0.80	0.02	0.01	0.01	0.05	40	0.02	7.40	99.13	20.9	1.17
08-05-97	10.14	27.6	0.04	0.04	0.98	1.02	0.03	0.02	0.01	0.05	39	0.02	5.70	89.29	37.6	5.89
09-02-97	9.96	17.0	0.02	0.02	2.10	2.12	0.01	0.01	0.01	0.10	41	0.02	6.40	81.70	35.6	8.57
10-14-97	8.23	14.2	0.28	0.01	1.00	1.28	0.07	0.02	0.01	0.07	42	0.02	6.50	78.18	27.1	2.23
Maximum	10.14	27.6	0.48	0.04	2.10	2.12	0.25	0.22	0.05	0.10	42	0.02	12.00	143.83	37.6	8.57
Minimum	7.50	3.7	0.02	0.01	0.40	0.64	0.01	0.01	0.01	0.04	36	0.02	5.70	78.18	11.4	0.96
Average	8.86	13.7	0.16	0.02	0.88	1.04	0.09	0.03	0.02	0.07	39	0.02	9.06	104.88	20.4	3.09

Date	Chloride mg/L	TDS mg/L	SS mg/L	Turb NTU	EC umhos	H2S mg/L	Ca mg/L	Na mg/L	Mg mg/L	SAR Ratio	Level Ft.	Flow Acre-Ft	% Ice Cover	Algae	Weeds
01-07-97	1.5	74	2.76	7.20	91		10.00	5.40	1.80	0.41			0	No	No
02-04-97	1.2	58	3.40	7.70	80		8.80	4.40	1.60	0.36	49.60		25	No	No
03-04-97	1.4	70	3.50	7.80	83		8.90	5.20	1.80	0.42			0	Yes	Yes
04-08-97	1.5	59	25.60	7.70	83		8.60	4.50	1.70	0.37	48.80		0	No	No
05-06-97	1.3	53	1.32	1.90	84		9.10	4.80	1.80	0.38	49.20		0		No
06-03-97	1.5	67	53.80	5.90	89		11.00	5.80	2.20	0.42			0	Yes	Yes
07-01-97	1.2	60	4.66	2.60	90		10.00	5.70	2.10	0.43	47.00		0	Yes	Yes
08-05-97	1.4	60	19.00	3.90	107		9.20	6.20	1.80	0.49	46.00		0	Yes	Yes
09-02-97	2.0	65	23.20	20.00	89		9.80	6.00	1.90	0.46	46.00		0	Yes	Yes
10-14-97	1.5	67	4.68	3.10	95		10.00	5.90	2.00	0.44	45.50		0	Yes	Yes
Maximum	2.0	74	53.80	20.00	107	ERR	11.00	6.20	2.20	0.49	49.60		25		
Minimum	1.2	53	1.32	1.90	80	ERR	8.60	4.40	1.60	0.36	45.50		0		
Average	1.4	63	14.19	6.78	89		9.54	5.39	1.87	0.42	47.44		3		

SOUTH TAHOE PUBLIC UTILITY DISTRICT
INIDAN CREEK RESERVOIR

Fro January 1, 1997
To: December 31, 1997

Date	Chloro-Phyll ug/L	Secci Disc m	Coliforms Total MPN	Fecal MPN	Fecal Strep MPN	Air Temp C	Total N mg/L	SO4 mg/L	Boron mg/L	Comments
01-07-97			23	<	2	4	4.4	1.41	3.58	< 0.01
02-04-97			27	<	2	2	5.0	1.01	3.70	0.06
03-04-97			13	<	2	< 2	7.2	0.85	3.56	< 0.01
04-08-97			4	<	2	4	15.3	0.93	4.18	< 0.01
05-06-97			8	<	2	4	25.0	1.19	4.15	0.05
06-03-97			50	<	2	30	13.3	0.78	3.93	0.02
07-01-97			500	<	2	500	23.9	0.83	3.87	< 0.01
08-05-97			11		11	300	36.0	1.07	3.88	0.01
09-02-97			240		50	220	16.4	2.14	2.28	< 0.01
10-14-97			< 2	<	2	4	24.7	1.37	2.98	0.05
Maximum	ERR	ERR	500		50	500	36.0	2.14	4.18	0.06
Minimum	ERR	ERR	< 2	<	2	< 2	4.4	0.78	2.28	0.01
Average			88		8	107	17.1	1.16	3.61	0.02

