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P.O. BOX 1020, HUNTINGTON, UT 84528
TEL: (801) 653-2311
FAX: (801) 653-2436

April 29, 1993

PACIFICORP FIELD OFFICE
P.O. Box 1005
Huntington UT 84528

Sample identification by
PACIFICORP FIELD OFFICE

Cottonwood Waste Rockwell
Depth 45.78'
Rec'd 1545 hr.
Sampled No Time Given

Kind of sample reported to us Water

Sample taken at Cottonwood

Sample taken by Energy West/KH

Date sampled April 5, 1993

Date received April 5, 1993

NOTE: Filtered at Lab.

Analysis report no. 59-12993

Parameter	Result	MDL	Units	Method	Analyzed Date/Time/Analyst
Alkalinity, Bicarbonate	337	1	mg/l $CaCO_3$	EPA 310.1	04-13-1993 08:30 LS
Alkalinity, Carbonate	0	1	mg/l $CaCO_3$	EPA 310.1	04-13-1993 08:30 LS
Alkalinity, Total	411	1	mg/l $CaCO_3$	EPA 310.1	04-13-1993 08:30 LS
Anions	451.56	----	meq/l	---------	---------- ----- --
Calcium	354.0	.1	mg/l	EPA 215.1	04-22-1993 10:10 LS
Cations	373.87	----	meq/l	---------	---------- ----- --
Chloride	2340.8	.1	mg/l	EPA 325.3	04-13-1993 13:00 LS
Conductivity	44900	2	umhos/cm	EPA 120.1	04-13-1993 13:00 LS
Hardness, Total	6748	1	mg/l $CaCO_3$	---------	04-22-1993 10:10 LS
Iron	0.61	.02	mg/l	EPA 236.1	04-15-1993 14:40 ED
Iron, Dissolved	0.29	.02	mg/l	EPA 236.1	04-15-1993 14:40 ED
Magnesium	1424.00	.01	mg/l	EPA 242.1	04-22-1993 10:30 LS
Manganese	0.02	.01	mg/l	EPA 243.1	04-15-1993 14:10 ED
Oxygen, Dissolved	8.1	.01	mg/l	EPA 360.1	04-05-1993 16:00 LS
pH	8.20	----	Units	EPA 150.1	04-05-1993 16:00 LS
Potassium	62.00	.01	mg/l	EPA 258.1	04-16-1993 08:20 ED
Sodium	5530.00	.01	mg/l	EPA 273.1	04-16-1993 07:35 ED
Solids, Total Dissolved	27422.0	.5	mg/l	EPA 160.1	04-16-1993 09:00 LM
Solids, Total Suspended	199.0	.5	mg/l	EPA 160.2	04-16-1993 09:00 LM
Sulfate	18000.0	.1	mg/l	EPA 375.4	04-15-1993 10:20 LS
Cation/Anion Balance	-9.25	----	%	---------	---------- ----- --

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4/30/93
FIELD OFFICE

Respectfully submitted,
COMMERCIAL TESTING & ENGINEERING CO.

Manager, Huntington Laboratory

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FAX: (801) 653-2436

July 21, 1993

PACIFICORP FIELD OFFICE
P.O. Box 1005
Huntington UT 84528

Sample identification by
PACIFICORP FIELD OFFICE

Kind of sample reported to us Water

Cottonwood Waste Rock Well
(Filtered in the field)
Rec'd 1400 hr.
Sampled 1112 hr.
Depth 39.06'

Sample taken at Cottonwood

Sample taken by Energy West/CS

Date sampled July 1, 1993

Date received July 1, 1993

Analysis report no. 59-13235

Parameter	Result	MDL	Units	Method	Analyzed Date/Time/Analyst
Alkalinity, Bicarbonate	392	2	mg/l HCO_3	EPA 310.1	07-07-1993 10:30 LS
Alkalinity, Carbonate	0	1	mg/l CO_3	EPA 310.1	07-07-1993 10:30 LS
Alkalinity, Total	322	2	mg/l $CaCO_3$	EPA 310.1	07-07-1993 10:30 LS
Anions	371.12	----	meq/l	---------	---------- ----- --
Calcium	337.0	.03	mg/l	EPA 215.1	07-13-1993 14:00 ED
Cations	422.96	----	meq/l	---------	---------- ----- --
Chloride	2530.2	.5	mg/l	EPA 325.3	07-17-1993 10:30 LM
Conductivity	34000	0.2	umhos/cm	EPA 120.1	07-07-1993 16:00 LS
Hardness, Total	5960	.03	mg/l $CaCO_3$	---------	07-13-1993 14:00 ED
Iron	0.34	.05	mg/l	EPA 236.1	07-12-1993 14:40 ED
Iron, Dissolved	0.34	.05	mg/l	EPA 236.1	07-16-1993 12:30 ED
Magnesium	1243.00	.007	mg/l	EPA 242.1	07-14-1993 16:20 ED
Manganese	0.03	.03	mg/l	EPA 243.1	07-12-1993 10:00 ED
Oxygen, Dissolved	7.0	.01	mg/l	EPA 360.1	07-01-1993 15:00 LS
pH	7.72	----	Units	EPA 150.1	07-01-1993 15:00 LS
Potassium	73.00	.1	mg/l	EPA 258.1	07-13-1993 18:15 ED
Sodium	7030.00	.2	mg/l	EPA 273.1	07-13-1993 16:25 ED
Solids, Total Dissolved	27177.0	14	mg/l	EPA 160.1	07-06-1993 11:00 LM
Solids, Total Suspended	885.0	7	mg/l	EPA 160.2	07-06-1993 10:00 LM
Sulfate	14000.0	1	mg/l	EPA 375.4	07-08-1993 13:15 LS
Cation/Anion Balance	6.53	----	%	---------	---------- ----- --

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7/21/93

Respectfully submitted,
COMMERCIAL TESTING & ENGINEERING CO.

Manager, Huntington Laboratory

FIELD OFFICE

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FAX: (801) 653-2436

October 20, 1993

PACIFICORP FIELD OFFICE
P.O. Box 1005
Huntington UT 84528

RECEIVED
10/21/93

Sample identification by
PACIFICORP FIELD OFFICE

Cottonwood Waste Rock Well
DEPTH 43.7'
Rec'd 1500 hr.
Sampled 1316 hr.

Kind of sample reported to us Water

Sample taken at Cottonwood FIELD OFFICE

Sample taken by Energy West/CS

Date sampled September 13, 1993

Date received September 13, 1993

NOTE: Holding time expired when alkalinity was run.
Sample filtered at Lab.
Metals preserved at Lab.

Analysis report no. 59-13522

Parameter	Result	MDL	Units		Method	Analyzed Date/Time/Analyst	
Alkalinity, Bicarbonate	333	2	mg/l	$CaCO_3$	EPA 310.1	10-16-1993 0915	LS
Alkalinity, Carbonate	0	1	mg/l	$CaCO_3$	EPA 310.1	09-13-1993 1730	LS
Alkalinity, Total	273	2	mg/l	$CaCO_3$	EPA 310.1	10-16-1993 0915	LS
Anions	381.46	----	meq/l		---------	---------- -----	--
Calcium	132.0	.03	mg/l		EPA 215.1	10-12-1993 1330	ED
Cations	380.84	----	meq/l		---------	---------- -----	--
Chloride	2933.5	.5	mg/l		EPA 325.3	10-11-1993 0800	LM
Conductivity	25800.00	0.2	umhos/cm		EPA 120.1	09-14-1993 1215	LS
Hardness, Total	4818.2	.03	mg/l	$CaCO_3$	---------	10-12-1993 1330	ED
Iron	0.09	.05	mg/l		EPA 236.1	10-12-1993 1700	ED
Iron, Dissolved	<0.05	.05	mg/l		EPA 236.1	10-19-1993 1220	ED
Magnesium	1090.00	.007	mg/l		EPA 242.1	10-18-1993 1405	ED
Manganese	<0.03	.03	mg/l		EPA 243.1	10-12-1993 1730	ED
Oxygen, Dissolved	6.78	.01	mg/l		EPA 360.1	09-13-1993 1745	ED
pH	7.91	----	Units		EPA 150.1	09-13-1993 1730	ED
Potassium	8.0	.1	mg/l		EPA 258.1	10-13-1993 1250	ED
Sodium	6620.0	.2	mg/l		EPA 273.1	10-18-1993 1650	ED
Solids, Total Dissolved	24794	14	mg/l		EPA 160.1	09-20-1993 0900	LM
Solids, Total Suspended	26	7	mg/l		EPA 160.2	09-20-1993 0745	LM
Sulfate	14000	1	mg/l		EPA 375.4	10-03-1993 1030	LS
Cation/Anion Balance	-0.08	----	%		---------	---------- -----	--

Respectfully submitted,
COMMERCIAL TESTING & ENGINEERING CO.

Manager, Huntington Laboratory

OVER 40 BRANCH LABORATORIES STRATEGICALLY LOCATED IN PRINCIPAL COAL MINING AREAS, TIDEWATER AND GREAT LAKES PORTS, AND RIVER LOADING FACILITIE
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FAX: (801) 653-2436

January 3, 1994

PACIFICORP FIELD OFFICE
P.O. Box 1005
Huntington UT 84528

RECEIVED
1/3/94
FIELD OFFICE

Sample identification by
PACIFICORP FIELD OFFICE

Cottonwood Waste Rock Well

Kind of sample reported to us Water

Sample taken at

Sample taken by Energy West/KH

Date sampled December 20, 1993

Date received December 20, 1993

Temperature 49.2°F
Depth 47.4'
Rec'd 1220 hr.
Sampled 1120 hr.

FIELD MEASUREMENTS	
pH	8.33
Conductivity	16,800
DO	15.3

Analysis report no. 59-13801

Parameter	Result	MDL	Units		Method	Analyzed Date/Time/Analyst
Alkalinity, Bicarbonate	305	1	mg/l	$CaCO_3$	4500 CO_2D	12-22-1993 1423 LS
Alkalinity, Carbonate	<1	1	mg/l	$CaCO_3$	4500 CO_2D	12-22-1993 1423 LS
Alkalinity, Total	305	1	mg/l	$CaCO_3$	EPA 310.1	12-22-1993 1423
Anions	318.70	----	meq/l		---------	---------- ----- --
Calcium	265.0	1	mg/l		EPA 215.1	12-28-1993 1100 DW
Cations	341.10	----	meq/l		---------	---------- ----- --
Chloride	3700.0	1	mg/l		EPA 325.3	12-22-1993 1255 ED
Conductivity	24900.00	0.2	umhos/cm		EPA 120.1	12-29-1993 0935 ED
Hardness, Total	4986.0	1	mg/l	$CaCO_3$	2340 B	- -
Iron	6.50	0.2	mg/l		EPA 236.1	12-29-1993 0830 DW
Iron, Dissolved	0.40	0.2	mg/l		EPA 236.1	01-03-1994 0930 DW
Magnesium	1050.00	1	mg/l		EPA 242.1	12-28-1993 1330 DW
Manganese	<0.10	0.1	mg/l		EPA 243.1	12-28-1993 1600 DW
Oxygen, Dissolved	8.93	.01	mg/l		EPA 360.1	12-20-1993 1520 LS
pH	6.94	----	Units		EPA 150.1	12-20-1993 1535 LS
Potassium	43.0	2	mg/l		EPA 258.1	12-28-1993 1515 DW
Sodium	5550.0	1	mg/l		EPA 273.1	12-28-1993 1230 DW
Solids, Total Dissolved	21494	10	mg/l		EPA 160.1	12-22-1993 0745 LM
Solids, Total Suspended	132	4	mg/l		EPA 160.2	12-21-1993 1230 LM
Sulfate	1000	1	mg/l		EPA 375.4	12-22-1993 1330 LS
Cation/Anion Balance	3.4	----	%		---------	---------- ----- --

Respectfully submitted,
COMMERCIAL TESTING & ENGINEERING CO.

Larry Stout

Manager, Huntington Laboratory

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FAX: (801) 653-2436

April 29, 1993

PACIFICORP FIELD OFFICE
P.O. Box 1005
Huntington UT 84528

Sample identification by
PACIFICORP FIELD OFFICE

Kind of sample reported to us Water

Sample taken at Trail Mountain

Sample taken by Energy West/CS

Date sampled April 2, 1993

Date received April 5, 1993

Trail Mountain Ground TM-1
Temperature 46.0°F
Depth 12.6
Rec'd 0930 hr.
Sampled 1600 hr.

FIELD MEASUREMENTS

pH	8.56
Conductivity	1300
DO	7.4

Analysis report no. 59-12990

Parameter	Result	MDL	Units	Method	Analyzed Date/Time/Analyst
Alkalinity, Bicarbonate	695	1	mg/l $CaCO_3$	EPA 310.1	04-12-1993 12:45 LS
Alkalinity, Carbonate	0	1	mg/l $CaCO_3$	EPA 310.1	04-12-1993 12:45 LS
Alkalinity, Total	570	1	mg/l $CaCO_3$	EPA 310.1	04-12-1993 12:45 LS
Anions	14.78	----	meq/l	---------	---------- ----- --
Calcium	8.7	.1	mg/l	EPA 215.1	04-28-1993 14:00 ED
Cations	18.14	----	meq/l	---------	---------- ----- --
Chloride	108.3	.1	mg/l	EPA 325.3	04-13-1993 13:00 LM
Conductivity	1226	2	umhos/cm	EPA 120.1	04-17-1993 13:00 LS
Hardness, Total	51	1	mg/l $CaCO_3$	---------	04-28-1993 14:00 ED
Iron	1.29	.02	mg/l	EPA 236.1	04-15-1993 14:40 ED
Iron, Dissolved	0.89	.02	mg/l	EPA 236.1	04-15-1993 14:40 ED
Magnesium	7.11	.01	mg/l	EPA 242.1	04-15-1993 11:05 ED
Manganese	0.00	.01	mg/l	EPA 243.1	04-15-1993 14:10 ED
Oil & Grease	0.2	1	mg/l	EPA 413.1	04-15-1993 08:30 LM
Oxygen, Dissolved	2.8	.01	mg/l	EPA 360.1	04-05-1993 10:00 LS
pH	8.20	----	Units	EPA 150.1	04-05-1993 10:00 LS
Potassium	2.10	.01	mg/l	EPA 258.1	04-16-1993 08:20 ED
Sodium	397.00	.01	mg/l	EPA 273.1	04-16-1993 07:35 ED
Solids, Total Dissolved	848.0	.5	mg/l	EPA 160.1	04-06-1993 09:00 LM
Solids, Total Suspended	42.0	.5	mg/l	EPA 160.2	04-06-1993 09:00 LM
Sulfate	30.0	.1	mg/l	EPA 375.4	04-26-1993 08:30 LS
Cation/Anion Balance	9.95	----	%	---------	---------- ----- --

RECEIVED
4/29/93
FIELD OFFICE

Respectfully submitted,
COMMERCIAL TESTING & ENGINEERING CO.

Manager, Huntington Laboratory

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FAX: (801) 653-2436

June 25, 1993

PACIFICORP FIELD OFFICE
P.O. Box 1005
Huntington UT 84528

Sample identification by
PACIFICORP FIELD OFFICE

Kind of sample reported to us Water

Sample taken at Trail Mountain

Sample taken by Energy West/KH

Date sampled June 10, 1993

Date received June 10, 1993

Trail Mountain T-1
Temperature 50.5°F
Depth 15.72
Rec'd 1600 hr.
Sampled 1340 hr.

FIELD MEASUREMENTS

pH	8.43
Conductivity	1350
DO	3.6

Analysis report no. 59-13173

Parameter	Result	MDL	Units	Method	Analyzed Date/Time/Analyst
Alkalinity, Bicarbonate	611	2	mg/l $CaCO_3$	EPA 310.1	06-15-1993 13:30 LS
Alkalinity, Carbonate	0	1	mg/l $CaCO_3$	EPA 310.1	06-15-1993 13:30 LS
Alkalinity, Total	501	2	mg/l $CaCO_3$	EPA 310.1	06-15-1993 13:30 LS
Anions	13.35	----	meq/l	---------	---------- ----- --
Calcium	11.3	.03	mg/l	EPA 215.1	06-21-1993 13:05 ED
Cations	15.88	----	meq/l	---------	---------- ----- --
Chloride	112.7	.5	mg/l	EPA 325.3	06-23-1993 09:10 LM
Conductivity	1230	0.2	umhos/cm	EPA 120.1	06-24-1993 09:00 LS
Hardness, Total	54	.03	mg/l $CaCO_3$	---------	06-21-1993 13:05 ED
Iron	0.63	.05	mg/l	EPA 236.1	06-17-1993 09:40 ED
Iron, Dissolved	0.08	.05	mg/l	EPA 236.1	06-22-1993 09:15 ED
Magnesium	6.30	.007	mg/l	EPA 242.1	06-21-1993 15:10 ED
Manganese	<0.03	.03	mg/l	EPA 243.1	06-22-1993 10:05 ED
Oil & Grease	0.7	1	mg/l	EPA 413.1	06-23-1993 08:00 LM
Oxygen, Dissolved	4.8	.01	mg/l	EPA 360.1	06-10-1993 17:30 LS
pH	7.90	----	Units	EPA 150.1	06-10-1993 17:30 LS
Potassium	1.80	.1	mg/l	EPA 258.1	06-22-1993 12:20 ED
Sodium	343.00	.2	mg/l	EPA 273.1	06-22-1993 11:15 ED
Solids, Total Dissolved	825.0	14	mg/l	EPA 160.1	06-14-1993 13:00 LM
Solids, Total Suspended	25.0	7	mg/l	EPA 160.2	06-15-1993 08:00 LM
Sulfate	20.0	1	mg/l	EPA 375.4	06-21-1993 13:50 LS
Cation/Anion Balance	8.64	----	%	---------	---------- ----- --

RECEIVED
6/25/93

Respectfully submitted,
COMMERCIAL TESTING & ENGINEERING CO.

Manager, Huntington Laboratory

AMERICAN COUNCIL OF INDEPENDENT LABORATORIES, INC.

FIELD OFFICE

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October 14, 1993

PACIFICORP FIELD OFFICE
P.O. Box 1005
Huntington UT 84528

RECEIVED
10/14/93

FIELD OFFICE

Kind of sample reported to us Water

Sample taken at Trail Mountain

Sample taken by Energy West/CS

Date sampled September 10, 1993

Date received September 10, 1993

Sample identification by
PACIFICORP FIELD OFFICE

TM-1
Temperature 58.8°F
Depth 17.4'
Rec'd 1535 hr.
Sampled 1350 hr.

FIELD MEASUREMENTS

pH	8.68
Conductivity	1340
DO	8.8

NOTE: HOLDING TIME EXPIRED WHEN ALKALINITY WAS RUN.
AMENDED ALKALINITY DATE

Analysis report no. 59-13502

Parameter	Result	MDL	Units		Method	Analyzed Date/Time/Analyst		
Alkalinity, Bicarbonate	614	2	mg/l	$CaCO_3$	EPA 310.1	09-27-1993	1000	LS
Alkalinity, Carbonate	18	1	mg/l	$CaCO_3$	EPA 310.1	09-27-1993	1000	LS
Alkalinity, Total	633	2	mg/l	$CaCO_3$	EPA 310.1	09-27-1993	1000	LS
Anions	15.59	----	meq/l		---------	----------	-----	--
Calcium	10.5	.03	mg/l		EPA 215.1	10-01-1993	1220	ED
Cations	14.06	----	meq/l		---------	----------	-----	--
Chloride	102.2	.5	mg/l		EPA 325.3	10-01-1993	0700	LM
Conductivity	1474.00	0.2	umhos/cm		EPA 120.1	09-14-1993	1215	LS
Hardness, Total	46.8	.03	mg/l	$CaCO_3$	---------	10-01-1993	1220	ED
Iron	0.73	.05	mg/l		EPA 236.1	09-29-1993	1030	ED
Iron, Dissolved	0.18	.05	mg/l		EPA 236.1	10-04-1993	0920	ED
Magnesium	5.00	.007	mg/l		EPA 242.1	10-01-1993	1410	ED
Manganese	<0.03	.03	mg/l		EPA 243.1	09-30-1993	1545	ED
Oil & Grease	<1	1	mg/l		EPA 413.1	09-17-1993	1000	LM
Oxygen, Dissolved	4.97	.01	mg/l		EPA 360.1	09-10-1993	1605	ED
pH	9.13	----	Units		EPA 150.1	09-10-1993	1605	ED
Potassium	2.0	.1	mg/l		EPA 258.1	10-01-1993	1700	ED
Sodium	304.0	.2	mg/l		EPA 273.1	10-01-1993	1550	ED
Solids, Total Dissolved	883	14	mg/l		EPA 160.1	09-13-1993	0800	LM
Solids, Total Suspended	26	7	mg/l		EPA 160.2	09-13-1993	1410	LM
Sulfate	18	1	mg/l		EPA 375.4	10-03-1993	1030	LS
Cation/Anion Balance	-5.17	----	%		---------	----------	-----	--

Respectfully submitted,
COMMERCIAL TESTING & ENGINEERING CO.

Manager, Huntington Laboratory

AMERICAN COUNCIL OF INDEPENDENT LABORATORIES, INC.