SAMPLE LOCATIONS

TAHOE BASIN MONITORING WELLS

<u>Site</u>	<u>Location</u>
ERB	Emergency Retention Basin
CONTROL	North of Post Office
MW02-25, -50	Emergency Retention Basin, S side
MW03-25, -50	Emergency Retention Basin, S side
MW04-25, -50	Emergency Retention Basin, W side
MW07-25, -50	Emergency Retention Basin, N side
MW08-25, -50	Pond #1, SW corner
MW11	S.E. corner of wastewater treatment plant grounds
MW12	South of Emergency Pump Building, for buried sludge
MW13	Pond 2, along Heavenly Valley Creek, for buried sludge

HEAVENLY VALLEY CREEK

HVC-1	At Pioneer Trail
HVC-2	250 ft upstream of Pond #2
HVC-3	25 ft downstream of Johnson Blvd.
HVC-4	Effluent of drain pipe from Lower Shop area
HVC-5	Effluent of drainage pipe along Johnson Blvd, 10 feet upstream of Johnson Blvd.

ALPINE COUNTY MONITORING WELLS

<u>Site</u>	<u>Location</u>
ACMW-01AW	Below main dam at Harvey Place Reservoir
ACMW-01BE	Below auxiliary dam at Harvey Place Reservoir
ACMW-02, N&S	On dam access road at Diamond Valley Road
ACMW-03	Bruns ranch, east side of Highway 88
ACMW-04W	Gansberg ranch, west side of Highway 88
ACMW-05	Dressler ranch
ACMW-06, N&S	Celio ranch, on Diamond Valley Road

ALPINE SOILS

<u>Site</u>	<u>Ranch</u>
S2	Celio
S3	Hall
S4	Gansberg
S5	Gansberg
S6	Neddenriep
S7	Bruns
S8	Dressler

ALPINE GROUNDWATERS

<u>Site</u>	<u>Homeowner</u>
GW-01	Sagues
GW-03	Smith/Springmeyer
GW-04	Celio
GW-05	Neddenriep
GW-07	Gansberg, Jr.
GW-08	Arant
GW-11	Diamond Valley School
GW-14	Sierra Pines Store

ALPINE SURFACEWATERS

<u>Site</u>	<u>Location</u>
SW-01	Carson River, Woodfords
SW-02	Indian Creek, @ HWY 89
SW-03	Indian Creek, @ upper bridge
SW-04	Indian Creek, @ lower bridge
SW-05	Carson River, Paynesville
SW-06	Carson River, Stateline
SW-07	Fredericksberg Ditch, Stateline
SW-08	Irrigation Ditch along Carson River Road
SW-09	Carson River, Dressler Lane
SW-10	Indian Creek, @ Smith-Springmeyer Ranch

SOUTH TAHOE PUBLIC UTILITY DISTRICT

11/13/97

WATER QUALITY DATA

of

MONITORING WELLS

WELL	DATE	WATER LEVEL (MSL ft)	TEMP C	pH	EC umhos/cm	Cl mg/L	NO3-N mg/L	PO4-P mg/L	COD mg/L
CONTROL	10/28/97	6285.2	9.9	6.90	182	6.1	2.44		< 5
MW01.5	10/28/97	6269.9	8.8	6.57	174	6.2	.96		< 5
MW02-50	10/28/97	6269.7	9.1	6.37	615	60.3	14.40		< 5
MW03-50	10/28/97	6269.9	8.7	5.96	582	50.2	19.50		< 5
MW04-50	10/28/97	6269.5	8.3	5.93	78	5.4	.05		< 5
MW07-50	10/28/97	6280.4	7.5	6.15	279	28.5	.53		< 5
MW08-25	10/28/97	6246.7	10.8	6.33	1045	49.2	< .01		90
MW11	10/28/97	6268.5	7.5	6.30	87	1.7	.15		
MW12	10/28/97	6264.9	9.7	6.42	205	3.3	.58		
MW13	10/28/97	6256.8	9.0	6.44	455	2.6	.34		