OVER 40 BRANCH LABORATORIES STRATEGICALLY LOCATED IN PRINCIPAL COAL MINING AREAS, TIDEWATER AND GREAT LAKES PORTS, AND RIVER LOADING FACILITIES

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TERMS AND CONDITIONS ON REVERSE

PACIFICORP
TECHNICAL SERVICES - HYDROLOGIC MONITORING

SURFACE PIEZOMETRIC DATA
RILDA CANYON

	Rilda Canyon(EM-47)		P - 1		P - 4		P - 5		P - 6		P - 7	
Collar Elevation	8045		7516.8		7579.3		7564.8		7615.5		7634.9	
Date	Reading	Level	Reading	Level	Reading	Level	Reading	Level	Reading	Level	Reading	Level
JAN 93	inaccessilbe >		==========									
FEB	inaccessilbe >		==========									
MAR	inaccessilbe >		==========									
APR	inaccessilbe >		==========									
05-13-93	inaccessilbe		22.10	7494.70	DAMP		7.98	7556.82	46.30	7569.20	44.40	7590.50
06-11-93	208.10	7836.90	22.07	7494.73	DAMP		7.46	7557.34	38.58	7576.92	24.10	7610.80
07-29-93	205.13	7839.87	22.50	7494.30	DAMP		7.67	7557.13	38.47	7577.03	24.64	7610.26
08-27-93	208.61	7836.39	22.51	7494.29	DAMP		7.51	7557.29	38.50	7577.00	24.68	7610.22
09-28-93	213.12	7831.88	22.58	7494.22	DAMP		7.55	7557.25	40.77	7574.73	31.94	7602.96
10-22-93	216.37	7828.63	22.44	7494.36	DAMP		7.65	7557.15	44.08	7571.42	41.83	7593.07
11-19-93	inaccessilbe		22.46	7494.34	DAMP		7.84	7556.96	45.27	7570.23	inaccessilbe	
DEC	inaccessilbe >		==========									

PACIFICORP
TECHNICAL SERVICES - HYDROLOGIC MONITORING

SURFACE PIEZOMETRIC DATA
COTTONWOOD CANYON

	EM-31		CCCW-1A		CCCW-1S		CCCW-2A		CCCW-3A		CCCW-3S U		CCCW-3S L	
Collar Elevation	7417.8		7843.2		7844.5		8133.9		8369.7		8367.6		8366.0	
Date	Reading	Level	Reading	Level	Reading	Level	Reading	Level	Reading	Level	Reading	Level	Reading	Level
01-26-93			-111.5	7731.7	-187.9	7656.6	-30.8	8103.1	-58.0	8311.8	-77.6	8290.0	-597.6	7768.5
01-28-93	-51.2	7366.6												
FEB	inaccessilbe >													
03-23-93	-52.5	7365.3	inaccessilbe >											
04-30-93	-53.2	7364.6	-100.8	7742.4	-189.9	7654.6	-28.9	8104.9	-55.2	8314.5	-75.9	8291.7	-602.3	7763.8
05-19-93	-53.0	7364.8	-103.5	7739.7	-190.4	7654.1	-26.3	8107.5	-52.7	8317.0	-74.2	8293.4	-601.7	7764.3
05-26-93			-102.1	7741.1	-190.4	7654.1	-24.0	8109.9	-50.7	8319.0	-72.3	8295.3	-601.8	7764.2
06-10-93	-53.8	7364.0	-88.6	7754.6	-190.3	7654.2	-20.5	8113.4	-49.3	8320.5	-69.0	8298.6	-601.9	7764.2
07-23-93	-50.9	7366.9	-96.0	7747.2	-189.6	7654.9	-17.0	8116.9	-50.7	8319.0	-70.7	8296.8	-602.2	7763.8
08-06-93	-55.1	7362.7	-98.8	7744.4	-189.6	7654.9	-17.4	8116.4	-51.3	8318.4	-71.6	8295.9	-602.4	7763.6
09-10-93	-53.6	7364.2	-99.4	7743.8	-189.6	7654.9	-19.4	8114.5	-52.5	8317.2	-73.3	8294.3	-602.5	7763.5
10-30-93	-53.3	7364.5	-100.5	7742.8	-190.2	7654.3	-22.6	8111.3	-53.2	8316.5	-74.4	8293.2	-602.9	7763.1
11-19-93	-54.1	7363.8	-100.8	7742.4	-190.4	7654.1	-23.1	8110.8	-53.1	8316.6	-74.4	8293.2	-603.0	7763.0
12-20-93	-54.1	7363.7	-101.1	7742.2	-190.6	7653.9	-23.7	8110.2	-52.7	8317.0	-74.3	8293.2	-603.1	77[illegible]

PACIFICORP
TECHNICAL SERVICES - HYDROLOGIC MONITORING

DEER CREEK IN -MINE PIEZOMETRIC DATA

	DCP - 1 3rd N. xc-8		DCP - 2 3rd N. xc-29		DCP - 3 3rd N. xc-55		DCP - 4 1st WM xc-29	
Elevation	7530		7567		7577		7529	
DRILL DEPTH	155.4		170.5		148.9		169.6	
Date	Reading	Level	Reading	Level	Reading	Level	Reading	Level
12-20-89	0.2	7530.2	-35.5	7531.5	-56.3	7520.2	1.7	7529.7
03-16-90	0.0	7530.0	-36.8	7530.2	-59.6	7516.9	1.2	7529.5
07-18-90	0.0	7530.0	-37.8	7529.2	-53.9	7522.6	0.4	7529.2
11-05-90	-4.6	7525.4	-38.0	7529.0	-63.5	7513.0	-5.0	7524.0
12-19-90	-5.4	7524.6	-36.9	7530.1	-60.6	7515.9	-4.9	7524.1
03-05-91	-4.6	7525.4	**		-63.5	7513.0	-5.0	7524.0
06-13-91	-6.6	7523.4			-64.1	7512.4	-3.2	7525.8
09-05-91	-6.9	7523.1			-64.6	7511.9	-3.4	7525.6
12-31-91	-5.7	7524.3			***		-6.7	7522.3
03-20-92	-3.9	7526.1					-7.0	7522.1
06-26-92	-3.6	7526.4					-3.0	7526.0
09-11-92	-5.8	7524.2					-2.7	7526.3
12-09-92	*						-4.2	7524.8
03-17-93	*						-13.2	7515.8
06-23-93	*						-13.6	7515.5
08-04-93	-7.6	7522.4					****	

Dec inaccessible (casing damaged)

* Area inaccessible
** Monitoring discontinued, hole caved @ 38'
*** Monitoring discontinued, entry used to access to 8th East
**** Monitoring discontinued, area sealed

PACIFICORP
TECHNICAL SERVICES - HYDROLOGIC MONITORING
WASTE ROCK DISPOSAL WELLS DATA

DEER CREEK WR1			WILBERG\COTTONWOOD WCWR1		
* Collar Elevation	6313.4	Elevations Adjusted 12/90		6774.5	
Date	Reading	Level	Date	Reading	Level
05-19-89	-5.4	6308.0	12-05-89	-59.5	6715.0
08-25-89	-5.9	6307.5	03-06-90	-60.0	6714.5
09-21-89	-5.9	6307.5	06-06-90	-59.6	6714.9
12-06-89	-5.1	6308.3	09-24-90	-58.9	6715.6
03-06-90	-4.4	6309.0	12-17-90	-59.2	6715.3
06-13-90	-5.2	6308.2	03-28-91	-59.3	6715.2
09-25-90	-4.0	6309.4	06-06-91	-59.1	6715.4
12-14-90	-4.9	6308.5	09-25-91	-58.5	6716.0
03-28-91	-5.4	6308.0	12-10-91	-58.5	6716.0
06-11-91	-6.4	6307.0	03-19-92	-52.4	6722.1
09-10-91	-7.5	6305.9	06-26-92	-46.3	6728.2
12-12-91	-5.6	6307.8	09-30-92	-49.3	6725.2
03-20-92	-4.5	6308.9	12-23-92	-51.5	6723.0
06-25-92	-7.0	6306.4	04-05-93	-45.8	6728.7
09-03-92	-5.8	6307.6	07-01-93	-39.1	6735.4
12-21-92	-6.2	6307.2	09-13-93	-43.7	6730.8
03-17-93	-3.8	6309.6	12-20-93	-47.4	6727.1
07-01-93	-4.7	6308.7			
09-28-93	-4.5	6308.9			
12-17-93	-4.5	6308.9			

PACIFICORP
HYDROLOGIC MONITORING

COTTONWOOD CANYON CREEK FLOW & QUALITY

SW-1

Date	Time	Temp.	Flow GPM	pH	Cond. (uS)	Dis. Oxygen	Weather	Comments
	<----------Field Measurements ------->							
28-Jan-93	900		<3				CLEAR 10'S	SHEET FLO
22-Feb-93		INACCESSIBLE					PC 20'S	
23-Mar-93	1520	49	50	8.07	843	9.5	CLEAR 50'S	
30-Apr-93	1522	53	100	8.25	869	6.3	PC 50'S	
18-May-93	1220	48	1500	8.34	423	9.5	clear 70's	
10-Jun-93	1505	59	1500	8.49	476	7.6	clear 60's	
23-Jul-93	1115	55.9	100	8.23	643	9.9	cloudy 60's	
06-Aug-93	1150	60.3	50	8.28	715	10.7	clear 70's	
10-Sep-93	1257	64.8	25	8.45	713	11.2	clear 70's	
30-Oct-93	1357	46.1	5-10	8.04	720	10.2	clear 60's	
19-Nov-93	1035	35	5	8.02	745	11.7	clear 40's	
13-Dec-93	1300		Frozen				clear 20's	

PACIFICORP
HYDROLOGIC MONITORING

COTTONWOOD CANYON CREEK FLOW & QUALITY

SW-2

	<----------Field Measurements ------->							
Date	Time	Temp.	Flow GPM	pH	Cond. (uS)	Dis. Oxygen	Weather	Comments
28-Jan-93	930	43	30	8.31	560	7.1	CLEAR 10'S	MINE DIS.
22-Feb-93	1145	49	30	8.48	481	7.3	PC 20'S	MINE DIS.
23-Mar-93	1545	45	250	8.60	786	8.6	CLEAR 50'S	
30-Apr-93	1530	49	150	8.60	855	6.2	PC 50'S	
18-May-93	1205	48	1500	8.90	456	9.0	clear 70's	
10-Jun-93	1512	56	1500	8.81	503	7.4	clear 60's	
23-Jul-93	1130	54.8	100	8.18	632	8.6	cloudy 60's	
06-Aug-93	1202	60.6	50	8.38	692	10.7	clear 70's	
10-Sep-93	1408	60.3	15	8.80	838	9.1	clear 70's	
30-Oct-93	1407	43.5	5-10	8.60	756	9.7	clear 60's	
19-Nov-93	1052	34	5	8.95	871	11.9	clear 40's	
13-Dec-93	1305		Frozen				clear 20's	

PACIFICORP
HYDROLOGIC MONITORING

COTTONWOOD CANYON CREEK FLOW & QUALITY

SW-3

	<----------Field Measurements ------->							
Date	Time	Temp.	Flow GPM	pH	Cond. (uS)	Dis. Oxygen	Weather	Comments
28-Jan-93	1000	38	55	8.62	1170	7.4	CLEAR 10'S	
22-Feb-93	1208	44	60	8.18	1180	8.3	PC 20'S	
23-Mar-93	1601	56	75	8.06	1320	7.9	CLEAR 50'S	
30-Apr-93	1540	56	100	8.27	1230	4.9	PC 50'S	
18-May-93	1115	57	1500	8.59	536	7.4	clear 70's	
10-Jun-93	1524	58	1500	8.64	602	5.4	clear 60's	
23-Jul-93	1155	56	100	8.65	1160	10	cloudy 60's	
06-Aug-93	1212	63.2	75-100	8.15	1150	10.4	clear 70's	
10-Sep-93	1417	65.2	100	8.68	1210	6.4	clear 70's	
30-Oct-93	1417	49.9	40-50	8.42	1100	9.9	clear 60's	
19-Nov-93	1103	42.1	25-35	8.50	1170	9.9	clear 40's	
13-Dec-93			Frozen				clear 20's	

PACIFICORP
HYDROLOGIC MONITORING

COTTONWOOD CANYON CREEK
@ USGS FLUME

	<---------- Field Measurements ----------								
			Flow			Cond.	Dis.		
Date	Time	Temp.	ft.	GPM	pH	(uS)	Oxygen	Weather	Comments
28-Jan-92	1345		no flow					PC 20's	
04-Feb-92	1535	35	0.15	76	8.16	631	9.9	PC 20's	
19-Mar-92	1445	45	0.21	127	8.93	642	8.3	showers 40's	
10-Apr-92	1325	56	0.08	29	8.76	708	9.2	PC 60's	
21-May-92	1130	51	0.29	207	8.58	764	5.8	rain 50's	
03-Jun-92	1050	61	0.1	41	8.43	781	9.1	clear 70's	
22-Jul-92	1230	65		5	8.65	742	8.8	cloudy 70's	
11-Aug-92	1330	72		5	9.03	555	8.7	PC 80's	
09-Sep-92	1230			<1				PC 70's	
22-Oct-92	1410	47		5	8.01	780	6.8	PC 60's	
25-Nov-92	1205		Frozen over - inaccessible					PC 10'S	
DEC			Frozen over - inaccessible						
JAN-FEB 93			Frozen over - inaccessible						
23-Mar-93	1554	50	0.28	196	8.25	813	9.1	clear 50's	
30-Apr-93	1532	52	0.22	136	8.68	830	5.9	PC 50'S	
19-May-93	1125	49	0.98	1336	8.90	452	7.5	clear 70's	
10-Jun-93	1519	55	1.00	1378	8.80	507	6.0	clear 60's	
23-Jul-93	1151	56.5	0.10	40.8	8.69	620	10.7	cloudy 70's	
06-Aug-93	1208			no flow				clear 70's	
10-Sep-93	1414			no flow				clear 70's	
30-Oct-93	1412	40.2		20	8.71	698	9.9	clear 60's	
19-Nov-93	1057			no flow				clear 40's	
13-Dec-93	1307			frozen-no flow				clear 20's	

PACIFICORP
HYDROLOGIC MONITORING

DEER CREEK FLOW & QUALITY

ABOVE THE MINE - DCR01

	<------ Field Measurements ------>							
			Flow			Cond.		
Date	Time	Temp.	ft.	GPM	pH	(uS)	Weather	Comments
06-Jan-92	1145		dry				snow 20's	
17-Feb-92	1125		dry				clear 20's	
18-Mar-92	1400		dry				cloudy 30's	
07-Apr-92	1200		dry				clear 40's	
20-May-92	1350	49	0.17	28.7	8.8	540	rain 40's	
25-Jun-92	1445		dry				rain 70's	
20-Jul-92	1555		dry				cloudy 80's	
20-Aug-92	1440		dry				PC 70'S	
28-Sep-92	1340		dry				clear 70's	
23-Oct-92	1400		dry				PC 50's	
25-Nov-92	1130		dry				PC 10's	
17-Dec-92	1105		dry				PC 10'S	
15-Jan-93	945		dry				snow 20's	
22-Feb-93	1030		dry				PC 20'S	
17-Mar-93	1415		dry				PC 40'S	
22-Apr-93	830		dry				clear 40's	
13-May-93	1325	43	0.4	868	8.26	484	PC 60's	
11-Jun-93	1400	51	0.43	971	8.62	497	PC 60's	
16-Jul-93	939	45.6	0.19	274	8.71	516	clear 70's	
23-Aug-93	1205	51.2	0.1	101	8.65	537	clear 70's - 80's	
20-Sep-93	1457	44.9	0.04	27	8.73	557	clear 70's	
22-Oct-93	910	35	0.06	50	8.69	580	PC 40'S - 50'S	
22-Nov-93	813		frozen				snow 40's	
17-Dec-93	1340		frozen-no flow				snow 30's	

PACIFICORP
HYDROLOGIC MONITORING

DEER CREEK FLOW & QUALITY

@ PERMIT BOUNDARY - DCR04

	<------ Field Measurements ------>							
			Flow			Cond.		
Date	Time	Temp.	ft.	GPM	pH	(uS)	Weather	Comments
06-Jan-92	1210	49	0.37	1154	8.68	759	snow 20's	
17-Feb-92	1155	52	0.41	1353	8.51	772	clear 20's	
18-Mar-92	1525	53	0.40	1302	8.86	874	cloudy 30's	
07-Apr-92	1300	58	0.38	1202	8.68	726	clear 40's	
20-May-92	1455	57	0.35	1059	8.62	735	rain 40's	
25-Jun-92	1515	57	0.21	480	8.62	810	rain 70's	
20-Jul-92	1615	60	0.50	1840	8.70	1390	cloudy 80's	
20-Aug-92	1525	62	0.22	1353	8.70	1030	PC 70'S	
28-Sep-92	1450	60	0.35	1059	8.61	889	clear 70's	
23-Oct-92	1500	55	0.24	590	8.50	871	PC 50's	
25-Nov-92	1150	46	0.28	749	8.38	844	PC 10's	
17-Dec-92	1150	46	0.28	749	8.57	907	PC 10'S	
15-Jan-93	1020	47	0.28	749	8.48	1070	snow 20's	
22-Feb-93	1115	49	0.3	834	8.16	1360	PC 20'S	
17-Mar-93	1436	56	0.3	834	8.7	1090	PC 40'S	
22-Apr-93	910	52	0.28	749	8.75	943	clear 40's	
13-May-93	1358	50	0.42	1404	8.35	734	PC 60's	
11-Jun-93	1447	55	0.41	1353	8.83	671	PC 60's	
16-Jul-93	1018	53.3	0.21	480	8.65	688	clear 70's	
23-Aug-93	1245	60.4	0.18	378	8.6	1050	clear 70's - 80's	
20-Sep-93	1603	53.6	0.15	285	8.82	838	clear 70's	
22-Oct-93	950	49.8	0.25	628	8.5	976	PC 40'S - 50'S	
22-Nov-93	910	43.7	0.16	315	8.77	980	snow 40's	
17-Dec-93	1340		frozen-no flow				snow 30's	

PACIFICORP
HYDROLOGIC MONITORING

DEER CREEK FLOW & QUALITY

BELOW THE MINE - DCR06

Date	Time	Temp.	Flow ft.	Flow GPM	pH	Cond. (uS)	Weather	Comments
	<------ Field Measurements ------>							
06-Jan-92	1220	42		1154	8.89	692	snow 20's	
17-Feb-92	1220	46		1353	8.48	789	clear 20's	
18-Mar-92	1525	52		1302	8.43	875	cloudy 30's	
07-Apr-92	1325	61		1200	8.84	777	clear 40's	
20-May-92	1515	60		1050	8.77	773	rain 40's	
25-Jun-92	1530	65		450	8.62	810	rain 70's	
20-Jul-92	1625	64		1800	8.54	1340	cloudy 80's	
20-Aug-92	1545	71		1350	8.70	1040	PC 70'S	
28-Sep-92	1500	63		1050	8.78	894	clear 70's	
23-Oct-92	1520	57		600	8.68	872	PC 50's	
25-Nov-92	1230	42		750	7.80	869	PC 10's	
17-Dec-92	1210	36		750	8.94	935	PC 10'S	
15-Jan-93	1045	37		750	8.59	1090	snow 20's	
22-Feb-93	1136	42		825	8.14	1360	PC 20'S	
17-Mar-93	1502	57		850	8.81	1010	PC 40'S	
22-Apr-93	930	50		750	8.65	1020	clear 40's	
13-May-93	1413	57		1400	8.79	803	PC 60's	
11-Jun-93	1457	59		1300	8.52	724	PC 60's	
16-Jul-93	1045	56.6		480	8.80	732	clear 70's	
23-Aug-93	1300	66		378	8.64	830	clear 70's - 80's	
20-Sep-93	1617	61.1		285	8.82	851	clear 70's	
22-Oct-93	1015	45.5		628	8.52	841	PC 40'S - 50'S	
22-Nov-93	935	33.5		315	8.95	993	snow 40's	
17-Dec-93	1340		frozen-no flow				snow 30's	

PACIFICORP
HYDROLOGIC MONITORING

GRIMES WASH FLOW & QUALITY

RIGHT FORK - GWR01

	<----- Field Measurements ------->							
			Flow			Cond.		
Date	Time	Temp.	ft.	GPM	pH	(uS)	Weather	Comments
20-Jan-92	1410	-	no flow				PC 30's	
04-Feb-92	1340	-	no flow				PC 40's	
19-Mar-92	1515	-	no flow				showers 40's	
10-Apr-92	1405	-	no flow				PC 60's	
21-May-92	1155	-	no flow				rain 50's	
26-Jun-92	1550	-	no flow				PC 70's	
11-Aug-92	1355	-	no flow				PC 80'S	
09-Sep-92	1305	-	no flow				PC 60'S	
21-Oct-92	1425	-	no flow				showers 50's	
17-Nov-92	1255	-	no flow				PC 30's	
18-Dec-92	1025	-	no flow				PC 10's	
05-Jan-93	1250	-	no flow				PC 10's	
22-Feb-93	1240	-	no flow				PC 20'S	
23-Mar-93	1340	-	no flow				clear 50's	
21-Apr-93	1251	-	no flow				clear 50's	
19-May-93	1020	-	no flow				clear 70's	
10-Jun-93	1056	-	no flow				clear 60's	
23-Jul-93	1215	-	no flow				cloudy 70's	
06-Aug-93	1228	-	no flow				clear 70's	
13-Sep-93	1150	-	no flow				clear 40's	
30-Oct-93	1050	-	no flow				clear 60's	
19-Nov-93	1120	-	no flow				clear 40's	
13-Dec-93	1120	-	no flow				clear 20's	

PACIFICORP
HYDROLOGIC MONITORING

GRIMES WASH FLOW & QUALITY

LEFT FORK - GWR02

Date	Time	Temp.	Flow ft.	Flow GPM	pH	Cond. (uS)	Weather	Comments
	<----- Field Measurements ------->							
20-Jan-92	1415	-	no flow				PC 30's	
04-Feb-92	1345	-	no flow				PC 40's	
19-Mar-92	1530	-	no flow				showers 40's	
10-Apr-92	1400	-	no flow				PC 60's	
21-May-92	1200	-	no flow				rain 50's	
26-Jun-92	1555	-	no flow				PC 70's	
11-Aug-92	1400	-	no flow				PC 80'S	
09-Sep-92	1310	-	no flow				PC 60'S	
21-Oct-92	1430	-	no flow				showers 50's	
17-Nov-92	1300	-	no flow				PC 30's	
18-Dec-92	1035	-	no flow				PC 10's	
05-Jan-93	1255	-	no flow				PC 10's	
22-Feb-93	1250	-	no flow				PC 20'S	
23-Mar-93	1345	-	no flow				clear 50's	
21-Apr-93	1256	-	no flow				clear 50's	
19-May-93	1025	48	0.79	961	8.72	482	clear 70's	
10-Jun-93	1045	51	0.37	197	8.30	599	clear 60's	
23-Jul-93	1220	56.1		15	8.69	613	cloudy 70's	
06-Aug-93	1232	72		20	8.58	638	clear 70's	
13-Sep-93	1201			<5			clear 40's	sheet flo
30-Oct-93	1105			<5			clear 60's	sheet flo
19-Nov-93	1122			no flow			clear 40's	
13-Dec-93	1130			no flow			clear 20's	

PACIFICORP
HYDROLOGIC MONITORING

GRIMES WASH FLOW & QUALITY

BELOW THE MINE - GWR03
** FLOW INCLUDES MINE DISCHARGE

Date	Time	Temp.	Flow ft.	Flow GPM	pH	Cond. (uS)	Weather	Comments
	<----- Field Measurements ------->							
20-Jan-92	1420	41		550**	7.52	1980	PC 30's	
04-Feb-92	1405	43		35	8.24	2050	PC 40's	
19-Mar-92	1615	46		175**	8.26	1980	showers 40's	
10-Apr-92	1420	55		50	8.20	2110	PC 60's	
21-May-92	1230	52		75	8.27	1152	rain 50's	
26-Jun-92	1600	56		35	8.58	1230	PC 70's	
11-Aug-92	1420	60		850**	8.62	1270	PC 80'S	
09-Sep-92	1320	flow <10 GPM - no sample					PC 60'S	
21-Oct-92	1450	25		25	8.34	1260	showers 50's	
17-Nov-92	1320	54		1000**	8.30	1180	PC 30's	
18-Dec-92	1055	52		1200**	8.70	2190	PC 10's	
05-Jan-93	1310	49		1000**	8.21	2100	PC 10'S	
22-Feb-93	1305	48		50**	8.55	3000	PC 20'S	
23-Mar-93	1355	68		50**	8.40	2530	clear 50's	
21-Apr-93	1304	51		30**	7.98	3090	clear 50's	
19-May-93	1040	48		1000	8.61	643	clear 70's	
10-Jun-93	1125	53		250	8.88	989	clear 60's	
23-Jul-93	1240	54.7		50**	8.55	1220	cloudy 70's	
06-Aug-93	1239	60.5		50**	8.48	1160	clear 70's	
13-Sep-93	1300	55.8		25**	8.26	1400	clear 40's	
30-Oct-93	1045	49.6		50**	8.49	1050	clear 60's	
19-Nov-93	1116	55.9	0.7	550**	7.70	1059	clear 40's	
13-Dec-93	1235	53.8		600**	8.47	1040	clear 20's	

PACIFICORP
HYDROLOGIC MONITORING

HUNTINGTON CREEK FLOW & QUALITY

HUNTINGTON CREEK - HCC01

	<----------Field Measurements ------							
Date	Time	Temp.	Flow CFS	pH	Cond. (uS)	Dis. Oxygen	Weather	Comments
06-Jan-92	1230	34	25	8.01	402	9.6	snow 20's	
17-Feb-92	1235	37	15	8.38	429	10.1	clear 20's	
18-Mar-92	1535	45	18	8.43	430	5.8	cloudy 30's	
07-Apr-92	1335	49	29	8.90	449	8	clear 40's	
20-May-92	1525	54	116	8.65	328	7.5	rain 40's	
25-Jun-92	1540	60	88	8.83	313	7.5	rain 70's	
20-Jul-92	1630	64	35	8.83	326	7.5	cloudy 80's	
20-Aug-92	1555	66	48	8.90	309	8.9	PC 70's	
28-Sep-92	1515	55	15	8.70	376	8.3	clear 70's	
23-Oct-92	1530	53	20	8.61	388	7.6	PC 50's	
11-Nov-92	1241	34	9.9	8.16	475	8.3	PC 10's	
17-Dec-92	1230	33	12	8.61	443	7.7	snow 20's	
15-Jan-93	1120	34	18	7.95	423	6.7	snow 20's	
22-Feb-93	1144	34	NA	8.72	448	8.2	PC 20'S	
17-Mar-93	1508	46	NA	8.43	449	8.4	PC 40'S	
22-Apr-93	945	43	NA	8.85	439	5.7	CLEAR 40'S	
13-May-93	1422	48	NA	8.38	329	7.2	PC 60's	
11-Jun-93	1453	53	NA	8.63	355	6.7	PC 60's	
16-Jul-93	1052	52	NA	8.71	309	7.4	clear 70's	
23-Aug-93	1310	61.5	NA	8.75	308	6.9	clear 70's - 80's	
20-Sep-93	1635	51.6	NA	8.77	275	3.9	clear 70's	
22-Oct-93	1030	43.3	NA	8.31	412	10.5	PC 40'S - 50'S	
22-Nov-93	950	33.2	NA	9.17	387	4.3	snow 40's	

Dec-93 No Mine Discharge from Deer Creek, Huntington not sampled.

PACIFICORP
HYDROLOGIC MONITORING

HUNTINGTON CREEK FLOW & QUALITY

HUNTINGTON CREEK - HCC02

	<----------Field Measurements ------							
Date	Time	Temp.	Flow CFS	pH	Cond. (uS)	Dis. Oxygen	Weather	Comments
06-Jan-92	1240	35	28	7.89	458	9.3	snow 20's	
17-Feb-92	1245	40	18	8.06	526	9.6	clear 20's	
18-Mar-92	1545	46	21	8.53	512	4.9	cloudy 30's	
07-Apr-92	1345	50	32	8.90	449	7.9	clear 40's	
20-May-92	1600	54	118	8.74	343	7.0	rain 40's	
25-Jun-92	1555	60	89	8.79	328	7.8	rain 70's	
20-Jul-92	1640	65	39	8.90	448	7.4	cloudy 80's	
20-Aug-92	1610	66	51	8.90	366	9.8	PC 70's	
28-Sep-92	1525	57	17	8.83	470	7.2	clear 70's	
23-Oct-92	1535	53	21	8.55	458	7.4	PC 50's	
11-Nov-92	1247	34	11	8.63	604	7.2	PC 10's	
17-Dec-92	1242	33	14	8.97	512	7.7	snow 20's	
15-Jan-93	1140	35	20	8.31	484	7.2	snow 20's	
22-Feb-93	1156	34	NA	8.71	532	7.8	PC 20'S	
17-Mar-93	1521	47	NA	8.89	535	7.0	PC 40'S	
22-Apr-93	1005	45	NA	8.45	466	4.8	CLEAR 40'S	
13-May-93	1432	49	NA	8.24	343	6.7	PC 60's	
11-Jun-93	1509	52	NA	8.55	366	6.9	PC 60's	
16-Jul-93	1105	51.4	NA	8.77	318	7.0	clear 70's	
23-Aug-93	1320	60.7	NA	8.65	320	3.3	clear 70's - 80's	
20-Sep-93	1642	52.1	NA	8.92	280	3.1	clear 70's	
22-Oct-93	1045	45.6	NA	8.94	424	8.2	PC 40'S - 50'S	
22-Nov-93	1000	33.8	NA	8.96	413	2.9	snow 40's	

Dec-93 No Mine Discharge from Deer Creek, Huntington not sampled.

PACIFICORP
HYDROLOGIC MONITORING

HUNTINGTON CREEK FLOW & QUALITY

HUNTINGTON CREEK - HCC04

	<----------Field Measurements ------							
Date	Time	Temp.	Flow CFS	pH	Cond. (uS)	Dis. Oxygen	Weather	Comments
06-Jan-92	1250	35	28	7.35	522	9.0	snow 20's	
17-Feb-92	1300	41	18	8.11	610	9.6	clear 20's	
18-Mar-92	1615	48	21	8.63	581	4.3	cloudy 30's	
07-Apr-92	1355	51	32	8.85	491	7.6	clear 40's	
20-May-92	1610	54	118	8.75	360	6.9	rain 40's	
25-Jun-92	1630	60	89	8.70	354	7.1	rain 70's	
20-Jul-92	1645	66	39	8.75	475	7.7	cloudy 80's	
20-Aug-92	1625	67	51	8.89	390	8.5	PC 70's	
28-Sep-92	1540	59	17	8.60	524	7.0	clear 70's	
23-Oct-92	1550	54	21	8.78	539	7.4	PC 50's	
11-Nov-92	1258	30	11	8.09	762	6.8	PC 10's	
17-Dec-92	1259	33	14	8.57	581	7.3	snow 20's	
15-Jan-93	1155	36	20	7.82	542	7.1	snow 20's	
22-Feb-93	1207	34	NA	8.80	729	6.8	PC 20'S	
17-Mar-93	1537	52	NA	8.58	622	6.8	PC 40'S	
22-Apr-93	1015	45	NA	8.90	507	4.9	CLEAR 40'S	
13-May-93	1440	51	NA	8.47	358	6.3	PC 60's	
11-Jun-93	1520	53	NA	8.13	379	6.5	PC 60's	
16-Jul-93	1118	52.3	NA	8.88	332	7.6	clear 70's	
23-Aug-93	1345	61.1	NA	8.78	340	2.2	clear 70's - 80's	
20-Sep-93	1651	52.7	NA	8.97	297	2.8	clear 70's	
22-Oct-93	1100	44.8	NA	8.96	474	6.0	PC 40'S - 50'S	
22-Nov-93	1010	35	NA	8.97	502	3.1	snow 40's	

Dec-93 No Mine Discharge from Deer Creek, Huntington not sampled.

PACIFICORP
HYDROLOGIC MONITORING

MEETINGHOUSE CANYON
MCH01

Date	Time	Temp.	Flow ft.	Flow GPM	pH	Cond. (uS)	Weather	Comments
06-Jan-92	1300		INACCESSIBLE				snow 20's	
17-Feb-92	1315		INACCESSIBLE				clear 20's	
18-Mar-92	1615		no flow				cloudy 30's	
07-Apr-92	1150		no flow				clear 40's	
20-May-92	1535	54	0.45	406	8.83	364	rain 40's	
12-Jun-92	1430	68	0.35	344	8.81	344	PC 70's	
20-Jul-92	1535	69	0.05	14.1	8.90	353	cloudy 80's	
14-Aug-92	1205	68	0.05	14.1	8.68	378	PC 80's	
28-Sep-92	1600		no flow				clear 70's	
30-Oct-92	1530		no flow				rain 40's	
25-Nov-92	1320		no flow				PC 10'S	
DEC 92			INACCESSIBLE					
JAN-APR 93			INACCESSIBLE					
13-May-93	1127	48	0.39	326	8.37	455	PC 60's	
11-Jun-93	1339	52	1.12	1639	8.80	394	PC 60's	
30-Aug-93	1100	55.9	0.15	76	8.87	385	cloudy 70's	
28-Sep-93	1420	53.7	0.1	41	8.80	395	clear 70's	
22-Oct-93	1520	46.3	0.1	41	8.72	432	cloudy 40's - 50's	
19-Nov-93	1452			no flow			clear 40's	
17-Dec-93				Inaccessible			snow 30's	

PACIFICORP
HYDROLOGIC MONITORING

RILDA CANYON FLOW & QUALITY

RILDA CANYON - FLUME #1 (RCF1)

Date	Time	<----- Field Measurements ------> Temp.	Flow ft.	Flow GPM	pH	Cond. (uS)	Weather	Comments
JAN.-MAR 92		INACCESSIBLE						
04-07-92		INACCESSIBLE					clear 40's	
05-18-92	1500	53	0.32	614	8.58	356	PC 70's	
06-12-92	1235	53	0.25	419	8.88	371	clear 70's	
07-20-92	1410	60		15	8.85	460	cloudy 80's	
08-14-92	1058	DRY					PC 80'S	
09-03-92	1300	DRY					cloudy 50's	
10-30-92	1400	DRY					rain 40's	
NOV-DEC 92		INACCESSIBLE						
JAN-APR 93		INACCESSIBLE						
05-13-93		INACCESSIBLE					PC 60's	
06-11-93	1132	45	0.68	1975	8.99	415	PC 60's	
07-29-93	1530	56.9	0.15	190	8.48	338	rain 70's	
08-27-93	1412	54.2	0.16	210	8.69	365	cloudy 70's	
09-28-93	1150	42.8		20	8.69	399	clear 70's	
10-22-93	1400	38.3		30	8.88	429	cloudy 40's - 50's	
11-19-93	1326	INACCESSIBLE					clear 40's	
12-17-93		INACCESSIBLE					snow 30's	

PACIFICORP
HYDROLOGIC MONITORING

RILDA CANYON FLOW & QUALITY

RILDA CANYON - LEFT FORK (RCLF1)

	<----- Field Measurements ------>						
Date	Time	Temp.	Flow ft.	Flow GPM	pH	Cond. (uS)	Weather	Comments
JAN.-MAR 92		INACCESSIBLE						
04-07-92		INACCESSIBLE					clear 40's	
05-18-92	1445			DRY			PC 70's	
06-12-92	1225			DRY			clear 70's	
07-20-92	1415			DRY			cloudy 80's	
08-14-92	1100			DRY			PC 80'S	
09-03-92	1310			DRY			cloudy 50's	
10-30-92	1405			DRY			rain 40's	
NOV-DEC 92		INACCESSIBLE						
JAN-APR 93		INACCESSIBLE						
05-13-93	1030			DRY			PC 60's	
06-11-93	1150		48	150	8.98	661	PC 60's	
07-29-93	1545			DRY			rain 70's	
08-27-93	1427			DRY			cloudy 70's	
09-28-93	1213			DRY			clear 70's	
10-22-93	1414			DRY			cloudy 40's - 50's	
11-19-93	1326	INACCESSIBLE					clear 40's	
12-17-93		INACCESSIBLE					snow 30's	

PACIFICORP
HYDROLOGIC MONITORING

RILDA CANYON FLOW & QUALITY

RILDA CANYON - FLUME #2 (RCF2)

	<----- Field Measurements ------>							
Date	Time	Temp.	Flow ft.	Flow GPM	pH	Cond. (uS)	Weather	Comments
JAN.-MAR 92		INACCESSIBLE						
04-07-92	1010		DRY				clear 40's	
05-18-92	1550	52	0.24	300	8.8	390	PC 70's	
06-12-92	1310	52	0.22	262	8.54	408	clear 70's	
07-20-92	1430		DRY				cloudy 80's	
08-14-92	1110		DRY				PC 80'S	
09-03-92	1405		DRY				cloudy 50's	
10-30-92	1415		DRY				rain 40's	
NOV-DEC 92		INACCESSIBLE						
JAN-APR 93		INACCESSIBLE						
05-13-93	1038		DRY				PC 60's	
06-11-93	1207	46	0.78	1838	8.85	442	PC 60's	
07-29-93	1559	52.8	0.08	55	8.01	528	rain 70's	
08-27-93	1444		DRY				cloudy 70's	
09-28-93	1242		DRY				clear 70's	
10-22-93	1425		DRY				cloudy 40's - 50's	
11-19-93	1339		DRY				clear 40's	
12-17-93		INACCESSIBLE					snow 30's	

PACIFICORP
HYDROLOGIC MONITORING

RILDA CANYON FLOW & QUALITY

RILDA CANYON - FLUME #3 (RCF3)

Date	Time	Temp.	Flow ft.	Flow GPM	pH	Cond. (uS)	Dis. Oxygen	Weather	Comments
		<----------Field Measurement----------							
JAN.-MAR 92		INACCESSIBLE							
04-07-92	1020	49	0.03	12	8.16	704	7.9	clear 40's	
05-18-92	1615	50	0.15	146	8.22	467	8.7	PC 70's	
06-12-92	1325	54	0.25	319	8.35	476	9.0	clear 70's	
07-20-92	1440	56	0.02	7	8.19	700	7.8	cloudy 80's	
08-14-92	1115	57	0.02	7	8.16	684	8.6	PC 80'S	
09-03-92	1425	53	0.02	7	8.47	722	6.7	cloudy 50's	
10-30-92	1425	54	0.03	12	7.91	687	7.3	rain 40's	
NOV-DEC 92		INACCESSIBLE							
JAN-APR 93		INACCESSIBLE							
05-13-93	1043	53	0.05	27	8.49	653	8.7	PC 60's	
06-11-93	1242	46	0.79	1874	8.83	437	7.7	PC 60's	
07-29-93	1606	52.6	0.1	78	8.37	528	8.5	rain 70's	
08-27-93	1452	55.5	0.06	36	8.24	656	8.3	cloudy 70's	
09-28-93	1400	50.9	0.09	66	8.34	674	6.7	clear 70's	
10-22-93	1430	49.8	0.09	66	8.21	644	5.0	cloudy 40's - 50's	
11-19-93	1353	40.1	0.11	90	8.50	662	5.4	clear 40's	
12-17-93		INACCESSIBLE						snow 30's	

PACIFICORP
HYDROLOGIC MONITORING

RILDA CANYON FLOW & QUALITY

RILDA CANYON - WEIR #4 (RCW4)

Date	Time	Temp.	Flow ft.	Flow GPM	pH	Cond. (uS)	Dis. Oxygen	Weather	Comments
		<----------Field Measurement----------							
JAN.-MAR 92		INACCESSIBLE							
04-07-92	1115	45	0.38	97	8.86	690	8.7	clear 40's	
05-18-92	1635	52	0.60	305	8.54	633	9.2	PC 70's	
06-12-92	1345	54	0.67	402	8.59	585	5.9	clear 70's	
07-20-92	1510	58	0.32	63	8.80	718	7.8	cloudy 80's	
08-14-92	1145	55	0.38	97	8.58	730	7.6	PC 80'S	
09-03-92	1510	52	0.30	54	8.85	719	10.1	cloudy 50's	
10-30-92	1455	44	0.35	79	8.34	713	7.4	rain 40's	
NOV-DEC 92		INACCESSIBLE							
JAN-APR 93		INACCESSIBLE							
05-13-93	1057	47	0.38	97	8.31	767	8.3	PC 60's	
06-11-93	1308	45	1.25	1960	8.73	486	5.5	PC 60's	
07-29-93	1631	53.6	0.46	157	8.49	595	9.1	rain 70's	
08-27-93	1528	54.7		60	8.50	693	6.7	cloudy 70's	
09-28-93	1340	49.1		48	8.62	707	7.5	clear 70's	
10-22-93	1506	45.1		100	8.75	720	1.6	cloudy 40's - 50's	
11-19-93	1437	37.1		75	8.73	719	6.0	clear 40's	
12-17-93		INACCESSIBLE						snow 30's	

EAST MOUNTAIN SPRINGS DISCHARGE
1993

Spring	Date Sampled	Flow (GPM)	Temp. F	Date Sampled	Flow (GPM)	Temp. F	Seasonal Net Change %
Sheba	7-15-93	11.0	44.3	11-1-93	1.3	41.3	-88.18
Elk Spring	7-15-93	369.9	44.6	10-29-93	56.2	38.4	-84.81
Burnt Tree	7-14-93	8.6	44.9	11-1-93	10.0	42.7	16.28
Jerk Water							
Pine Springs							
Pine Sp. Trough							
Ted's Tub	7-14-93	51.0	51.2	11-4-93	6.7	38.0	-86.86
79-1							
79-2	7-14-93	7.5	43.8	11-1-93	2.2	41.4	-70.67
79-3							
79-4							
79-5							
79-6							
79-7							
79-8							
79-9							
79-10	7-15-93	30.0	44.5	10-29-93	6.7	42.2	-77.67
79-11							
79-12	7-14-93	<2 - sheet flow		11-4-93	damp		
79-13							
79-14							
79-15	7-15-93	20.7	46.1	11-4-93	3.8	44.9	-81.64
79-16							
79-17							
79-18							
79-19							
79-20							
79-21							
79-22							
79-23	7-14-93	damp		11-1-93	dry		
79-24	7-14-93	damp		11-1-93	dry		
79-25							
79-26	7-12-93	10.0	59.5	11-1-93	0.9	49.1	
79-27							
79-28	7-12-93	2.2	44.2	11-1-93	standing water - no flow		
79-29	7-12-93	2.9	42.9	11-1-93	2.1	43.2	-27.59
79-30							
79-31							
79-32	7-12-93	1.3	53.5	11-1-93	damp		
79-33							
79-34	7-15-93	13.0	46.3	11-4-93	damp		
79-35	7-15-93	8.9	42.9	10-29-93	1.2	43.2	-86.52
79-36							
79-37							
79-38	7-14-93	6.4	54.3	11-4-93	1.8	43.2	-71.88
79-39							
79-40	7-12-93	4.0	58.0	11-1-93	damp		
80-41	7-12-93	4.0	60.7	11-1-93	damp		
80-42							
80-43	7-14-93	2.7	47.8	11-1-93	damp		

EAST MOUNTAIN SPRINGS DISCHARGE
1993

Spring	Date Sampled	Flow (GPM)	Temp. F	Date Sampled	Flow (GPM)	Temp. F	Seasonal Net Change %
80-44	7-12-93	1.4	75.4	11-1-93	dry		
80-45							
80-46	7-14-93	7.5	43.5	11-1-93	damp		
80-47	7-14-93	13.3	48.2	11-1-93	7.5	39.1	-43.61
80-48	7-15-93	6.7	52.8	10-29-93	2.4	46.2	-64.18
80-49							
80-50							
82-51	7-14-93	3.2	52.9	11-1-93	damp		
82-52	7-14-93	16.7	44.1	11-4-93	4.0	44.3	-76.05
84-53	7-12-93	13.3	52.2	11-4-93	damp		
84-54							
84-55							
84-56	7-12-93	1.0	43.4	11-1-93	1.1	42.3	10.00
85-57							
86-58							
86-59							
89-60	7-14-93	2.1	54.5	11-4-93	sheet flow		
89-61	7-15-93	129.3	45.6	10-29-93	24.0	38.7	-81.44
89-62							
89-63							
89-64							
89-65	7-15-93	1.6	45.5	10-29-93	flow <0.1		
89-66	7-15-93	2.6	45.0	10-29-93	damp		
89-67	7-15-93	9.2	40.4	10-29-93	2.7	40.5	-70.65
89-68	7-15-93	2.7	47.7	10-29-93	flow <0.1		
89-69							
89-70							
89-71							
91-72	7-22-93	8.7	56.5	10-27-93	3.2	43.6	-63.22
91-73	7-22-93	1.0	62.4	10-27-93	0.5	41.2	-50.00
TOTAL FLOW FOR JULY (W\OUT 91-72 & 73)		764.7			134.6		
				Net Change - Average			-61.59
				Net Change - By Volume			-82.40