=====
Note: Samples filtered through 0.45 u filter before analysis

SOUTH TAHOE PUBLIC UTILITY DISTRICT
 WATER QUALITY DATA
 of
 HEAVENLY VALLEY CREEK

11/13/97

Sample Date: 10/02/97

SITE	TEMP C	pH	EC umhos/cm	Cl mg/L	COD mg/L	NO3-N mg/L	SS mg/L	O&G mg/L	COMMENTS
HVC-1	8.1	6.77	41	.7	< 5	.01	2	< 1	
HVC-2	9.0	7.24	50	1.1	< 5	< .01	3	< 1	
HVC-3	8.6	6.64	50	1.1	< 5	< .01	4	< 1	
HVC-4	11.5	6.68	157	1.8		.02	999	< 1	SUS. SOLIDS 8760 mg/L, TURB = 140 NTU

- =====
- HVC-1: 15 feet downstream of Pioneer Trail
 - HVC-2: 250 feet upstream of Pond #2
 - HVC-3: 25 feet downstream of Johnson Blvd crossing
 - HVC-4: Effluent of drainpipe from Lower Shop area
 - HVC-5: Effluent of drainpipe along Johnson Blvd, 10 feet upstream of Johnson Blvd

SOUTH TAHOE PUBLIC UTILITY DISTRICT
ALPINE COUNTY MONITORING WELLS
WATER QUALITY DATA

11/13/97

SITE	SAMPLE DATE	TEMP C	pH	TOTAL ALK mg/L	TURB- IDITY NTU	EC umhos	TDS mg/L	SO4 mg/L	Cl mg/L	COD mg/L	HARD NESS mg/L
ACMW-01AW	10/07/97	11.9	6.82	60		184	137		10.5		
ACMW-01BE	10/22/97	11.1	6.50	66		138	98		1.6		
ACMW-02N	10/22/97	13.6	6.47	67		156	108		6.2		
ACMW-02S	10/22/97	13.7	6.25	53		112	77		1.7		
ACMW-04W	10/07/97	13.3	6.37	52		217	166		18.2		
ACMW-06N	10/22/97	11.7	6.69	285		791	477		73.6		
ACMW-06S	10/22/97	11.4	8.42	202		638	393		73.7		
=====											
Recommended Maximum:					5	900	500	250	250		
=====											

Note: Alkalinity and Hardness expressed as CaCO3.

SITE	SAMPLE DATE	ORGANIC N mg/L	NH3 N mg/L	NO2 N mg/L	NO3 N mg/L	TOTAL N mg/L	TOTAL P mg/L	WATER LEVEL ft
ACMW-01AW	10/07/97	< .10	< .02	< .01	3.07	3.20	.02	5478.4
ACMW-01BE	10/22/97	.11	.02	< .10	.56	.79	.02	5486.2
ACMW-02N	10/22/97	< .10	< .02	< .01	.12	.25	.02	5455.3
ACMW-02S	10/22/97	< .10	< .02	< .01	.04	.17	.02	5459.3
ACMW-04W	10/07/97	.10	< .02	< .01	2.71	2.84	.05	4907.0
ACMW-06N	10/22/97	.24	.04	.01	.02	.31	.29	5216.5
ACMW-06S	10/22/97	1.36	1.58	.05	.01	3.00	.11	5205.4
=====								
Title 22 Maximum:					10			
=====								

SOUTH TAHOE PUBLIC UTILITY DISTRICT
ALPINE COUNTY MONITORING WELLS
WATER QUALITY DATA

11/13/97

SITE	SAMPLE DATE	ID#	TOTAL COLIFORMS MPN/100 mL	FECAL COLIFORMS MPN/100 mL	FECAL STREPTOCOCCUS MPN/100 mL
ACMW-01AW	10/07/97	971007-27	1	< 1	1
ACMW-01BE	10/22/97	971022-08	< 1	< 1	1
ACMW-02N	10/22/97	971022-09	< 1	< 1	1
ACMW-02S	10/22/97	971022-10	< 1	< 1	1
ACMW-04W	10/07/97	971007-28	9	9	
ACMW-06N	10/22/97	971022-11	> 23	< 1	1
ACMW-06S	10/22/97	971022-12	> 23	< 1	1

=====

Recommended Maximum:

< 2.2 < 2.2 < 2.2

=====

Note: For coliform tests, 2 = 2.2; 5 = 5.1; 9 = 9.2. All other results are true values.

SOUTH TAHOE PUBLIC UTILITY DISTRICT
ALPINE COUNTY GROUNDWATERS
WATER QUALITY DATA

11/13/97

SITE	SAMPLE DATE	TEMP C	pH	TOTAL ALK mg/L	TURB-IDITY NTU	EC umhos	TDS mg/L	COLOR UNITS	Cl mg/L	COD mg/L	HARDNESS mg/L
GW-03	10/14/97	13.2	7.56	130		308	223		1.5		
GW-04	10/14/97	14.1	7.99	119		263	205		3.0		
GW-05	10/14/97	10.7	7.09	60		300	192		33.0		
GW-07	10/14/97	10.6	6.72	52		130	93		1.8		
GW-08	10/14/97	12.7	6.60	58		279	172		25.6		
GW-11	10/14/97	14.6	6.69	44		95	85		.7		
GW-14	10/14/97	10.9	5.99	53		114	96		1.3		

=====

Recommended Maximum:

Recommended Minimum:

6.50

=====

5 900 500 15 250

=====

Note: Alkalinity and Hardness expressed as CaCO3.

SITE	SAMPLE DATE	ORGANIC N mg/L	NH3 N mg/L	NO2 N mg/L	NO3 N mg/L	TOTAL N mg/L	P mg/L
GW-03	10/14/97	< .10	< .02	< .01	.72	.85	.04
GW-04	10/14/97	< .10	< .02	< .01	.82	.95	.06
GW-05	10/14/97	< .10	< .02	< .01	3.11	3.24	.03
GW-07	10/14/97	< .10	< .02	< .01	1.18	1.31	.09
GW-08	10/14/97	.10	< .02	< .01	5.87	6.00	.04
GW-11	10/14/97	< .10	< .02	< .01	.35	.48	.03
GW-14	10/14/97	< .10	< .02	< .01	.44	.57	.06

=====

Title 22 Maximum:

10

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SOUTH TAHOE PUBLIC UTILITY DISTRICT
ALPINE COUNTY GROUNDWATERS
WATER QUALITY DATA

11/13/97

SITE	SAMPLE DATE	LOCATION	TOTAL COLIFORM MPN/100 mL	FECAL COLIFORM MPN/100 mL	FECAL STREPTOCOCCUS MPN/100 mL
GW-03	10/14/97	Smith/Springmeyer	< 1	< 1	
GW-04	10/14/97	Celio	7	< 1	
GW-05	10/14/97	Neddenriep	7	< 1	
GW-07	10/14/97	Gansberg	5	< 1	
GW-08	10/14/97	Arant	5	< 1	
GW-11	10/14/97	Diamond Val. School	< 1	< 1	
GW-14	10/14/97	Sierra Pines	< 1	< 1	
=====					
Recommended Maximum:			< 2.2	<2.2	<2.2
=====					

Note: For coliform tests, 2 = 2.2; 5 = 5.1; 9 = 9.2. All other results are true values.