TOTAL FOR JULY 1992 = 221.1 GPM
JULY 1993 246 % HIGHER THAN JULY 1992

PACIFICORP - ENERGY WEST MINING
TECHNICAL SERVICES - HYDROLOGIC MONITORING
SPRING DISCHARGE RECESSION STUDY

YEAR 1993

SPRING		JUL	AUG	SEP	OCT		
79-10	F	30.0	14.0	8.3	6.7		
	T	45	47	46	42		
SHEBA	F	11.0	5.3	1.3	1.3		
SPRINGS	T	44	45	47	41		
ELK	F	369.9	152.8	72.7	56.2		
SPRING	T	45	43	44	38		
79-35	F	8.9	6.1	2.7	1.2		
	T	43	44	45	43		
79-26	F	10.0	2.6	1.1	0.9		
	T	60	59	58	49		
79-29	F	2.9	2.7	2.1	2.1		
	T	43	44	48	43		
84-56	F	1.0	0.9	0.8	1.1		
	T	43	46	47	42		
80-44	F	1.4	damp	dry	dry		
	T	75					
80-46	F	7.5	4.5	<0.5	damp		
	T	44	45	na			
BURNT	F	8.6	7.3	10.5	10.0		
TREE	T	45	47	49	43		
79-23	F	damp	dry	dry	dry		
	T						
82-52	F	16.7	9.4	5.5	4.0		
	T	44	44	42	44		

PACIFICORP
HYDROLOGIC MONITORING

TRAIL MOUNTAIN SPRINGS

T-19

Date	Time	Temp.(F)	Flow GPM	pH	Cond. (uS)	Dis. Oxygen	Weather	Comments
15-Dec-92	1150	INACCESSIBLE-FROZEN					Clear	10's
23-Mar-93	1400	INACCESSIBLE-FROZEN					Clear	50's
10-Jun-93	1245	56	300	8.61	665	8.5	Clear	60's
10-Sep-93	1417	64	150	8.74	650	5.9	Clear	70's
Dec 93	1243	INACCESSIBLE-FROZEN						

PACIFICORP - ENERGY WEST
TECHNICAL SERVICES - HYDROLOGIC MONITORING
TRAIL MOUNTAIN
SPRING DISCHARGE RECESSION STUDY
YEAR 1993

SPRING		JUL	AUG	SEP	OCT		
T-6	F	6.0	5.0	2.5	2.7		
18-2-1	T	61	55	55	52		
T-8	F	1.7	1.0	0.6	0.4		
17-21-1	T	46	47	46	42		
T-9	F	40.0	15.8	8.0	5.5		
17-22-1	T	47	50	47	46		
T-10	F	0.4	0.3	0.3	damp		
17-26-4	T	65	55	56	na		
T-14	F	1.6	<1.0	damp	damp		
17-25-1	T	64	na	na	na		
T-14A	F	dry	dry	dry	dry		
17-26-5	T						
T-15	F	1.6	1.0	0.7	0.7		
17-35-1	T	53	52	52	49		
T-16	F	dry	dry	dry	dry		
17-35-2	T						
TM-23	F	dry	dry	dry	dry		
	T						

PACIFICORP
TECHNICAL SERVICES - HYDROLOGIC MONITORING

DEER CREEK DISCHARGE QUALITY AND QUANTITY

	Quality			Quantity	
Date	Time	GPM	Temp. (F)	Month	Gallons/da
01-15-93	945	1000	56	Jan	1,336,320
02-22-93	1038	1058	56	Feb	1,221,120
03-17-93	1430	960	60	Mar	1,569,600
04-22-93	845	725	56	Apr	1,166,400
05-13-93	1344	921	56	May	1,074,240
06-11-93	1411	979	57	Jun	1,118,880
07-16-93	955	1117	55	Jul	1,411,200
08-03-93	1152	1250	58	Aug	1,393,920
09-20-93	1431	58	58	Sep	1,450,080
10-22-93	930	979	54	Oct	1,245,600
11-22-93	847	411	48	Nov	600,480
12-17-93	1340	20	42	Dec	218,880

PACIFICORP
TECHNICAL SERVICES - HYDROLOGIC MONITORING

TRAIL MOUNTAIN MINE - COTTONWOOD CANYON
PERMIT # UTG040003-002

	Quality			Quantity	
Date	Time	GPM	Temp. (F)	Month	Gallons/day
28-Jan-93	930	30	51	Jan-93	20,903
22-Feb-93	1145	30	49	Feb	21,600
23-Mar-93	1538	60	49	Mar	21,600
21-Apr-93	1403	84	53	Apr	60,266
May-Dec 93		No Discharge		May-Dec 93	No Discharge

PACIFICORP
TECHNICAL SERVICES - HYDROLOGIC MONITORING

WILBERG MINE - GRIMES WASH
PERMIT # 0022896-001A

Left Fork Grimes Wash

Quality				Quantity	
Date	Time	GPM	Temp. (F)	Month	Gallons/day
01-06-92	1035	6	50	Jan-92	208,766
02-04-92	1345	7	53	Feb	146,352
03-19-92	1515	150	53	Mar	113,957
04-28-92	1450	11.6	57	Apr	191,280
05-04-92	1600	12	56	May	259,297
06-16-92	1420	15	56	Jun	140,003
07-22-92	1100	550	58	Jul	311,827
08-11-92	1400	811	61	Aug	1,435,584
09-21-92	1230	1800	57	Sep	2,297,987
10-21-92	1430	925	59	Oct	1,423,935
11-03-92	1515	550	55	Nov	1,552,140
12-18-93	1035	1200	56	Dec	1,523,808
01-20-93	940	42	54	Jan-93	1,445,409
02-22-93	1250	12	52	Feb	1,334,160
03-02-93	1155	312	54	Mar	370,633
04-06-93	1447	20	54	Apr	25,162
05-19-93	1030	12	52	May	33,871
06-01-93	1612	22	54	Jun	15,410
07-23-93	1220	18	57	Jul	6,597
08-03-93	1256	12	57	Aug	270,947
09-13-93	1201	12	60	Sep	356,340
10-30-93	1105	20	54	Oct	320,303
11-02-93	1652	526	53	Nov	147,906
12-13-93	1130	12	53	Dec	99,306

PACIFICORP
TECHNICAL SERVICES - HYDROLOGIC MONITORING

WILBERG MINE - MILLER CANYON
PERMIT # 0022896-004A

Miller Canyon Breakout

Quality				Quantity	
Date	Time	GPM	Temp. (F)	Month	Gallons/day
Jan-Mar 93		Inacessible		Jan-Mar 93	Inacessible
04-21-93	1430	10	60	Apr	14,400
05-19-93	1155	12	58	May	17,280
06-14-93	1240	10	60	Jun	14,400
07-23-93	1140	8	58	Jul	11,520
08-18-93	1320	10	64	Aug	14,400
09-13-93	1113	12	48	Sep	17,280
10-30-93	1154	12	35	Oct	17,280
11-03-93	830	12	47	Nov	17,280
12-13-93	1250	Frozen		Dec	Frozen

DEER CREEK IN-MINE

PACIFICORP
TECHNICAL SERVICES - HYDROLOGIC MONITORING

DEER CREEK IN-MINE QUALTIY & LONG TERM FLOW

Date	Location	QUALITY Time	Temp.(F)	GPM	Date	LONG TERM FLOW(GPM Site #1	Site #2
03-20-92	TW-10	1035	46	6.0			
03-20-92	MAIN N.-MAIN	1000	49	0.4			
03-20-92	1ST R.-3RD N.	1105	52	<.1			
06-25-92	TW-10	1250	45	6.0			
06-25-92	MAIN N.-MAIN	1100	50	0.5			
09-11-92	TW-10	1600	49	6.0			
09-11-92	MAIN N.-MAIN	1700	52	0.5			
12-09-92	TW-10	1140	46	5.6			
12-09-92	MAIN N.-MAIN	900	56	0.4			
03-17-93	TW-10	1325	44	0.5			
03-17-93	MAIN N.-MAIN	1035	52	0.4			
03-17-93	4TH S. SEALS	1235	55	<500			
06-29-93	TW-10	1040	46	3.5			
06-28-93	MAIN N.-MAIN	1105	54	0.4			
06-29-93	4TH S. SEALS	900	54				
09-15-93	TW-10	1205	56	5.3			
09-15-93	MAIN N.-MAIN	1440	56	0.4			
12-15-93	MAIN N.-MAIN	1011	52	0.3			
12-15-93	TW-10	1045	44	4.8			

Site #1 Main North - Main West
Site #2 3rd North XC-65 2R, TW-10

TRAIL MOUNTAIN IN-MINE

PACIFICORP
TECHNICAL SERVICES - HYDROLOGIC MONITORING

TRAIL MOUNTAIN IN-MINE QUALTIY & LONG TERM FLOW

		QUALITY				LONG TERM FLOW(GPM)	
Date	Location	Time	Temp.(F)	GPM	Date	UG-2	UG-3
04-02-93	UG-2	1450	56	<0.01	04-02-93	0.01	12.00
04-02-93	UG-3	1500	54	12.0	07-03-93	0.01	15.1
07-03-93	UG-2	1005	55	<0.01	09-23-93	0.01	12
08-23-93	UG-3	1206	55	15.1	12-16-93	0.01	12
09-23-93	UG-2	1038	50	0.1			
09-23-93	UG-3	1112	54	12			
12-16-93	UG-3	1045	52	0.1			
12-16-93	UG-2	1115	51	12			

WILBERG/COTTONWOOD IN-MINE

PACIFICORP
TECHNICAL SERVICES - HYDROLOGIC MONITORING

WILBERG-COTTONWOOD IN-MINE QUALTIY & LONG TERM FLOW

		QUALITY				LONG TERM FLOW(GPM)		
Date	Location	Time	Temp.(F)	GPM	Date	Site #1	Site #2	Site #3
12-10-91	2nd S XC-11	1045	54	0.06				
12-10-91	4th E XC-24	1120	53	0.11				
03-04-92	2nd S XC-11	1355	51	0.06				
03-04-92	4th E XC-24	1230	55	0.11				
06-26-92	4th E XC-24	1300	54	0.1				
06-26-92	12th R XC-02	1520	54	1.4				
09-16-92	2nd S XC-11	1430	55	0.07				
09-16-92	8th R XC-8.5	1405	54	0.5				
12-09-92	2nd S XC-11	1230		frozen				
12-09-92	7th R XC-12	1106	56	2.0				
03-23-93	2nd S XC-11	1105	52	0.06				
03-23-93	5th R XC-9.5	1235	52	<1.0				
07-01-93	2nd S XC-11	1235	55	0.06				
07-01-93	3rd R XC-6	1215	55	0.06				
09-23-93	2nd S XC-11	1120	55	0.07				
09-23-93	MWE XC-20	1100	55	0.50				
12-13-93	2nd R XC-13	1430	54	<1.0				
12-13-93	2nd S XC-11	1245	52	0.07				

Site #1 2nd South cross cut 11
Site #2
* sampling hose plugged
** 4th East cross cut 24, terminated as of 6/92 (ceased flowing)

ENERGY WEST MINING COMPANY
EAST MOUNTAIN PRECIPITATION
HISTORICAL COMPARISON

MONTH	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	MIN	MEAN	MAX	ST DEV
OCT	1.28	1.93	0.38	0.76	3.27	1.15	1.57	2.77	0.61	0.28	0.48	0.49	1.57	0.28	1.27	3.27	0.94
NOV	0.39	0.53	2.90	2.43	0.97	2.38	0.39	1.91	0.43	0.39	0.26	1.07	0.57	0.26	1.12	2.90	0.93
DEC	0.05	0.97	1.39	2.42	1.67	0.87	0.16	1.29	1.56	0.16	0.66	0.07	1.53	0.05	0.98	2.42	0.72
JAN	0.29	3.22	1.30	0.27	0.49	0.30	1.37	1.42	1.00	0.74	0.34	0.61	4.10	0.27	1.19	4.10	0.80
FEB	0.52	0.14	1.81	0.65	0.59	2.10	1.37	0.00	0.68	2.08	0.39	1.73	2.34	0.00	1.11	2.34	0.73
MAR	2.77	1.67	1.98	1.22	1.77	1.43	1.65	0.99	1.03	1.75	2.34	2.39	2.01	0.99	1.77	2.77	0.53
APR	0.64	0.00	0.92	0.50	1.35	1.05	1.16	2.08	0.26	1.03	0.59	0.56	0.33	0.00	0.81	2.08	0.53
MAY	0.87	0.45	0.71	0.22	1.73	0.38	1.77	1.03	0.47	0.26	1.83	2.19	0.72	0.22	0.97	2.19	0.67
JUN	0.11	0.09	0.61	1.18	0.28	0.53	0.58	0.81	0.43	0.67	0.21	0.95	0.19	0.09	0.51	1.18	0.32
JUL	0.57	1.86	1.27	1.90	2.47	0.87	2.49	0.45	1.19	0.88	1.01	0.85	0.04	0.04	1.22	2.49	0.67
AUG	0.85	1.10	4.83	2.33	0.12	2.24	1.16	0.96	2.44	1.03	1.48	0.48	0.82	0.12	1.53	4.83	1.20
SEP	2.55	2.61	1.62	0.64	2.31	1.63	0.06	0.91	0.49	1.62	3.11	0.35	0.14	0.06	1.39	3.11	0.96
TOTAL	10.90	14.57	19.71	14.53	17.02	14.92	13.73	14.62	10.59	10.90	12.69	11.74	14.37	10.59	13.83	19.71	2.50

ENERGY WEST MINING COMPANY
EAST MOUNTAIN PRECIPITATION 1993

DATE	TIME		INCHES PRECIPITATION	
25-Oct-92	03:42 AM	START		
25-Oct-92	09:02 AM	STOP	0.43	
25-Oct-92	01:07 PM	START		
25-Oct-92	07:50 PM	STOP	0.36	
26-Oct-92	01:23 AM	START		
26-Oct-92	07:00 AM	STOP	0.08	
28-Oct-92	01:08 AM	START		
28-Oct-92	12:28 PM	STOP	0.50	
29-Oct-92	10:06 PM	START		
30-Oct-92	06:44 AM	STOP	0.11	
30-Oct-92	10:16 PM	START		
31-Oct-92	12:02 PM	STOP	0.10	1.57 INCHES
01-Nov-92	05:02 AM	START		
01-Nov-92	11:05 AM	STOP	0.12	
01-Nov-92	02:02 PM	START		
01-Nov-92	07:39 PM	STOP	0.05	
02-Nov-92	08:12 AM	START		
02-Nov-92	06:37 PM	STOP	0.06	
03-Nov-92	12:43 PM	START		
03-Nov-92	09:17 PM	STOP	0.07	
19-Nov-92	04:16 AM	START		
19-Nov-92	02:08 PM	STOP	0.05	
20-Nov-92	09:18 AM	START		
20-Nov-92	09:54 PM	STOP	0.06	
22-Nov-92	12:15 PM	START		
22-Nov-92	06:17 PM	STOP	0.17	0.57 INCHES
05-Dec-92	01:23 PM	START		
06-Dec-92	06:16 AM	STOP	0.14	
09-Dec-92	07:55 AM	START		
09-Dec-92	05:05 PM	STOP	0.05	
11-Dec-92	10:33 PM	START		
13-Dec-92	05:33 AM	STOP	0.15	
13-Dec-92	03:37 PM	START		
13-Dec-92	04:41 PM	STOP	0.04	
17-Dec-92	10:26 PM	START		
19-Dec-92	09:31 AM	STOP	0.40	
27-Dec-92	05:19 PM	START		
28-Dec-92	08:49 AM	STOP	0.45	
29-Dec-92	02:18 PM	START		
30-Dec-92	10:59 AM	STOP	0.29	1.53 INCHES
02-Jan-93	03:24 AM	START		
02-Jan-93	06:20 AM	STOP	0.10	
06-Jan-93	09:04 AM	START		

ENERGY WEST MINING COMPANY
EAST MOUNTAIN PRECIPITATION 1993

DATE	TIME		INCHES PRECIPITATION	
06-Jan-93	08:39 PM	STOP	0.12	
06-Jan-93	11:16 PM	START		
08-Jan-93	04:07 PM	STOP	0.30	
09-Jan-93	08:16 AM	START		
09-Jan-93	07:07 PM	STOP	0.09	
09-Jan-93	08:38 PM	START		
11-Jan-93	11:17 PM	STOP	1.09	
12-Jan-93	10:34 PM	START		
16-Jan-93	01:55 AM	STOP	0.38	
16-Jan-93	07:34 AM	START		
17-Jan-93	02:18 AM	STOP	0.07	
17-Jan-93	08:20 AM	START		
18-Jan-93	03:25 AM	STOP	0.17	
18-Jan-93	08:17 AM	START		
18-Jan-93	10:09 PM	STOP	0.10	
18-Jan-93	10:54 PM	START		
20-Jan-93	11:55 AM	STOP	0.42	
22-Jan-93	06:44 AM	START		
22-Jan-93	01:30 PM	STOP	0.02	
23-Jan-93	05:16 AM	START		
23-Jan-93	04:08 PM	STOP	0.07	
31-Jan-93	09:21 AM	START		
31-Jan-93	07:06 PM	STOP	0.04	
31-Jan-93	10:52 PM	START		
31-Jan-93	11:57 PM	STOP	0.67	
31-Jan-93	07:16 AM	START		
31-Jan-93	08:05 PM	STOP	0.11	
31-Jan-93	10:56 AM	START		
31-Jan-93	12:48 PM	STOP	0.01	
31-Jan-93	01:12 PM	START		
31-Jan-93	03:36 PM	STOP	0.13	
31-Jan-93	03:50 PM	START		
31-Jan-93	04:48 PM	STOP	0.14	
31-Jan-93	05:16 PM	START		
31-Jan-93	09:36 PM	STOP	0.10	4.10 INCHES
06-Feb-93	10:56 PM	START		
07-Feb-93	03:04 PM	STOP	0.07	
07-Feb-93	06:08 PM	START		
10-Feb-93	03:54 AM	STOP	0.76	
12-Feb-93	07:10 AM	START		
12-Feb-93	10:31 PM	STOP	0.04	
16-Feb-93	01:34 AM	START		
16-Feb-93	01:34 PM	STOP	0.09	
16-Feb-93	07:30 PM	START		
17-Feb-93	05:57 PM	STOP	0.13	

ENERGY WEST MINING COMPANY

EAST MOUNTAIN PRECIPITATION 1993

DATE	TIME		INCHES PRECIPITATION	
18-Feb-93	10:25 PM	START		
19-Feb-93	05:44 PM	STOP	0.23	
19-Feb-93	10:32 PM	START		
20-Feb-93	12:53 PM	STOP	0.14	
20-Feb-93	03:50 PM	START		
21-Feb-93	07:29 PM	STOP	0.33	
22-Feb-93	04:11 PM	START		
23-Feb-93	12:44 PM	STOP	0.10	
24-Feb-93	12:55 AM	START		
25-Feb-93	05:10 AM	STOP	0.25	
28-Feb-93	02:06 AM	START		
28-Feb-93	11:52 PM	STOP	0.19	2.34 INCHES
14-Mar-93	05:09 PM	START		
15-Mar-93	02:23 AM	STOP	0.15	
17-Mar-93	06:18 PM	START		
18-Mar-93	06:50 AM	STOP	0.04	
26-Mar-93	04:34 PM	START		
26-Mar-93	08:19 PM	STOP	0.05	
26-Mar-93	10:08 PM	START		
26-Mar-93	10:23 PM	STOP	0.20	
27-Mar-93	12:14 AM	START		
27-Mar-93	02:33 AM	STOP	0.41	
27-Mar-93	05:08 AM	START		
27-Mar-93	08:49 AM	STOP	0.33	
27-Mar-93	11:29 PM	START		
29-Mar-93	03:46 PM	STOP	0.84	2.01 INCHES
05-Apr-93	04:23 PM	START		
06-Apr-93	09:54 AM	STOP	0.23	
11-Apr-93	05:27 PM	START		
12-Apr-93	05:35 AM	STOP	0.10	0.33 INCHES
07-May-93	01:35 AM	START		
07-May-93	07:19 AM	STOP	0.04	
07-May-93	09:14 PM	START		
08-May-93	04:29 AM	STOP	0.06	
09-May-93	01:30 AM	START		
09-May-93	01:39 PM	STOP	0.05	
16-May-93	04:35 PM	START		
16-May-93	08:47 PM	STOP	0.03	
17-May-93	06:36 PM	START		
17-May-93	10:08 PM	STOP	0.12	
28-May-93	10:54 AM	START		
28-May-93	08:23 PM	STOP	0.43	0.72 INCHES

ENERGY WEST MINING COMPANY
EAST MOUNTAIN PRECIPITATION 1993

DATE	TIME		INCHES PRECIPITATION	
17-Jun-93	06:09 PM	START		
17-Jun-93	10:16 PM	STOP	0.15	
18-Jun-93	04:41 AM	START		
19-Jun-93	03:16 AM	STOP	0.04	0.19 INCHES
24-Jul-93	05:41 AM	START		
24-Jul-93	05:48 AM	STOP	0.04	0.04 INCHES
04-Aug-93	04:19 PM	START		
04-Aug-93	08:26 PM	STOP	0.07	
08-Aug-93	04:02 PM	START		
08-Aug-93	07:19 PM	STOP	0.05	
10-Aug-93	03:46 PM	START		
10-Aug-93	04:47 PM	STOP	0.29	
20-Aug-93	03:27 PM	START		
21-Aug-93	03:32 AM	STOP	0.19	
25-Aug-93	05:51 PM	START		
26-Aug-93	12:20 AM	STOP	0.22	0.82 INCHES
17-Sep-93	03:16 AM	START		
17-Sep-93	04:47 AM	STOP	0.04	
17-Sep-93	05:54 PM	START		
17-Sep-93	07:26 PM	STOP	0.04	
18-Sep-93	02:21 AM	START		
18-Sep-93	04:57 AM	STOP	0.01	
18-Sep-93	02:02 PM	START		
18-Sep-93	05:02 PM	STOP	0.04	0.14 INCHES