SOUTH TAHOE PUBLIC UTILITY DISTRICT
ALPINE COUNTY SURFACE WATERS
WATER QUALITY DATA

11/13/97

SYSTEM: CARSON RIVER

SITE	SAMPLE DATE	TEMP C	pH	TOTAL ALK mg/L	TURB-IDITY NTU	EC umhos	TDS mg/L	SS mg/L	Cl mg/L	DO mg/L	HARD-NESS mg/L	OIL & GREASE mg/L
SW-01	10/07/97	7.1	7.55	36	.26	74	62	1	.7	7.50		< 1
SW-05	10/07/97	8.3	7.88	40	.67	84	74	4	1.0	7.60		< 1
SW-06	10/07/97	8.5	7.93	41	.54	87	82	1	1.3	7.90		< 1
SW-08	10/07/97	14.2	7.81	57	3.20	122	99	13	1.6	7.10		< 1

=====

WOODFORDS OBJECTIVES:

55 1.0

STATELINE OBJECTIVES:

70 2.5

=====

Note: Stated objectives are for the West Fork, Carson River

SYSTEM: INDIAN CREEK

SITE	SAMPLE DATE	TEMP C	pH	TOTAL ALK mg/L	TURB-IDITY NTU	EC umhos	TDS mg/L	SS mg/L	Cl mg/L	DO mg/L	HARD-NESS mg/L	OIL & GREASE mg/L
SW-02	10/07/97	6.9	7.78	91	1.90	174	129	1	1.1	3.10		< 1
SW-03	10/07/97	9.8	7.52	110	3.90	251	169	5	10.1	7.10		< 1
SW-04	10/07/97	7.3	7.80	63	2.00	134	101	1	2.7	8.50		< 1

=====

90th Percentile:

100 6.0

Annual Average:

80 4.0

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Note: Stated objectives are for the East Fork, Carson River Hydrologic Unit

Note: Alkalinity and Hardness expressed as CaCO3.

SOUTH TAHOE PUBLIC UTILITY DISTRICT
ALPINE COUNTY SURFACE WATERS
WATER QUALITY DATA

11/13/97

SYSTEM: CARSON RIVER

SITE	SAMPLE DATE	ORGANIC N mg/L	NH3 N mg/L	TKN N mg/L	NO2 N mg/L	NO3 N mg/L	TOTAL N mg/L	P mg/L	PO4-P mg/L	COD mg/L	BOD mg/L	SO4 mg/L
SW-01	10/07/97	.11	< .02	.13	< .01	.28	.42	.02	.01		1	2.14
SW-05	10/07/97	.10	< .02	.12	< .01	.17	.30	.02	.01		1	2.10
SW-06	10/07/97	.17	< .02	.19	< .01	.26	.46	.02	.01		1	2.41
SW-08	10/07/97	.19	< .02	.21	< .01	.65	.87	.07	.03		1	2.79

=====

WOODFORDS OBJECTIVES:				0.13		0.02	0.15	0.02				2.0
STATELINE OBJECTIVES:				0.22		0.03	0.25	0.03				2.0

=====

Note: Stated objectives are for the West Fork, Carson River

SYSTEM: INDIAN CREEK

SITE	SAMPLE DATE	ORGANIC N mg/L	NH3 N mg/L	TKN N mg/L	NO2 N mg/L	NO3 N mg/L	TOTAL N mg/L	P mg/L	PO4-P mg/L	COD mg/L	BOD mg/L	SO4 mg/L
SW-02	10/07/97	.24	< .02	.26	< .01	.29	.56	.04	.02		1	2.46
SW-03	10/07/97	.13	< .02	.15	< .01	.39	.55	.07	.03		1	5.11
SW-04	10/07/97	.16	< .02	.18	< .01	.32	.51	.04	.02		1	2.37