1993 WATER YEAR
EAST MTN PRECIP.

OCT 92	1.57
NOV 92	0.57
DEC 92	1.53
JAN 93	4.10
FEB 93	2.34
MAR 93	2.01
APR 93	0.33
MAY 93	0.72
JUN 93	0.19
JUL 93	0.04
AUG 93	0.82
SEP 93	0.14
TOTAL	14.37

EAST MOUNTAIN TEMPERATURES - HISTORICAL SUMMARY

OCTOBER SUMMARY

	HIGH	LOW
AVG.	47.1	30.6
MAX.	71.5	54.9
MIN.	11.6	4.3

FEBRUARY SUMMARY

	HIGH	LOW
AVG.	32.2	15.6
MAX.	55.5	39.2
MIN.	-2.3	-14.7

JUNE SUMMARY

	HIGH	LOW
AVG.	65.9	43.3
MAX.	85.7	74.1
MIN.	27.7	13.1

NOVEMBER SUMMARY

	HIGH	LOW
AVG.	34.5	21.2
MAX.	54.3	41.9
MIN.	13.0	0.2

MARCH SUMMARY

	HIGH	LOW
AVG.	36.6	18.9
MAX.	58.7	40.0
MIN.	7.4	-6.6

JULY SUMMARY

	HIGH	LOW
AVG.	72.0	50.4
MAX.	86.9	65.1
MIN.	48.5	20.4

DECEMBER SUMMARY

	HIGH	LOW
AVG.	28.0	12.9
MAX.	55.9	41.8
MIN.	-2.6	-17.6

APRIL SUMMARY

	HIGH	LOW
AVG.	45.8	26.3
MAX.	69.4	51.9
MIN.	12.7	-0.3

AUGUST SUMMARY

	HIGH	LOW
AVG.	70.8	50.3
MAX.	89.3	63.8
MIN.	47.4	31.8

JANUARY SUMMARY

	HIGH	LOW
AVG.	28.9	13.8
MAX.	50.7	34.9
MIN.	2.0	-15.2

MAY SUMMARY

	HIGH	LOW
AVG.	53.1	33.2
MAX.	76.4	53.4
MIN.	15.8	3.4

SEPTEMBER SUMMARY

	HIGH	LOW
AVG.	61.3	41.9
MAX.	85.4	59.4
MIN.	31.6	20.0

HISTORICAL SUMMARY

PARAMETER	DATE	TEMP
AVERAGE HIGH		47.9
MAXIMUM HIGH	31-Jan-85	89.3
AVG. MAX. HIGH		84.0
MINIMUM HIGH	22-Dec-90	-2.6
AVG. MIN. HIGH		6.1
AVERAGE LOW		30.3
MAXIMUM LOW	03-Jun-89	74.1
AVG. MAX. LOW		62.4
MINIMUM LOW	22-Dec-90	-17.6
AVG. MIN. LOW		-6.7

EAST MOUNTAIN TEMPERATURES - 1993 WATER YEAR SUMMARY

Oct-92 SUMMARY

	HIGH	LOW
AVG.	54.1	35.9
MAX.	68.8	46.3
MIN.	28.5	21.9

Nov-92 SUMMARY

	HIGH	LOW
AVG.	29.5	15.6
MAX.	46.5	32.7
MIN.	16.2	0.2

Dec-92 SUMMARY

	HIGH	LOW
AVG.	20.2	8.2
MAX.	34.6	18.9
MIN.	7.0	-2.7

Jan-93 SUMMARY

	HIGH	LOW
AVG.	24.3	10.8
MAX.	38.2	21.0
MIN.	8.8	-5.9

Feb-93 SUMMARY

	HIGH	LOW
AVG.	27.9	12.8
MAX.	37.8	21.2
MIN.	13.9	1.8

Mar-93 SUMMARY

	HIGH	LOW
AVG.	41.4	22.6
MAX.	51.0	30.5
MIN.	30.2	9.1

Apr-93 SUMMARY

	HIGH	LOW
AVG.	43.9	23.8
MAX.	60.4	36.1
MIN.	27.5	13.2

May-93 SUMMARY

	HIGH	LOW
AVG.	57.8	36.8
MAX.	71.7	46.8
MIN.	29.3	21.6

Jun-93 SUMMARY

	HIGH	LOW
AVG.	61.2	40.1
MAX.	78.1	74.1
MIN.	41.0	24.6

Jul-93 SUMMARY

	HIGH	LOW
AVG.	71.1	47.9
MAX.	80.0	56.3
MIN.	48.5	33.5

Aug-93 SUMMARY

	HIGH	LOW
AVG.	67.8	45.0
MAX.	77.3	59.3
MIN.	55.2	38.2

Sep-93 SUMMARY

	HIGH	LOW
AVG.	65.1	41.5
MAX.	77.6	52.5
MIN.	46.1	26.8

1993 SUMMARY

PARAMETER	DATE	TEMP
AVG. HIGH	NA	47.1
MAX. HIGH	28-Jul-93	80.0
MIN. HIGH	17-Dec-92	7.0
AVG. LOW	NA	29.8
MAX. LOW	28-Jun-93	74.1
MIN. LOW	03-Jan-93	-5.9

ENERGY WEST MINING COMPANY
EAST MOUNTAIN STATION
1993 WATER YEAR

DATE	TIME	TEMPERATURE (DEG. F)	
01-Oct-92	07:45 AM	45.1	LOW
01-Oct-92	12:15 PM	68.5	HIGH
02-Oct-92	09:01 AM	68.8	HIGH
02-Oct-92	07:29 PM	44.9	LOW
03-Oct-92	09:20 AM	61.3	HIGH
03-Oct-92	07:55 PM	37.5	LOW
04-Oct-92	12:01 AM	31.9	LOW
04-Oct-92	09:05 AM	57.9	HIGH
05-Oct-92	12:24 AM	37.2	LOW
05-Oct-92	08:09 AM	59.7	HIGH
06-Oct-92	07:26 AM	51.8	HIGH
06-Oct-92	07:42 PM	23.3	LOW
07-Oct-92	12:01 AM	24.1	LOW
07-Oct-92	07:35 AM	46.8	HIGH
08-Oct-92	01:13 AM	36.0	LOW
08-Oct-92	08:37 AM	53.1	HIGH
09-Oct-92	09:16 AM	54.5	HIGH
09-Oct-92	06:49 PM	37.2	LOW
10-Oct-92	12:49 AM	36.2	LOW
10-Oct-92	09:59 AM	59.8	HIGH
11-Oct-92	02:17 AM	42.0	LOW
11-Oct-92	11:18 AM	66.6	HIGH
12-Oct-92	01:32 AM	46.3	LOW
12-Oct-92	10:36 AM	67.6	HIGH
13-Oct-92	02:38 AM	43.8	LOW
13-Oct-92	09:32 AM	64.3	HIGH
14-Oct-92	08:39 AM	57.3	HIGH
14-Oct-92	07:54 PM	39.6	LOW
15-Oct-92	01:47 AM	38.1	LOW
15-Oct-92	09:24 AM	54.9	HIGH
16-Oct-92	01:48 AM	36.5	LOW
16-Oct-92	08:18 AM	53.4	HIGH
17-Oct-92	02:06 AM	35.9	LOW
17-Oct-92	10:04 AM	55.0	HIGH
18-Oct-92	02:21 AM	39.2	LOW
18-Oct-92	10:59 AM	58.9	HIGH
19-Oct-92	10:47 AM	63.9	HIGH
19-Oct-92	08:16 PM	43.3	LOW
20-Oct-92	10:43 AM	62.2	HIGH
20-Oct-92	09:55 PM	40.4	LOW
21-Oct-92	09:45 AM	47.0	HIGH
21-Oct-92	09:08 PM	36.3	LOW
22-Oct-92	01:54 AM	36.3	LOW
22-Oct-92	08:38 AM	55.2	HIGH
23-Oct-92	01:10 AM	39.4	LOW
23-Oct-92	07:57 AM	55.8	HIGH
24-Oct-92	08:34 AM	58.7	HIGH
24-Oct-92	08:21 PM	36.4	LOW
25-Oct-92	04:54 AM	47.2	HIGH
25-Oct-92	05:43 PM	32.0	LOW
26-Oct-92	05:44 AM	47.7	HIGH
26-Oct-92	02:16 PM	34.3	LOW

ENERGY WEST MINING COMPANY
EAST MOUNTAIN STATION
1993 WATER YEAR

DATE	TIME	TEMPERATURE (DEG. F)		
27-Oct-92	01:41 AM	42.4		HIGH
27-Oct-92	07:18 PM		32.4	LOW
28-Oct-92	04:55 AM	35.9		HIGH
28-Oct-92	06:08 PM		31.5	LOW
29-Oct-92	02:22 AM	39.1		HIGH
29-Oct-92	01:07 PM		30.3	LOW
30-Oct-92	12:55 AM	33.5		HIGH
30-Oct-92	05:57 PM		24.6	LOW
31-Oct-92	03:22 AM	28.5		HIGH
31-Oct-92	04:02 PM		21.9	LOW
01-Nov-92	06:05 AM	36.4		HIGH
01-Nov-92	02:32 PM		29.5	LOW
02-Nov-92	02:52 AM	29.9		HIGH
02-Nov-92	09:24 PM		16.5	LOW
03-Nov-92	07:38 AM	27.0		HIGH
03-Nov-92	08:16 PM		11.2	LOW
04-Nov-92	12:01 AM		10.2	LOW
04-Nov-92	05:25 AM	25.2		HIGH
05-Nov-92	04:35 AM	23.9		HIGH
05-Nov-92	03:18 PM		13.1	LOW
06-Nov-92	12:01 AM		13.1	LOW
06-Nov-92	05:51 AM	31.9		HIGH
07-Nov-92	03:12 AM	37.4		HIGH
07-Nov-92	04:20 PM		19.4	LOW
08-Nov-92	12:12 AM	28.2		HIGH
08-Nov-92	02:11 PM		16.1	LOW
09-Nov-92	12:05 AM		13.6	LOW
09-Nov-92	02:39 AM	27.9		HIGH
10-Nov-92	12:48 AM	20.3		HIGH
10-Nov-92	11:58 AM		7.2	LOW
11-Nov-92	12:02 AM		14.7	LOW
11-Nov-92	03:53 AM	29.7		HIGH
12-Nov-92	04:39 AM	33.6		HIGH
12-Nov-92	05:11 PM		19.6	LOW
13-Nov-92	03:20 AM		20.6	LOW
13-Nov-92	07:54 AM	39.1		HIGH
14-Nov-92	05:09 AM	46.5		HIGH
14-Nov-92	12:38 PM		32.7	LOW
15-Nov-92	07:06 AM	42.8		HIGH
15-Nov-92	08:11 PM		28.5	LOW
16-Nov-92	03:21 AM		26.1	LOW
16-Nov-92	07:43 AM	39.8		HIGH
17-Nov-92	07:26 AM	38.1		HIGH
17-Nov-92	09:43 PM		24.9	LOW
18-Nov-92	05:01 AM	35.7		HIGH
18-Nov-92	07:49 PM		19.4	LOW
19-Nov-92	06:05 AM	30.6		HIGH
19-Nov-92	08:55 PM		15.0	LOW
20-Nov-92	03:52 AM		14.2	LOW
20-Nov-92	08:33 AM	17.0		HIGH
21-Nov-92	04:56 AM	28.8		HIGH

Oct-92 SUMMARY

	HIGH	LOW
AVG.	54.1	35.9
MAX.	68.8	46.3
MIN.	28.5	21.9

ENERGY WEST MINING COMPANY
EAST MOUNTAIN STATION
1993 WATER YEAR

DATE	TIME	TEMPERATURE (DEG. F)	
21-Nov-92	12:35 PM	15.2	LOW
22-Nov-92	02:07 AM	20.3	HIGH
22-Nov-92	01:59 PM	11.0	LOW
23-Nov-92	01:06 AM	16.2	HIGH
23-Nov-92	01:26 PM	6.4	LOW
24-Nov-92	12:08 AM	20.8	HIGH
24-Nov-92	09:19 AM	0.2	LOW
25-Nov-92	12:28 AM	3.7	LOW
25-Nov-92	09:57 PM	19.3	HIGH
26-Nov-92	12:01 AM	14.2	LOW
26-Nov-92	08:15 PM	29.6	HIGH
27-Nov-92	02:24 AM	18.6	LOW
27-Nov-92	04:48 PM	32.4	HIGH
28-Nov-92	01:12 PM	23.5	HIGH
28-Nov-92	10:48 PM	10.4	LOW
29-Nov-92	02:24 PM	23.9	HIGH
29-Nov-92	11:45 PM	8.9	LOW
30-Nov-92	04:48 AM	13.9	LOW
30-Nov-92	02:24 PM	28.4	HIGH
01-Dec-92	03:50 AM	18.3	LOW
01-Dec-92	06:28 PM	30.8	HIGH
02-Dec-92	10:21 AM	26.6	HIGH
02-Dec-92	05:44 PM	15.6	LOW
03-Dec-92	09:08 AM	25.7	HIGH
03-Dec-92	07:11 PM	13.2	LOW
04-Dec-92	03:28 AM	5.1	LOW
04-Dec-92	09:43 AM	15.5	HIGH
05-Dec-92	11:41 AM	16.4	HIGH
05-Dec-92	04:57 PM	5.2	LOW
06-Dec-92	06:54 AM	2.8	LOW
06-Dec-92	12:07 PM	11.1	HIGH
07-Dec-92	03:17 AM	4.9	LOW
07-Dec-92	12:29 PM	14.3	HIGH
08-Dec-92	04:43 AM	9.2	LOW
08-Dec-92	12:40 PM	24.5	HIGH
09-Dec-92	01:32 AM	18.9	LOW
09-Dec-92	09:47 AM	30.3	HIGH
10-Dec-92	12:27 AM	15.8	LOW
10-Dec-92	08:36 AM	21.2	HIGH
11-Dec-92	02:08 AM	14.7	LOW
11-Dec-92	07:50 AM	20.4	HIGH
12-Dec-92	12:20 AM	18.2	HIGH
12-Dec-92	06:17 PM	10.1	LOW
13-Dec-92	10:21 AM	14.9	HIGH
13-Dec-92	06:02 PM	7.7	LOW
14-Dec-92	01:48 AM	8.4	LOW
14-Dec-92	12:16 PM	15.6	HIGH
15-Dec-92	08:47 AM	14.0	HIGH
15-Dec-92	11:51 PM	2.5	LOW
16-Dec-92	03:48 PM	13.0	HIGH
16-Dec-92	11:28 PM	-0.5	LOW

Nov-92 SUMMARY

	HIGH	LOW
AVG.	29.5	15.6
MAX.	46.5	32.7
MIN.	16.2	0.2

ENERGY WEST MINING COMPANY
EAST MOUNTAIN STATION
1993 WATER YEAR

DATE	TIME	TEMPERATURE (DEG. F)	
17-Dec-92	10:25 AM	1.3	LOW
17-Dec-92	04:39 PM	7.0	HIGH
18-Dec-92	06:03 PM	16.6	HIGH
18-Dec-92	11:45 PM	-1.9	LOW
19-Dec-92	11:55 AM	-2.7	LOW
19-Dec-92	05:46 PM	16.7	HIGH
20-Dec-92	11:11 AM	0.1	LOW
20-Dec-92	09:00 PM	12.8	HIGH
21-Dec-92	11:02 AM	6.7	LOW
21-Dec-92	04:22 PM	15.3	HIGH
22-Dec-92	07:48 AM	7.7	LOW
22-Dec-92	01:48 PM	22.5	HIGH
23-Dec-92	07:31 AM	11.9	LOW
23-Dec-92	01:44 PM	27.1	HIGH
24-Dec-92	04:54 AM	13.6	LOW
24-Dec-92	10:28 AM	34.6	HIGH
25-Dec-92	03:50 AM	12.6	LOW
25-Dec-92	08:42 AM	32.7	HIGH
26-Dec-92	05:34 AM	22.2	HIGH
26-Dec-92	03:56 PM	3.2	LOW
27-Dec-92	12:17 AM	3.3	LOW
27-Dec-92	04:46 AM	14.8	HIGH
28-Dec-92	04:09 AM	27.8	HIGH
28-Dec-92	11:25 AM	14.5	LOW
29-Dec-92	12:33 AM	15.9	LOW
29-Dec-92	03:49 AM	26.3	HIGH
30-Dec-92	01:08 AM	17.8	HIGH
30-Dec-92	11:01 AM	8.6	LOW
31-Dec-92	03:36 AM	8.7	LOW
31-Dec-92	04:16 PM	20.9	HIGH
01-Jan-93	11:51 PM	14.0	LOW
01-Jan-93	05:55 AM	22.4	HIGH
02-Jan-93	07:16 AM	22.9	HIGH
02-Jan-93	04:35 PM	-2.1	LOW
03-Jan-93	01:06 AM	-5.9	LOW
03-Jan-93	06:38 AM	8.8	HIGH
04-Jan-93	12:51 AM	-4.7	LOW
04-Jan-93	08:06 AM	9.4	HIGH
05-Jan-93	03:21 AM	7.4	LOW
05-Jan-93	11:13 AM	17.7	HIGH
06-Jan-93	01:28 AM	11.1	LOW
06-Jan-93	07:07 AM	20.5	HIGH
07-Jan-93	05:48 AM	26.9	HIGH
07-Jan-93	11:55 AM	16.1	LOW
08-Jan-93	08:35 AM	24.8	HIGH
08-Jan-93	07:21 PM	12.9	LOW
09-Jan-93	05:24 AM	23.4	HIGH
09-Jan-93	11:29 AM	16.5	LOW
10-Jan-93	06:12 AM	21.2	HIGH
10-Jan-93	09:27 PM	14.4	LOW
11-Jan-93	04:48 AM	10.9	HIGH

Dec-92 SUMMARY

	HIGH	LOW
AVG.	20.2	8.2
MAX.	34.6	18.9
MIN.	7.0	-2.7

ENERGY WEST MINING COMPANY
EAST MOUNTAIN STATION
1993 WATER YEAR

DATE	TIME	TEMPERATURE (DEG. F)	
11-Jan-93	06:40 PM	-2.3	LOW
12-Jan-93	12:15 AM	-2.3	LOW
12-Jan-93	05:58 AM	12.7	HIGH
13-Jan-93	12:20 AM	6.5	LOW
13-Jan-93	06:20 AM	24.1	HIGH
14-Jan-93	12:56 AM	14.2	LOW
14-Jan-93	05:58 AM	25.0	HIGH
15-Jan-93	06:07 AM	29.4	HIGH
15-Jan-93	11:20 AM	12.6	LOW
16-Jan-93	05:38 AM	27.9	HIGH
16-Jan-93	01:08 PM	15.9	LOW
17-Jan-93	04:48 AM	27.6	HIGH
17-Jan-93	11:00 AM	18.8	LOW
18-Jan-93	02:51 AM	27.4	HIGH
18-Jan-93	03:21 PM	16.4	LOW
19-Jan-93	04:03 AM	23.8	HIGH
19-Jan-93	02:13 PM	11.7	LOW
20-Jan-93	07:59 AM	33.3	HIGH
20-Jan-93	02:32 PM	16.6	LOW
21-Jan-93	08:37 AM	33.9	HIGH
21-Jan-93	04:08 PM	15.6	LOW
22-Jan-93	03:14 AM	25.4	HIGH
22-Jan-93	04:45 PM	1.9	LOW
23-Jan-93	06:17 AM	17.6	HIGH
23-Jan-93	11:46 AM	4.7	LOW
24-Jan-93	06:55 AM	19.6	HIGH
24-Jan-93	10:36 AM	9.3	LOW
25-Jan-93	09:05 AM	34.5	HIGH
25-Jan-93	07:23 PM	21.0	LOW
26-Jan-93	08:42 AM	38.2	HIGH
26-Jan-93	07:51 PM	17.3	LOW
27-Jan-93	02:13 AM	17.3	LOW
27-Jan-93	12:21 PM	33.7	HIGH
28-Jan-93	08:05 AM	35.6	HIGH
28-Jan-93	05:27 PM	12.1	LOW
29-Jan-93	12:50 AM	10.3	LOW
29-Jan-93	08:07 AM	27.8	HIGH
30-Jan-93	03:00 AM	24.6	HIGH
30-Jan-93	09:36 AM	20.1	LOW
31-Jan-93	06:52 AM	22.8	HIGH
31-Jan-93	05:01 PM	17.8	LOW
01-Feb-93	02:38 AM	26.4	HIGH
01-Feb-93	07:30 AM	15.4	LOW
02-Feb-93	10:00 AM	25.8	HIGH
02-Feb-93	02:56 PM	15.5	LOW
03-Feb-93	03:45 AM	9.9	LOW
03-Feb-93	10:16 AM	27.3	HIGH
04-Feb-93	06:10 AM	32.4	HIGH
04-Feb-93	12:25 PM	13.8	LOW
05-Feb-93	02:52 AM	11.2	LOW
05-Feb-93	02:24 PM	34.1	HIGH

Jan-93 SUMMARY

	HIGH	LOW
AVG.	24.3	10.8
MAX.	38.2	21.0
MIN.	8.8	-5.9

ENERGY WEST MINING COMPANY
EAST MOUNTAIN STATION
1993 WATER YEAR

DATE	TIME	TEMPERATURE (DEG. F)	
06-Feb-93	01:12 AM	16.4	LOW
06-Feb-93	04:04 PM	32.0	HIGH
07-Feb-93	01:55 AM	28.8	HIGH
07-Feb-93	04:16 PM	19.5	LOW
08-Feb-93	07:12 AM	19.5	LOW
08-Feb-93	08:18 PM	27.4	HIGH
09-Feb-93	11:28 PM	33.3	HIGH
09-Feb-93	02:05 PM	15.2	LOW
10-Feb-93	01:12 AM	30.1	HIGH
10-Feb-93	03:21 PM	15.2	LOW
11-Feb-93	02:04 AM	31.7	HIGH
11-Feb-93	12:07 PM	13.9	LOW
12-Feb-93	01:43 AM	26.4	HIGH
12-Feb-93	08:13 AM	10.0	LOW
13-Feb-93	04:31 AM	26.4	HIGH
13-Feb-93	05:33 PM	3.1	LOW
14-Feb-93	03:49 AM	25.3	HIGH
14-Feb-93	06:19 PM	1.8	LOW
15-Feb-93	06:27 AM	23.4	HIGH
15-Feb-93	01:45 PM	6.9	LOW
16-Feb-93	05:38 AM	23.1	HIGH
16-Feb-93	01:06 PM	10.5	LOW
17-Feb-93	06:21 AM	29.4	HIGH
17-Feb-93	03:20 PM	12.6	LOW
18-Feb-93	02:52 AM	29.8	HIGH
18-Feb-93	11:21 AM	20.2	LOW
19-Feb-93	04:20 AM	37.8	HIGH
19-Feb-93	03:59 PM	20.6	LOW
20-Feb-93	02:48 AM	29.3	HIGH
20-Feb-93	02:41 PM	7.9	LOW
21-Feb-93	04:13 AM	13.9	HIGH
21-Feb-93	11:51 AM	9.9	LOW
22-Feb-93	02:02 AM	19.9	HIGH
22-Feb-93	04:21 PM	10.9	LOW
23-Feb-93	12:43 AM	24.9	HIGH
23-Feb-93	01:55 PM	14.8	LOW
24-Feb-93	02:40 AM	29.1	HIGH
24-Feb-93	05:39 PM	6.2	LOW
25-Feb-93	03:47 AM	23.4	HIGH
25-Feb-93	09:21 AM	6.1	LOW
26-Feb-93	03:13 AM	27.0	HIGH
26-Feb-93	09:16 AM	14.8	LOW
27-Feb-93	12:37 AM	30.0	HIGH
27-Feb-93	07:12 AM	16.2	LOW
28-Feb-93	02:40 AM	32.5	HIGH
28-Feb-93	09:26 AM	21.2	LOW
01-Mar-93	08:30 AM	32.8	HIGH
01-Mar-93	04:00 PM	18.6	LOW
02-Mar-93	06:13 AM	35.5	HIGH
02-Mar-93	01:10 PM	12.6	LOW
03-Mar-93	12:01 AM	11.4	LOW

Feb-93 SUMMARY

	HIGH	LOW
AVG.	27.9	12.8
MAX.	37.8	21.2
MIN.	13.9	1.8

ENERGY WEST MINING COMPANY
EAST MOUNTAIN STATION
1993 WATER YEAR

DATE	TIME	TEMPERATURE (DEG. F)		
03-Mar-93	06:00 AM	39.3		HIGH
04-Mar-93	04:48 AM		17.0	LOW
04-Mar-93	03:36 PM	41.0		HIGH
05-Mar-93	12:20 AM	42.9		HIGH
05-Mar-93	10:58 AM		23.7	LOW
06-Mar-93	12:46 AM	45.3		HIGH
06-Mar-93	12:05 PM		26.8	LOW
07-Mar-93	02:52 AM		25.7	LOW
07-Mar-93	10:48 AM	49.8		HIGH
08-Mar-93	01:51 AM	48.3		HIGH
08-Mar-93	02:43 PM		24.7	LOW
09-Mar-93	04:16 AM	44.1		HIGH
09-Mar-93	02:41 PM		23.6	LOW
10-Mar-93	01:12 AM		24.6	LOW
10-Mar-93	02:24 PM	45.1		HIGH
11-Mar-93	02:20 AM	32.1		HIGH
11-Mar-93	05:05 PM		12.1	LOW
12-Mar-93	04:17 AM	30.2		HIGH
12-Mar-93	02:45 PM		9.1	LOW
13-Mar-93	02:24 AM		17.4	LOW
13-Mar-93	05:06 AM	35.0		HIGH
14-Mar-93	04:31 AM	39.2		HIGH
14-Mar-93	04:48 PM		22.5	LOW
15-Mar-93	07:25 AM	37.4		HIGH
15-Mar-93	05:38 PM		25.9	LOW
16-Mar-93	06:11 AM	40.8		HIGH
16-Mar-93	02:01 PM		28.3	LOW
17-Mar-93	04:35 AM	47.1		HIGH
17-Mar-93	03:03 PM		26.6	LOW
18-Mar-93	03:15 AM	38.2		HIGH
18-Mar-93	02:02 PM		22.7	LOW
19-Mar-93	04:51 AM	42.5		HIGH
19-Mar-93	04:00 PM		23.8	LOW
20-Mar-93	04:39 AM	45.4		HIGH
20-Mar-93	03:44 PM		24.8	LOW
21-Mar-93	03:59 AM	45.1		HIGH
21-Mar-93	04:23 PM		23.6	LOW
22-Mar-93	06:44 AM	47.7		HIGH
22-Mar-93	03:54 PM		28.1	LOW
23-Mar-93	07:41 AM	51.0		HIGH
23-Mar-93	03:34 PM		30.5	LOW
24-Mar-93	03:07 AM	48.8		HIGH
24-Mar-93	03:56 PM		28.3	LOW
25-Mar-93	02:48 AM	45.7		HIGH
25-Mar-93	04:20 PM		29.9	LOW
26-Mar-93	01:11 AM	42.7		HIGH
26-Mar-93	12:11 PM		26.3	LOW
27-Mar-93	02:23 AM	36.5		HIGH
27-Mar-93	03:18 PM		23.3	LOW
28-Mar-93	12:23 AM	38.2		HIGH
28-Mar-93	03:59 PM		22.6	LOW
29-Mar-93	01:24 AM	38.9		HIGH

Mar-93 SUMMARY

ENERGY WEST MINING COMPANY
EAST MOUNTAIN STATION
1993 WATER YEAR

DATE	TIME	TEMPERATURE (DEG. F)		
29-Mar-93	04:27 PM		23.6	LOW
30-Mar-93	04:09 AM	32.3		HIGH
30-Mar-93	04:11 PM		18.4	LOW
31-Mar-93	05:06 AM	43.7		HIGH
31-Mar-93	01:57 PM		24.3	LOW
01-Apr-93	12:07 AM		27.6	LOW
01-Apr-93	01:20 PM	42.6		HIGH
02-Apr-93	07:00 AM		18.8	LOW
02-Apr-93	03:10 PM	28.6		HIGH
03-Apr-93	11:14 AM		21.6	LOW
03-Apr-93	05:31 PM	46.9		HIGH
04-Apr-93	12:51 PM		26.6	LOW
04-Apr-93	07:52 PM	47.1		HIGH
05-Apr-93	06:27 PM	40.2		HIGH
05-Apr-93	11:31 PM		21.3	LOW
06-Apr-93	08:35 PM	27.5		HIGH
06-Apr-93	11:02 PM		18.4	LOW
07-Apr-93	03:54 PM		18.4	LOW
07-Apr-93	07:42 PM	35.7		HIGH
08-Apr-93	01:38 PM		19.8	LOW
08-Apr-93	07:47 PM	48.3		HIGH
09-Apr-93	05:44 PM	50.7		HIGH
09-Apr-93	09:50 PM		26.1	LOW
10-Apr-93	12:12 PM		24.9	LOW
10-Apr-93	05:49 PM	45.5		HIGH
11-Apr-93	12:03 PM	41.8		HIGH
11-Apr-93	11:58 PM		20.6	LOW
12-Apr-93	10:45 AM	27.5		HIGH
12-Apr-93	06:41 PM		13.2	LOW
13-Apr-93	06:30 AM		14.7	LOW
13-Apr-93	12:07 PM	35.1		HIGH
14-Apr-93	02:15 AM		16.9	LOW
14-Apr-93	08:31 AM	41.2		HIGH
15-Apr-93	03:16 AM		24.3	LOW
15-Apr-93	06:22 AM	41.6		HIGH
16-Apr-93	09:28 AM	41.7		HIGH
16-Apr-93	06:22 PM		26.2	LOW
17-Apr-93	07:32 AM	49.0		HIGH
17-Apr-93	06:32 PM		36.1	LOW
18-Apr-93	06:16 AM	36.5		HIGH
18-Apr-93	03:26 PM		17.1	LOW
19-Apr-93	08:03 AM	36.7		HIGH
19-Apr-93	03:40 PM		18.7	LOW
20-Apr-93	02:03 AM		19.5	LOW
20-Apr-93	09:13 AM	48.8		HIGH
21-Apr-93	01:55 AM		29.6	LOW
21-Apr-93	07:30 AM	53.6		HIGH
22-Apr-93	03:09 AM	60.4		HIGH
22-Apr-93	12:29 PM		30.9	LOW
23-Apr-93	02:18 AM	46.2		HIGH
23-Apr-93	11:19 AM		25.1	LOW

	HIGH	LOW
AVG.	41.4	22.6
MAX.	51.0	30.5
MIN.	30.2	9.1

ENERGY WEST MINING COMPANY
EAST MOUNTAIN STATION
1993 WATER YEAR

DATE	TIME	TEMPERATURE (DEG. F)		
24-Apr-93	12:14 AM	37.3		HIGH
24-Apr-93	09:04 AM		22.8	LOW
25-Apr-93	02:02 AM	52.9		HIGH
25-Apr-93	12:15 PM		33.2	LOW
26-Apr-93	01:12 AM	50.5		HIGH
26-Apr-93	11:43 AM		28.9	LOW
27-Apr-93	03:36 AM	53.5		HIGH
27-Apr-93	11:39 AM		29.4	LOW
28-Apr-93	12:14 AM		28.0	LOW
28-Apr-93	04:55 AM	53.9		HIGH
29-Apr-93	12:28 AM		32.7	LOW
29-Apr-93	03:11 AM	53.0		HIGH
30-Apr-93	04:04 AM	43.8		HIGH
30-Apr-93	12:02 PM		23.3	LOW
01-May-93	04:48 AM		24.4	LOW
01-May-93	05:02 AM	46.3		HIGH
02-May-93	12:57 AM		31.3	LOW
02-May-93	01:26 PM	54.6		HIGH
03-May-93	12:50 AM		36.4	LOW
03-May-93	03:25 PM	58.4		HIGH
04-May-93	03:08 PM	30.9		HIGH
04-May-93	10:47 PM		21.6	LOW
05-May-93	05:25 PM	37.4		HIGH
05-May-93	11:45 PM		23.9	LOW
06-May-93	12:42 PM		21.8	LOW
06-May-93	07:33 PM	43.5		HIGH
07-May-93	05:38 PM	38.6		HIGH
07-May-93	11:52 PM		23.7	LOW
08-May-93	03:18 PM	29.3		HIGH
08-May-93	11:55 PM		22.5	LOW
09-May-93	02:18 PM		21.9	LOW
09-May-93	10:04 PM	50.2		HIGH
10-May-93	01:05 PM		31.1	LOW
10-May-93	08:38 PM	55.9		HIGH
11-May-93	12:17 PM		39.0	LOW
11-May-93	08:19 PM	64.1		HIGH
12-May-93	10:33 AM		42.9	LOW
12-May-93	04:57 PM	67.8		HIGH
13-May-93	08:30 AM		45.0	LOW
13-May-93	05:10 PM	61.8		HIGH
14-May-93	10:07 AM	63.9		HIGH
14-May-93	08:53 PM		42.8	LOW
15-May-93	08:51 AM	62.8		HIGH
15-May-93	07:26 PM		40.7	LOW
16-May-93	06:50 AM	55.5		HIGH
16-May-93	05:12 PM		38.0	LOW
17-May-93	06:08 AM	55.3		HIGH
17-May-93	05:09 PM		38.5	LOW
18-May-93	07:49 AM	60.7		HIGH
18-May-93	05:44 PM		42.1	LOW
19-May-93	07:25 AM	66.5		HIGH

Apr-93 SUMMARY

	HIGH	LOW
AVG.	43.9	23.8
MAX.	60.4	36.1
MIN.	27.5	13.2

ENERGY WEST MINING COMPANY
EAST MOUNTAIN STATION
1993 WATER YEAR

DATE	TIME	TEMPERATURE (DEG. F)	
19-May-93	03:47 PM	46.1	LOW
20-May-93	05:59 AM	65.2	HIGH
20-May-93	03:28 PM	42.7	LOW
21-May-93	12:01 AM	43.0	LOW
21-May-93	06:19 AM	68.9	HIGH
22-May-93	01:48 AM	57.0	HIGH
22-May-93	12:44 PM	37.4	LOW
23-May-93	12:17 AM	40.4	LOW
23-May-93	02:33 AM	63.4	HIGH
24-May-93	12:13 AM	68.9	HIGH
24-May-93	11:36 AM	44.4	LOW
25-May-93	02:23 AM	71.7	HIGH
25-May-93	12:02 PM	45.4	LOW
26-May-93	03:36 AM	69.9	HIGH
26-May-93	01:24 PM	43.3	LOW
27-May-93	01:16 AM	63.3	HIGH
27-May-93	10:06 AM	37.8	LOW
28-May-93	12:05 AM	58.4	HIGH
28-May-93	12:54 PM	38.7	LOW
29-May-93	04:04 AM	63.2	HIGH
29-May-93	01:32 PM	44.3	LOW
30-May-93	07:21 AM	68.8	HIGH
30-May-93	03:12 PM	46.8	LOW
31-May-93	07:15 AM	67.9	HIGH
31-May-93	04:23 PM	43.7	LOW
01-Jun-93	12:02 AM	43.1	LOW
01-Jun-93	08:07 AM	60.6	HIGH
02-Jun-93	04:16 PM	55.6	HIGH
02-Jun-93	11:57 PM	30.5	LOW
03-Jun-93	12:12 AM	30.1	LOW
03-Jun-93	09:36 AM	41.0	HIGH
04-Jun-93	07:57 AM	28.9	LOW
04-Jun-93	07:25 PM	50.6	HIGH
05-Jun-93	05:48 AM	37.6	LOW
05-Jun-93	02:52 PM	48.9	HIGH
06-Jun-93	02:01 PM	48.9	HIGH
06-Jun-93	06:37 PM	24.6	LOW
07-Jun-93	12:34 PM	42.3	HIGH
07-Jun-93	05:45 PM	30.5	LOW
08-Jun-93	03:18 AM	29.7	LOW
08-Jun-93	11:14 AM	47.3	HIGH
09-Jun-93	02:17 AM	32.1	LOW
09-Jun-93	10:45 AM	59.6	HIGH
10-Jun-93	01:24 AM	37.5	LOW
10-Jun-93	09:16 AM	65.7	HIGH
11-Jun-93	01:28 AM	45.5	LOW
11-Jun-93	11:01 AM	66.1	HIGH
12-Jun-93	08:07 AM	61.5	HIGH
12-Jun-93	03:00 PM	43.7	LOW
13-Jun-93	12:41 AM	41.5	LOW
13-Jun-93	12:38 PM	70.0	HIGH

May-93 SUMMARY

	HIGH	LOW
AVG.	57.8	36.8
MAX.	71.7	[illegible]8
MIN.	29.3	[illegible]6

ENERGY WEST MINING COMPANY
EAST MOUNTAIN STATION
1993 WATER YEAR

DATE	TIME	TEMPERATURE (DEG. F)		
14-Jun-93	03:47 AM		49.9	LOW
14-Jun-93	12:59 PM	77.5		HIGH
15-Jun-93	11:09 AM	73.1		HIGH
15-Jun-93	07:29 PM		52.0	LOW
16-Jun-93	11:46 AM	68.2		HIGH
16-Jun-93	03:13 PM		41.8	LOW
17-Jun-93	04:15 AM		31.3	LOW
17-Jun-93	09:39 AM	52.7		HIGH
18-Jun-93	01:49 AM		33.3	LOW
18-Jun-93	07:54 AM	52.5		HIGH
19-Jun-93	12:17 AM		38.6	LOW
19-Jun-93	06:46 AM	64.8		HIGH
20-Jun-93	12:30 AM		45.6	LOW
20-Jun-93	05:58 AM	70.2		HIGH
21-Jun-93	08:26 AM	65.8		HIGH
21-Jun-93	11:23 AM		44.3	LOW
22-Jun-93	12:17 AM		42.5	LOW
22-Jun-93	08:18 AM	64.4		HIGH
23-Jun-93	03:27 AM	53.6		HIGH
23-Jun-93	01:16 PM		31.5	LOW
24-Jun-93	12:24 AM		31.0	LOW
24-Jun-93	09:25 AM	61.3		HIGH
25-Jun-93	12:43 AM		39.7	LOW
25-Jun-93	10:44 AM	72.2		HIGH
26-Jun-93	12:17 AM		49.6	LOW
26-Jun-93	08:13 AM	76.3		HIGH
27-Jun-93	12:33 AM		54.8	LOW
27-Jun-93	09:44 AM	78.1		HIGH
28-Jun-93	09:18 AM		74.1	LOW
28-Jun-93	03:10 PM	45.5		HIGH
29-Jun-93	01:31 AM		43.6	LOW
29-Jun-93	12:20 PM	70.1		HIGH
30-Jun-93	12:18 AM		44.8	LOW
30-Jun-93	10:31 AM	70.7		HIGH
01-Jul-93	02:25 AM		48.9	LOW
01-Jul-93	11:00 AM	73.0		HIGH
02-Jul-93	04:54 PM	78.3		HIGH
02-Jul-93	11:58 PM		39.0	LOW
03-Jul-93	04:35 PM	53.2		HIGH
03-Jul-93	10:56 PM		38.9	LOW
04-Jul-93	03:32 PM	48.5		HIGH
04-Jul-93	11:28 PM		33.5	LOW
05-Jul-93	01:08 PM		41.2	LOW
05-Jul-93	08:44 PM	64.2		HIGH
06-Jul-93	08:05 PM	66.6		HIGH
06-Jul-93	11:39 PM		45.7	LOW
07-Jul-93	05:44 PM	74.3		HIGH
07-Jul-93	11:30 PM		48.1	LOW
08-Jul-93	08:26 AM		48.4	LOW
08-Jul-93	01:57 PM	69.7		HIGH
09-Jul-93	07:54 AM		50.5	LOW

Jun-93 SUMMARY

	HIGH	LOW
AVG.	61.2	40.1
MAX.	78.1	74.1
MIN.	41.0	24.6

ENERGY WEST MINING COMPANY
EAST MOUNTAIN STATION
1993 WATER YEAR

DATE	TIME	TEMPERATURE (DEG. F)		
09-Jul-93	12:45 PM	74.2		HIGH
10-Jul-93	10:41 AM	76.4		HIGH
10-Jul-93	08:17 PM		55.7	LOW
11-Jul-93	03:42 AM		55.0	LOW
11-Jul-93	08:40 AM	78.2		HIGH
12-Jul-93	08:34 AM	75.0		HIGH
12-Jul-93	07:49 PM		52.4	LOW
13-Jul-93	08:39 AM	74.1		HIGH
13-Jul-93	07:52 PM		53.7	LOW
14-Jul-93	10:45 AM	76.2		HIGH
14-Jul-93	08:11 PM		50.7	LOW
15-Jul-93	08:58 AM	77.0		HIGH
15-Jul-93	06:47 PM		47.0	LOW
16-Jul-93	02:19 AM		45.4	LOW
16-Jul-93	09:59 AM	71.5		HIGH
17-Jul-93	03:40 AM		47.9	LOW
17-Jul-93	10:14 AM	72.0		HIGH
18-Jul-93	10:09 AM	73.7		HIGH
18-Jul-93	07:54 PM		48.1	LOW
19-Jul-93	06:56 AM	74.7		HIGH
19-Jul-93	06:06 PM		48.8	LOW
20-Jul-93	02:26 AM		48.8	LOW
20-Jul-93	08:26 AM	77.0		HIGH
21-Jul-93	07:39 AM	70.2		HIGH
21-Jul-93	05:29 PM		48.1	LOW
22-Jul-93	03:18 AM	64.3		HIGH
22-Jul-93	04:12 PM		50.2	LOW
23-Jul-93	07:22 AM	61.5		HIGH
23-Jul-93	02:37 PM		37.3	LOW
24-Jul-93	04:47 AM	60.6		HIGH
24-Jul-93	03:48 PM		44.1	LOW
25-Jul-93	12:01 AM		50.4	LOW
25-Jul-93	07:58 AM	72.5		HIGH
26-Jul-93	03:47 AM	62.7		HIGH
26-Jul-93	03:32 PM		43.5	LOW
27-Jul-93	05:03 AM		49.1	LOW
27-Jul-93	08:07 AM	70.9		HIGH
28-Jul-93	12:57 AM		53.4	LOW
28-Jul-93	07:36 AM	80.0		HIGH
29-Jul-93	02:33 AM	74.2		HIGH
29-Jul-93	02:09 PM		50.3	LOW
30-Jul-93	06:04 AM	78.5		HIGH
30-Jul-93	03:10 PM		56.3	LOW
31-Jul-93	05:16 AM	79.7		HIGH
31-Jul-93	03:44 PM		54.4	LOW
01-Aug-93	09:06 PM		53.5	LOW
01-Aug-93	05:52 AM	77.3		HIGH
02-Aug-93	10:15 AM	76.8		HIGH
02-Aug-93	05:26 PM		59.3	LOW
03-Aug-93	03:09 AM		54.2	LOW
03-Aug-93	12:08 PM	70.6		HIGH