=====

90th Percentile:							0.30	0.03				8.0
Annual Average:							0.20	0.02				4.0

=====

Note: Stated objectives are for the West Fork, Carson River Hydrologic Unit

SOUTH TAHOE PUBLIC UTILITY DISTRICT
ALPINE COUNTY SURFACE WATERS
WATER QUALITY DATA

11/13/97

SYSTEM: CARSON RIVER

SITE	SAMPLE DATE	STREAM	TOTAL COLIFORM MPN/100 mL	FECAL COLIFORM MPN/100 mL	FECAL STREPTOCOCCUS MPN/100 mL
SW-01	10/07/97	Carson R Woodfords	< 30	< 30	
SW-05	10/07/97	Carson R Paynesville	30	30	
SW-06	10/07/97	Carson R Stateline	90	90	
SW-08	10/07/97	Irrigation Ditch	390	390	

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SYSTEM: INDIAN CREEK

SITE	SAMPLE DATE	STREAM	TOTAL COLIFORM MPN/100 mL	FECAL COLIFORM MPN/100 mL	FECAL STREPTOCOCCUS MPN/100 mL
SW-02	10/07/97	Indian Cr Upper	40	< 30	
SW-03	10/07/97	Indian Cr Mid	< 30	< 30	
SW-04	10/07/97	Indian Cr Lower	40	40	

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SOUTH TAHOE PUBLIC UTILITY DISTRICT
ALPINE COUNTY SURFACE WATERS
WATER QUALITY DATA

11/13/97

SYSTEM: CARSON RIVER

SITE	SAMPLE DATE	STREAM	B mg/L	K mg/L	CALCIUM mg/L	MAGNESIUM mg/L	SODIUM mg/L	SAR	EXCHANGEABLE SODIUM PERCENTAGE
SW-01	10/07/97	Carson R Woodfords	.01	1.60	7.90	2.20	3.70	.29	20.7
SW-05	10/07/97	Carson R Paynesville	.01	1.50	8.70	2.40	4.30	.33	21.8
SW-06	10/07/97	Carson R Stateline	<.01	1.70	9.20	2.70	4.50	.33	21.2
SW-08	10/07/97	Irrigation Ditch	.01	1.90	12.00	2.90	9.30	.62	31.3

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WOODFORDS OBJECTIVES:                0.02                20.0
STATELINE OBJECTIVES:                0.02                20.0
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Note: Objectives are for West Fork, Carson River

SYSTEM: INDIAN CREEK

SITE	SAMPLE DATE	STREAM	B mg/L	K mg/L	CALCIUM mg/L	MAGNESIUM mg/L	SODIUM mg/L	SAR	EXCHANGEABLE SODIUM PERCENTAGE
SW-02	10/07/97	Indian Cr Upper	.01	2.00	20.00	5.20	11.00	.56	24.4
SW-03	10/07/97	Indian Cr Mid	.03	2.20	25.00	7.50	19.00	.85	30.0
SW-04	10/07/97	Indian Cr Lower	.01	1.70	14.00	4.40	7.50	.44	22.8

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=====
90th Percentile:                0.25                30
Annual Average:                0.12                25
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Note: Objectives are for the East Fork, Carson River Hydrologic Unit

SOUTH TAHOE PUBLIC UTILITY DISTRICT
ALPINE COUNTY SURFACE WATERS
WATER QUALITY DATA

11/13/97

BLUE GREEN ALGAE

SYSTEM: CARSON RIVER

SITE	SAMPLE DATE	STREAM	COLONIES		FILAMENTS		FILAMENTS		SINGLE CELLS
			#	# OF CELLS	#	# OF CELLS	#	LENGTH (um)	
SW-01	10/07/97	Carson R Woodfords	0	0	0	0	0	0	0
SW-05	10/07/97	Carson R Paynesville	0	0	0	0	0	0	0
SW-06	10/07/97	Carson R Stateline	0	0	0	0	0	0	0
SW-08	10/07/97	Irrigation Ditch	0	0	0	0	0	0	0