Jul-93 SUMMARY

	HIGH	LOW
AVG.	71.1	47.9
MAX.	80.0	56.3
MIN.	48.5	33.5

ENERGY WEST MINING COMPANY
EAST MOUNTAIN STATION
1993 WATER YEAR

DATE	TIME	TEMPERATURE (DEG. F)		
04-Aug-93	08:26 AM	67.9		HIGH
04-Aug-93	02:39 PM		44.8	LOW
05-Aug-93	01:28 AM		43.4	LOW
05-Aug-93	09:00 AM	69.7		HIGH
06-Aug-93	03:23 AM		45.1	LOW
06-Aug-93	09:25 AM	69.9		HIGH
07-Aug-93	02:34 AM	67.6		HIGH
07-Aug-93	11:20 AM		46.5	LOW
08-Aug-93	02:39 AM	67.5		HIGH
08-Aug-93	09:50 AM		42.3	LOW
09-Aug-93	12:23 AM		42.4	LOW
09-Aug-93	07:57 AM	65.1		HIGH
10-Aug-93	02:54 AM	55.2		HIGH
10-Aug-93	01:08 PM		42.9	LOW
11-Aug-93	01:04 AM		41.5	LOW
11-Aug-93	11:22 AM	66.4		HIGH
12-Aug-93	06:57 AM	73.1		HIGH
12-Aug-93	03:04 PM		46.3	LOW
13-Aug-93	08:25 AM	75.4		HIGH
13-Aug-93	03:39 PM		43.0	LOW
14-Aug-93	04:39 AM	69.6		HIGH
14-Aug-93	05:40 PM		41.4	LOW
15-Aug-93	08:33 AM	69.5		HIGH
15-Aug-93	05:30 PM		42.1	LOW
16-Aug-93	09:25 AM	71.6		HIGH
16-Aug-93	05:13 PM		46.1	LOW
17-Aug-93	09:13 AM	73.8		HIGH
17-Aug-93	03:51 PM		48.6	LOW
18-Aug-93	12:54 AM		48.5	LOW
18-Aug-93	06:30 AM	72.8		HIGH
19-Aug-93	01:12 AM	64.3		HIGH
19-Aug-93	12:36 PM		40.8	LOW
20-Aug-93	12:36 AM	63.4		HIGH
20-Aug-93	11:12 AM		43.0	LOW
21-Aug-93	12:47 AM	64.6		HIGH
21-Aug-93	09:52 AM		41.8	LOW
22-Aug-93	01:42 AM	61.9		HIGH
22-Aug-93	07:11 AM		43.6	LOW
23-Aug-93	01:38 AM	73.3		HIGH
23-Aug-93	10:24 AM		50.1	LOW
24-Aug-93	02:42 AM	74.9		HIGH
24-Aug-93	11:25 AM		50.6	LOW
25-Aug-93	12:01 AM	64.6		HIGH
25-Aug-93	06:43 AM		38.2	LOW
26-Aug-93	12:18 AM	58.0		HIGH
26-Aug-93	10:46 AM		43.1	LOW
27-Aug-93	12:00 AM	62.8		HIGH
27-Aug-93	11:39 AM		43.0	LOW
28-Aug-93	04:52 AM	68.5		HIGH
28-Aug-93	12:15 PM		46.0	LOW
29-Aug-93	03:10 AM	68.4		HIGH
29-Aug-93	01:41 PM		39.9	LOW

Aug-93 SUMMARY

ENERGY WEST MINING COMPANY
EAST MOUNTAIN STATION
1993 WATER YEAR

DATE	TIME	TEMPERATURE (DEG. F)		
30-Aug-93	12:30 AM	56.9		HIGH
30-Aug-93	08:51 AM		39.7	LOW
31-Aug-93	02:30 AM	61.5		HIGH
31-Aug-93	12:10 PM		42.4	LOW
01-Sep-93	04:58 AM	63.6		HIGH
01-Sep-93	01:41 PM		44.4	LOW
02-Sep-93	01:52 AM		44.9	LOW
02-Sep-93	02:24 PM	66.8		HIGH
03-Sep-93	11:39 AM		47.4	LOW
03-Sep-93	05:18 PM	70.6		HIGH
04-Sep-93	07:00 PM	75.5		HIGH
04-Sep-93	01:11 AM		47.0	LOW
05-Sep-93	06:53 PM	71.7		HIGH
05-Sep-93	11:52 PM		46.5	LOW
06-Sep-93	01:04 PM		46.0	LOW
06-Sep-93	05:04 PM	67.8		HIGH
07-Sep-93	01:20 PM	72.2		HIGH
07-Sep-93	09:56 PM		52.2	LOW
08-Sep-93	08:29 AM		44.7	LOW
08-Sep-93	02:34 PM	73.4		HIGH
09-Sep-93	06:44 AM		47.8	LOW
09-Sep-93	01:06 PM	74.7		HIGH
10-Sep-93	10:49 AM	74.3		HIGH
10-Sep-93	07:05 PM		52.4	LOW
11-Sep-93	04:59 AM		52.5	LOW
11-Sep-93	09:39 AM	77.6		HIGH
12-Sep-93	09:34 AM	66.2		HIGH
12-Sep-93	04:03 PM		33.8	LOW
13-Sep-93	06:09 AM	46.1		HIGH
13-Sep-93	02:36 PM		26.8	LOW
14-Sep-93	02:15 AM		27.3	LOW
14-Sep-93	09:39 AM	57.1		HIGH
15-Sep-93	12:38 AM		34.8	LOW
15-Sep-93	09:52 AM	64.3		HIGH
16-Sep-93	06:01 AM	56.0		HIGH
16-Sep-93	06:20 PM		36.8	LOW
17-Sep-93	08:16 AM	50.1		HIGH
17-Sep-93	09:41 PM		35.1	LOW
18-Sep-93	09:52 AM	46.6		HIGH
18-Sep-93	06:43 PM		31.6	LOW
19-Sep-93	12:05 PM	56.2		HIGH
19-Sep-93	06:40 PM		35.7	LOW
20-Sep-93	03:56 AM		35.9	LOW
20-Sep-93	09:36 AM	65.5		HIGH
21-Sep-93	05:03 AM		44.6	LOW
21-Sep-93	10:23 AM	67.4		HIGH
22-Sep-93	04:29 AM		43.6	LOW
22-Sep-93	10:18 AM	70.3		HIGH
23-Sep-93	07:29 AM	68.3		HIGH
23-Sep-93	03:22 PM		39.1	LOW
24-Sep-93	03:17 AM	52.6		HIGH

	HIGH	LOW
AVG.	67.8	45.0
MAX.	77.3	59.3
MIN.	55.2	38.2

ENERGY WEST MINING COMPANY
EAST MOUNTAIN STATION
1993 WATER YEAR

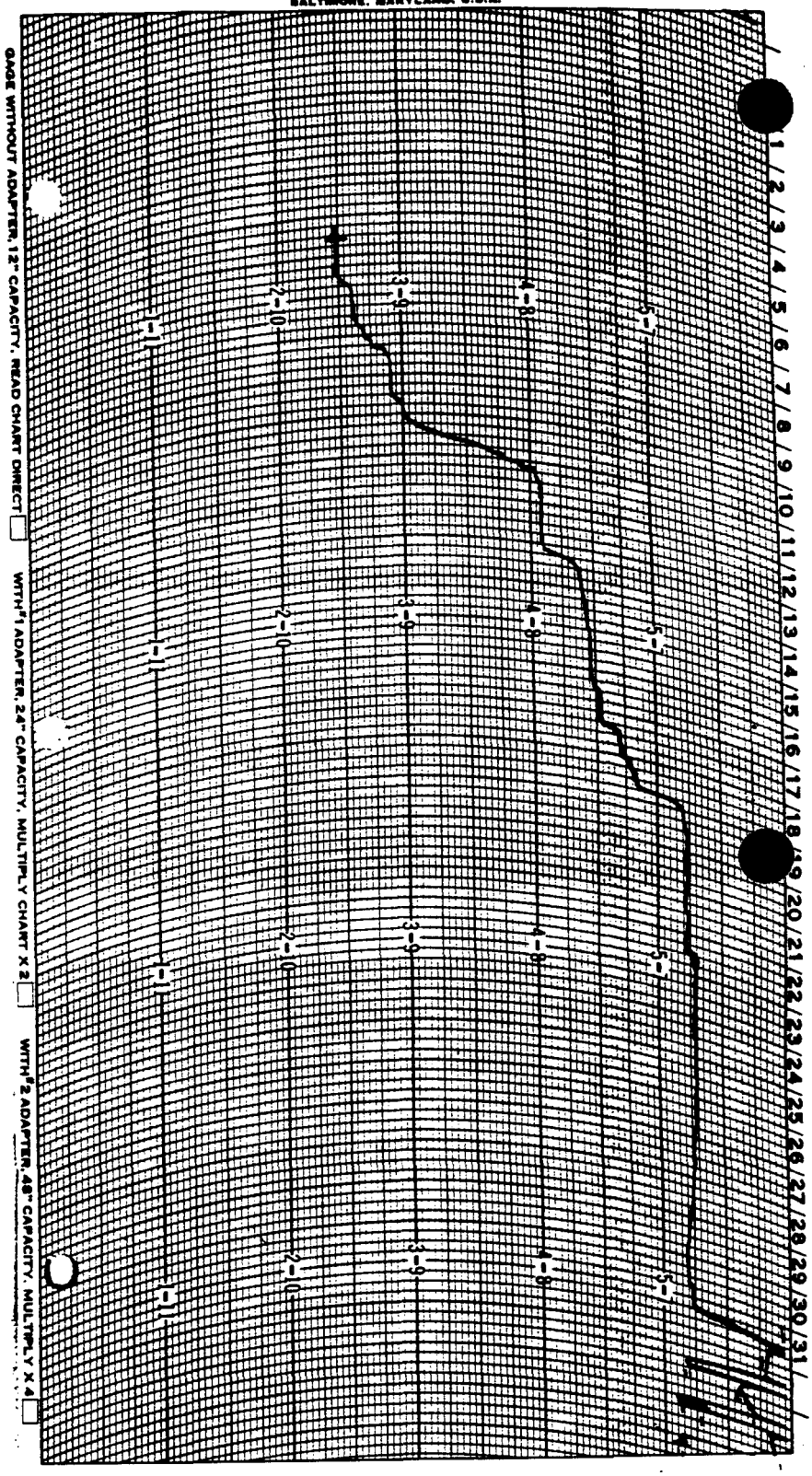
DATE	TIME	TEMPERATURE (DEG. F)		
24-Sep-93	12:40 PM		35.7	LOW
25-Sep-93	09:57 PM		36.0	LOW
25-Sep-93	03:35 AM	63.0		HIGH
26-Sep-93	08:13 PM		37.2	LOW
26-Sep-93	04:49 AM	63.6		HIGH
27-Sep-93	06:19 AM		43.8	LOW
27-Sep-93	09:24 PM	68.8		HIGH
28-Sep-93	07:07 AM		44.7	LOW
28-Sep-93	11:50 PM	69.7		HIGH
29-Sep-93	02:57 AM		46.6	LOW
29-Sep-93	03:27 PM	69.8		HIGH
30-Sep-93	10:16 PM		49.3	LOW
30-Sep-93	05:36 AM	64.3		HIGH

Sep-93 SUMMARY

	HIGH	LOW
AVG.	65.1	41.5
MAX.	77.6	52.5
MIN.	46.1	26.8

12-INCH DUAL TRAVERSE MONTHLY-861 HRS.
UNIVERSAL RAIN GAGE

BELFORT INSTRUMENT COMPANY
BALTIMORE, MARYLAND, U.S.A.



OBSERVER Housekeeper ON 12:58 A.M. P.M. 1-5 19 93

STATION _____ OFF 15:05 A.M. P.M. 2-3 19 93

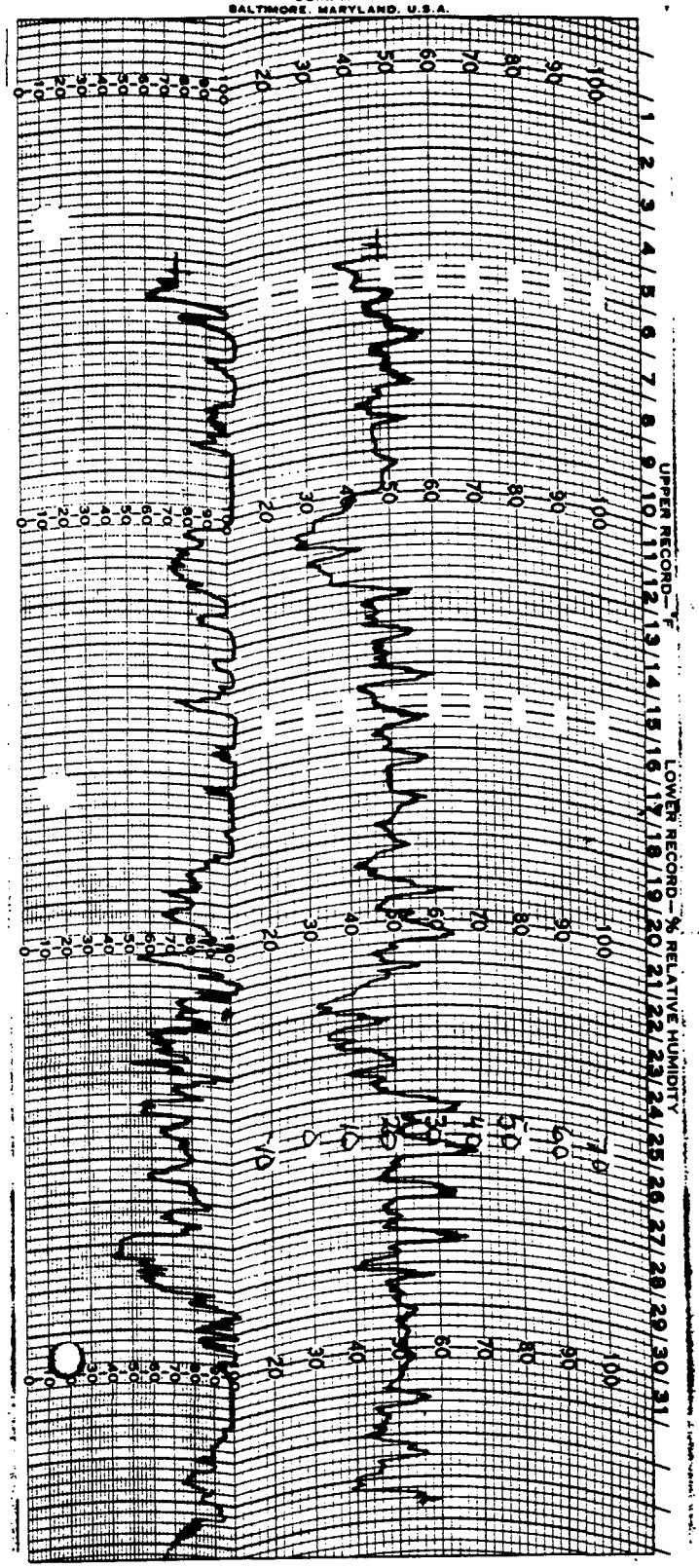
HYGROTHERMOGRAPH

CHART NO. 15627

MONTHLY-[redacted] HRS.

BELFORT INSTRUMENT COMPANY

BALTIMORE, MARYLAND, U.S.A.

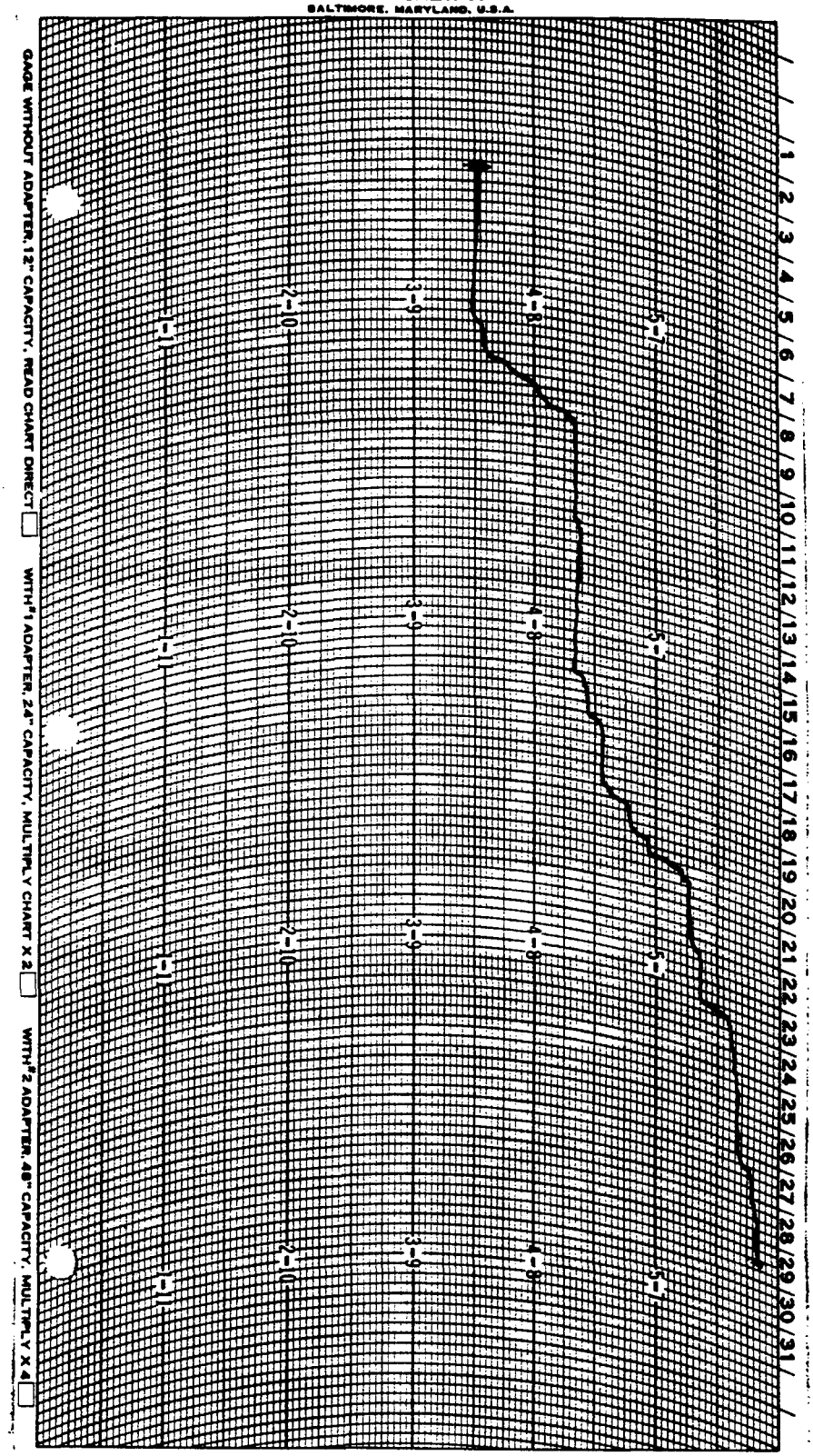


OBSERVER Houstemaker ON [redacted] A.M. P.M. 1-5 19 93

STATION _____ OFF 15:00 A.M. P.M. 2-3 1993

12-INCH DUAL TRAVERSE MONTHLY-861 HRS.
UNIVERSAL RAIN GAGE

BELFORT INSTRUMENT COMPANY
BALTIMORE, MARYLAND, U.S.A.



OBSERVER Housteeper ON 15:10 A.M. P.M. 2-3 19 93

STATION _____ OFF 1305 A.M. P.M. 3-1 19 93

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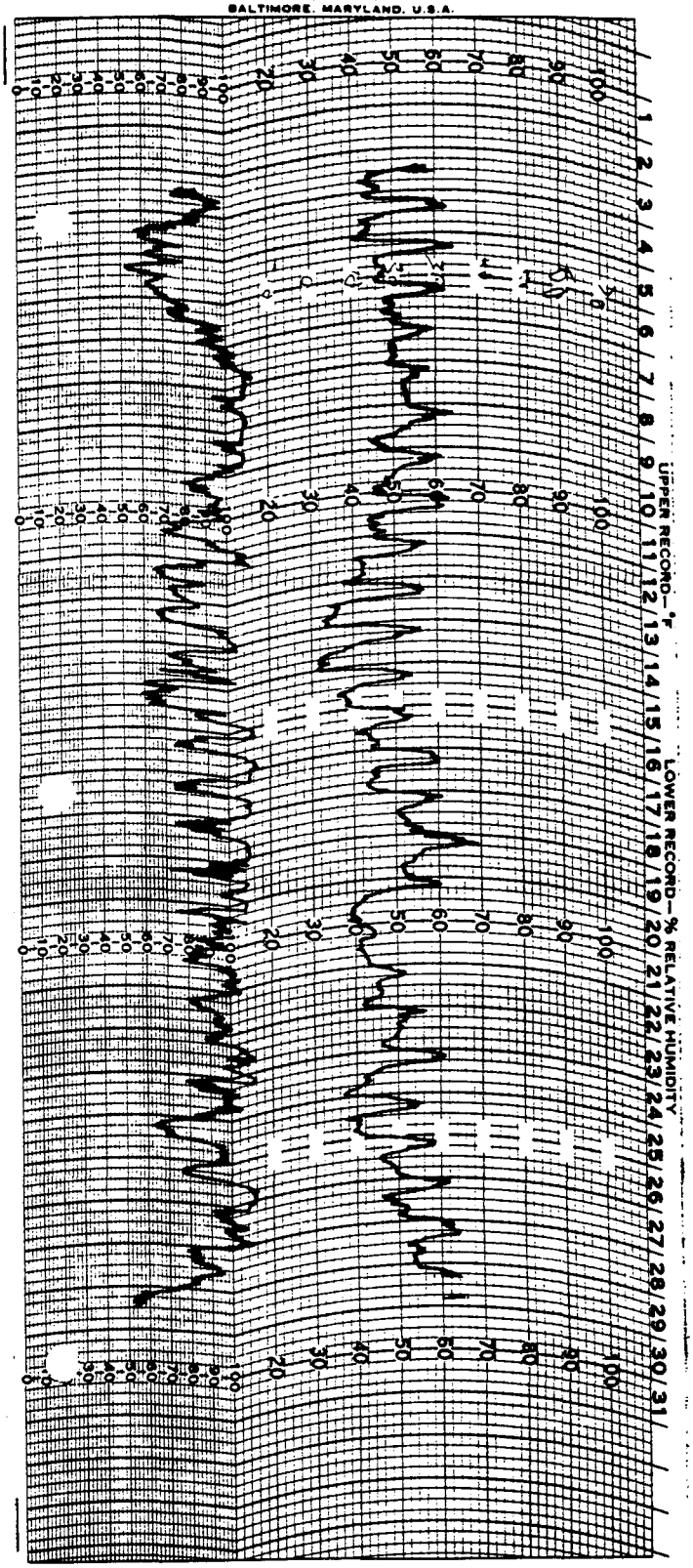
HYGROTHERMOGRAPH
CHART NO. 15627
MONTHLY-861 HRS.
BELFORT INSTRUMENT COMPANY
BALTIMORE, MARYLAND, U.S.A.