=====

SYSTEM: INDIAN CREEK

SITE	SAMPLE DATE	STREAM	COLONIES		FILAMENTS		FILAMENTS		SINGLE CELLS
			#	# OF CELLS	#	# OF CELLS	#	LENGTH (um)	
SW-02	10/02/97	Indian Cr Upper	0	0	0	0	0	0	0
SW-03	10/07/97	Indian Cr Mid	0	0	0	0	0	0	0
SW-04	10/07/97	Indian Cr Lower	0	0	0	0	0	0	0

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Note: Results are per 5 ml

SOUTH TAHOE PUBLIC UTILITY DISTRICT
ALPINE COUNTY SOILS DATA

11/13/97

SAMPLE DATE: 09/05/97

SITE	RANCH	SOIL TYPE	DEPTH Inch	pH	EC mmhos	TKN mg/kg	NH3-N mg/kg	NO3-N mg/kg	TOT-P mg/kg	K2O mg/kg	Mo mg/kg	Cu mg/kg	SO4 mg/kg
2a	Celio	KT	6	8.18	2.62	2820		3.5	1000		< 1.0	8.2	82
3a	Hall	SMB	6	5.80	.68	2390		.4	890		< 1.0	10.0	31
4a	Gansberg	DI	6	6.48	.56	1100		6.6	480		< 1.0	14.0	6
5a	Gansberg	HRB	6	6.26	.25	840		3.6	630		< 1.0	8.6	2
6a	Neddenriep	DWB	6	5.98	.41	1220		7.2	590		< 1.0	16.0	8
7a	Bruns	JaC	6	6.20	.15	1710		2.1	790		< 1.0	16.0	1
8a	Dressler	SoD	6	6.50	.13	196		1.2	320		< 1.0	7.4	1

SITE	RANCH	SOIL TYPE	DEPTH Inchs	SATURATION %	CEC me/100g	Ca mg/L	Na mg/L	Mg mg/L	SAR	Ex-Na %	Cl mg/L	Ex-P mg/Kg
2a	Celio	KT	6	74.4		78	430	63	8.77	10.5		
3a	Hall	SMB	6	42.7		51	52	20	1.56	1.0		
4a	Gansberg	DI	6	36.0		49	35	12	1.16	< 1.0		
5a	Gansberg	HRB	6	31.7		17	32	3	1.87	1.5		
6a	Neddenriep	DWB	6	42.5		29	34	7	1.46	< 1.0		
7a	Bruns	JaC	6	42.4		19	11	4	.59	< 1.0		
8a	Dressler	SoD	6	15.8		8	13	3	.99	< 1.0		

Note: Ca, Mg, Na, SAR, Ex-Na, and Cl results are from soil extract.

SOUTH TAHOE PUBLIC UTILITY DISTRICT
ALPINE COUNTY SURFACE WATERS
WATER QUALITY DATA

11/13/97

BLUE GREEN ALGAE

SYSTEM: CARSON RIVER

SITE	SAMPLE DATE	STREAM	COLONIES		FILAMENTS		FILAMENTS		SINGLE CELLS
			#	# OF CELLS	#	# OF CELLS	#	LENGTH (um)	
SW-01	09/02/97	Carson R Woodfords	0	0	0	0	0	0	0
SW-05	09/02/97	Carson R Paynesville	0	0	0	0	0	0	0
SW-06	09/02/97	Carson R Stateline	0	0	0	0	0	0	0
SW-08	09/02/97	Irrigation Ditch	0	0	0	0	0	0	0

=====

SYSTEM: INDIAN CREEK

SITE	SAMPLE DATE	STREAM	COLONIES		FILAMENTS		FILAMENTS		SINGLE CELLS
			#	# OF CELLS	#	# OF CELLS	#	LENGTH (um)	
SW-02	09/02/97	Indian Cr Upper	0	0	0	0	0	0	0
SW-03	09/02/97	Indian Cr Mid	0	0	0	0	0	0	0
SW-04	09/02/97	Indian Cr Lower	0	0	0	0	0	0	0

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Note: Results are per 5 ml