OBSERVER Housekeeper ON 15:00 A.M. P.M. 2-3 1993

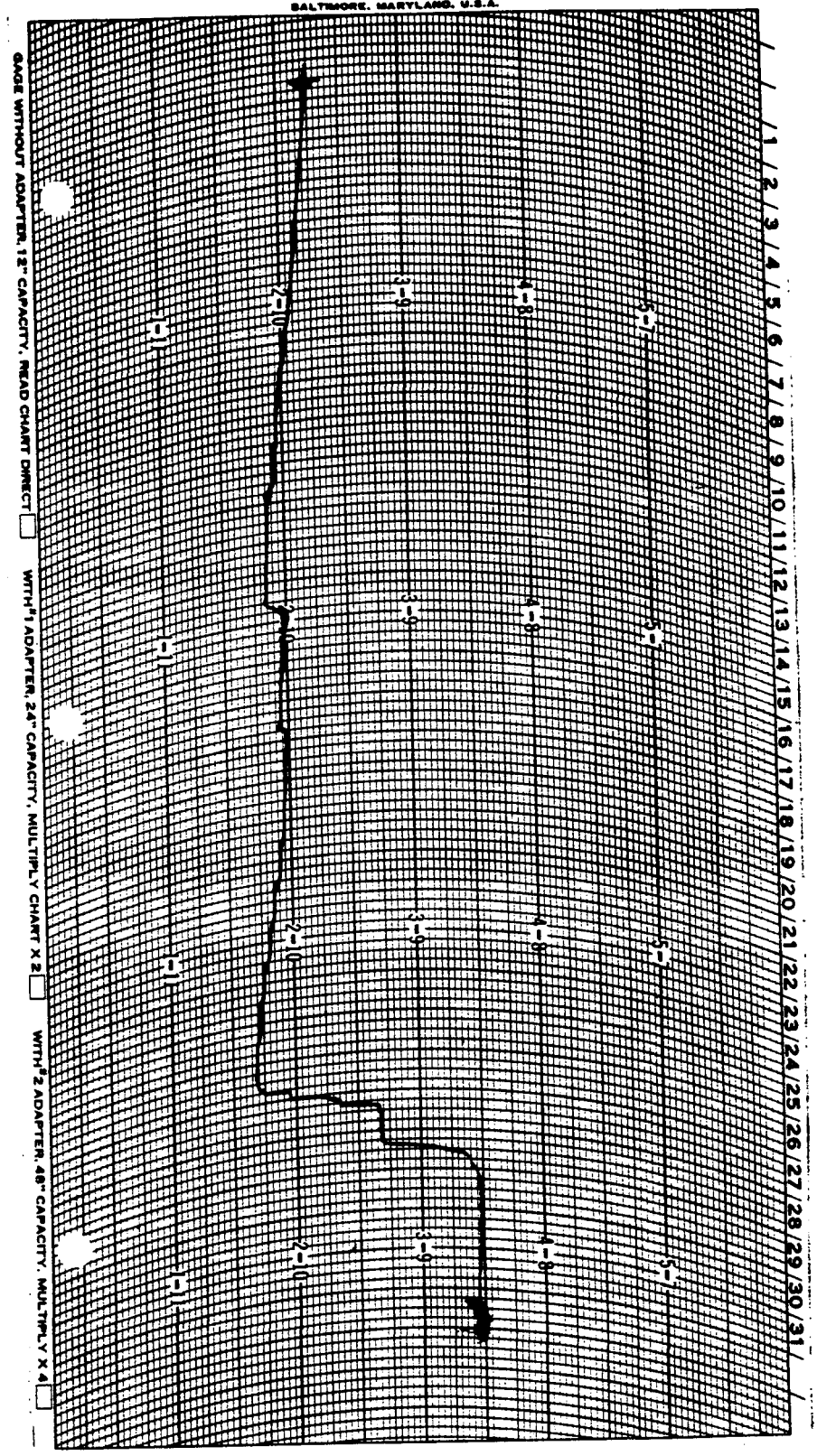
STATION _____ OFF 1252 A.M. P.M. 3-1 1993

12-INCH DUAL TRAVERSE MONTHLY-861 HRS.

UNIVERSAL RAIN GAGE

BELFORT INSTRUMENT COMPANY

BALTIMORE, MARYLAND, U.S.A.



GAGE WITHOUT ADAPTER, 12" CAPACITY, READ CHART DIRECT ☐ WITH #1 ADAPTER, 24" CAPACITY, MULTIPLY CHART X 2 ☐ WITH #2 ADAPTER, 48" CAPACITY, MULTIPLY X 4 ☐

OBSERVER Houstkeeper

STATION

ON 1322 A.M. P.M. 3-1 19 93

OFF 1040 A.M. P.M. 4-1 19 93

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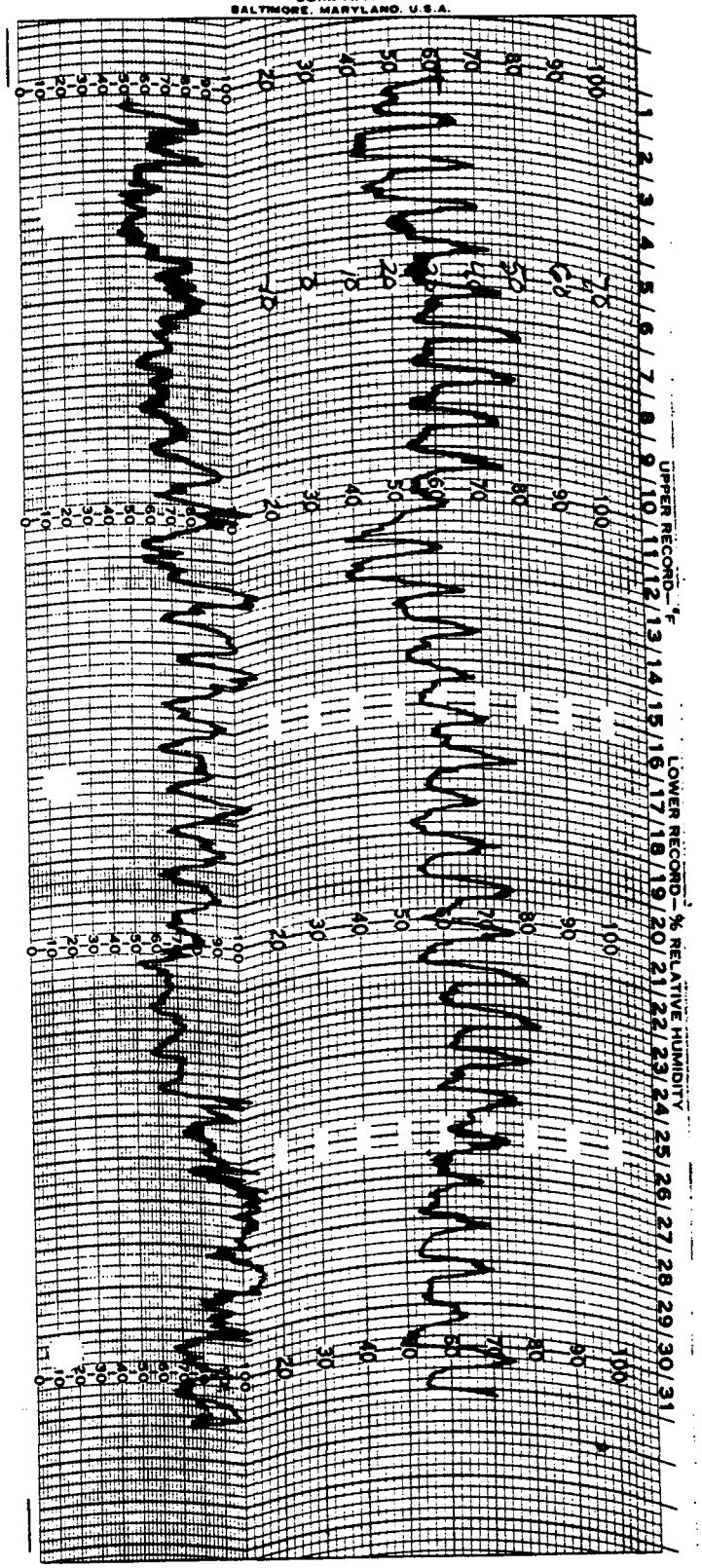
HYGROTHERMOGRAPH
CHART NO. 15627
MONTHLY-861 HRS.
BELFORT INSTRUMENT COMPANY
BALTIMORE, MARYLAND, U.S.A.



OBSERVER Housekeeper ON 12:53 A.M. (P.M.) 3-1 1992

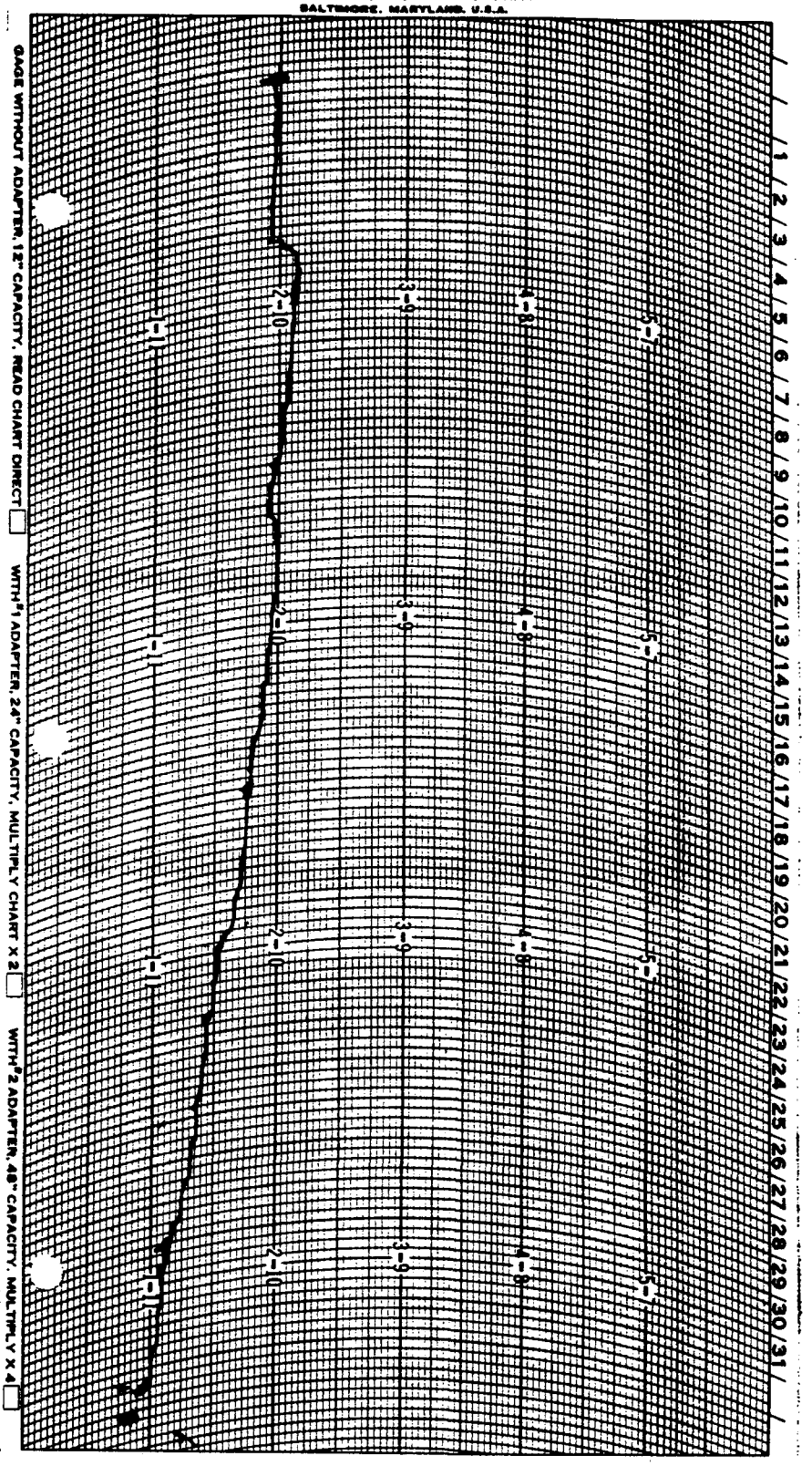
STATION _____ OFF 1050 A.M. (P.M.) 4-1 1992

12-INCH DUAL TRAVERSE MONTHLY-861 HRS.

UNIVERSAL RAIN GAGE

BELFORT INSTRUMENT COMPANY

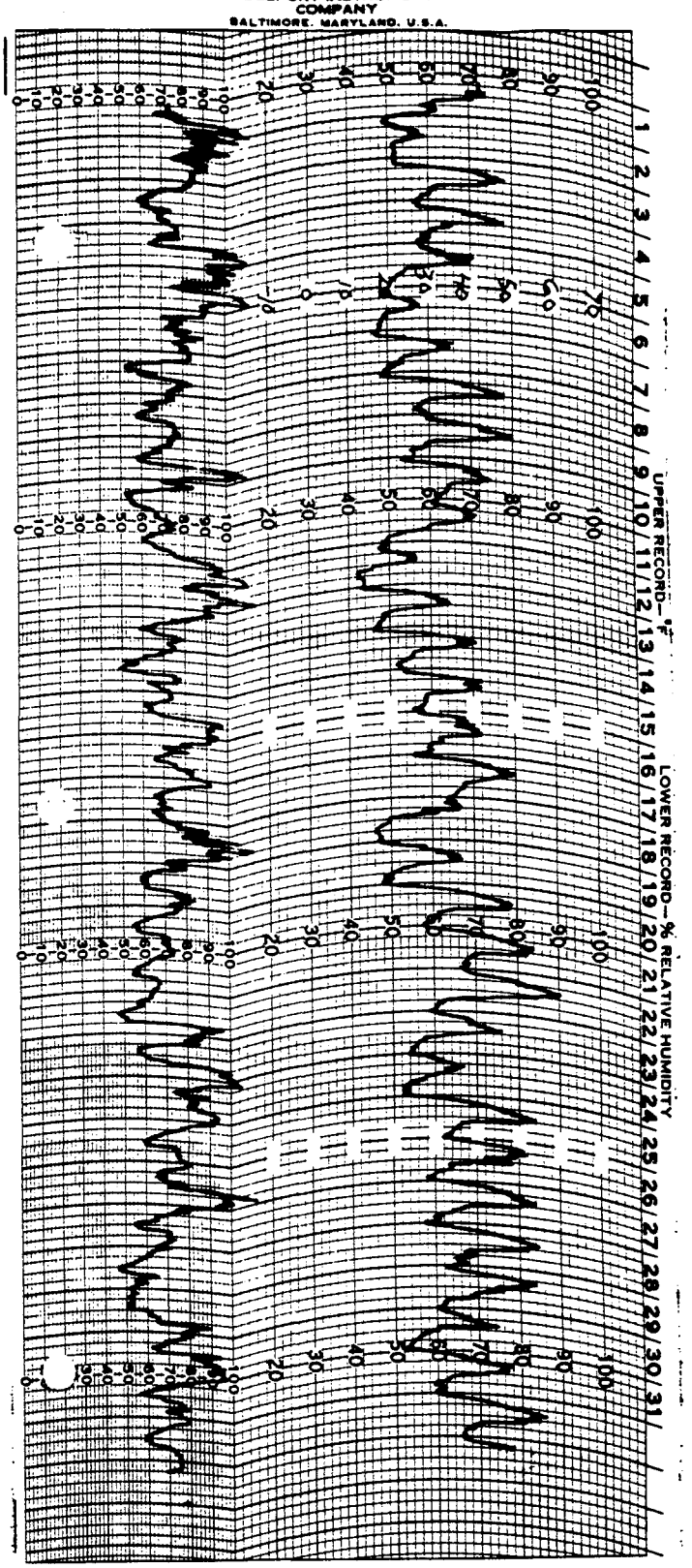
BALTIMORE, MARYLAND, U.S.A.



OBSERVER Housekeeper ON 1042 A.M. P.M. 4-4 19 93

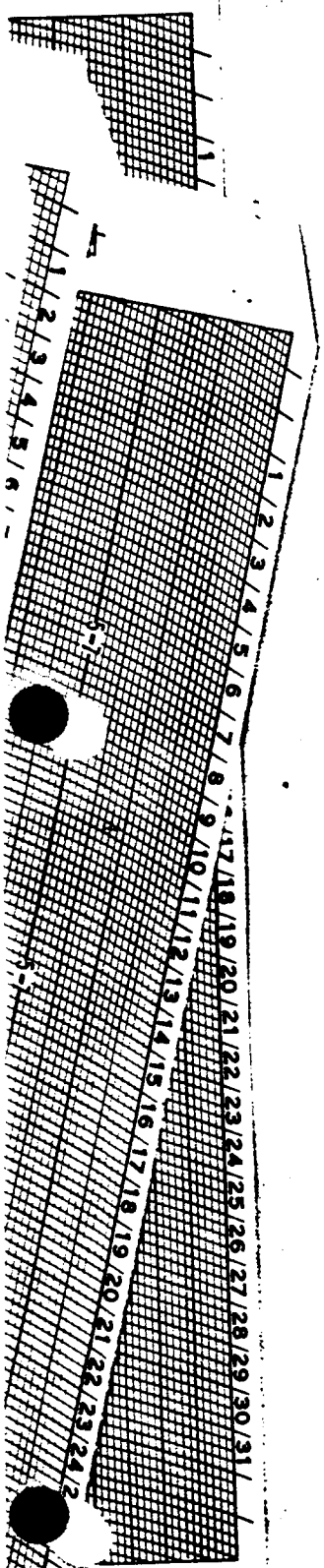
STATION OFF 10:01 A.M. P.M. 5-3 19 93

CHART NO. 15627
MONTHLY-861 HRS.
BELFORT INSTRUMENT COMPANY
BALTIMORE, MARYLAND, U.S.A.



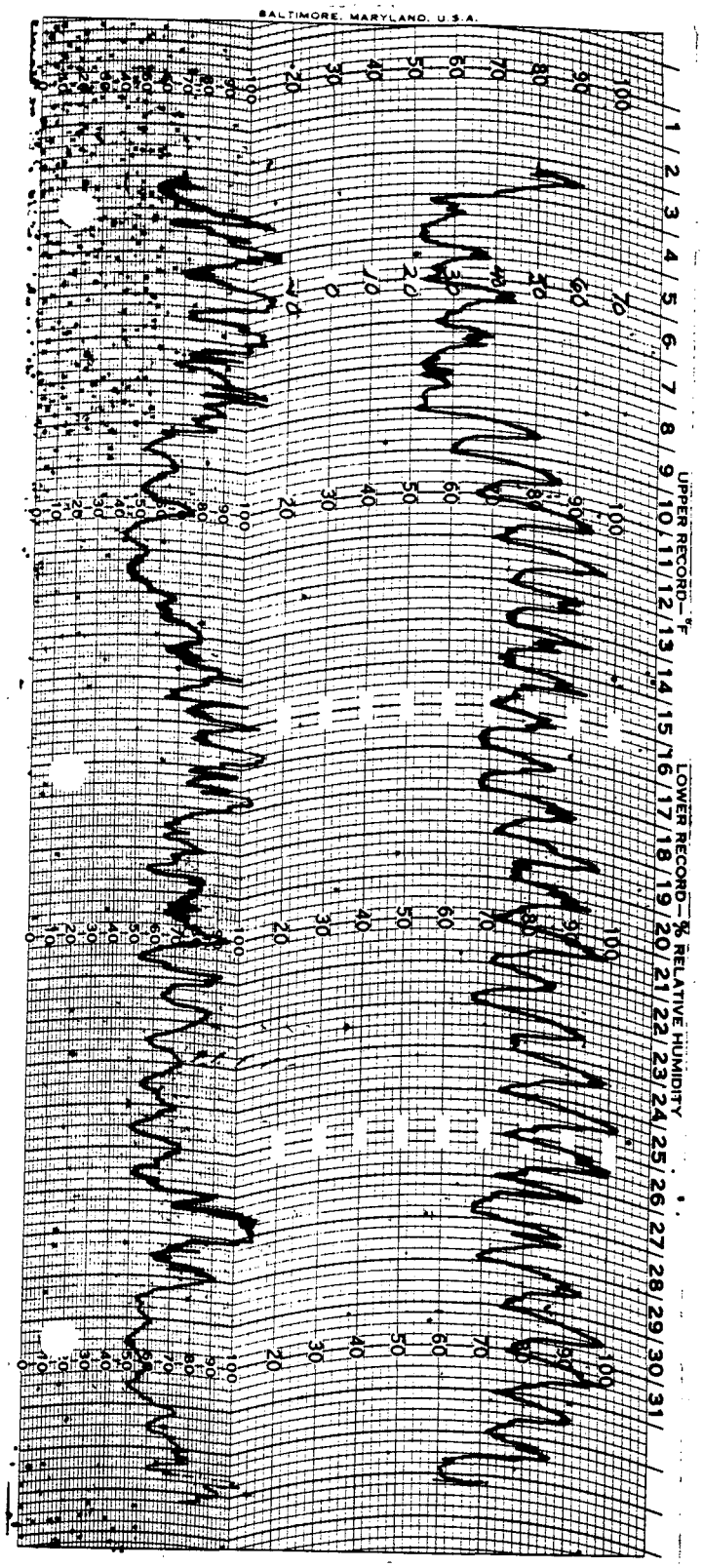
OBSERVER Housekeeper ON 10 52 A.M. P.M. 4-1 1993

STATION _____ OFF 10:14 A.M. P.M. 5-3 1993



4-1 1993

5-3 1993

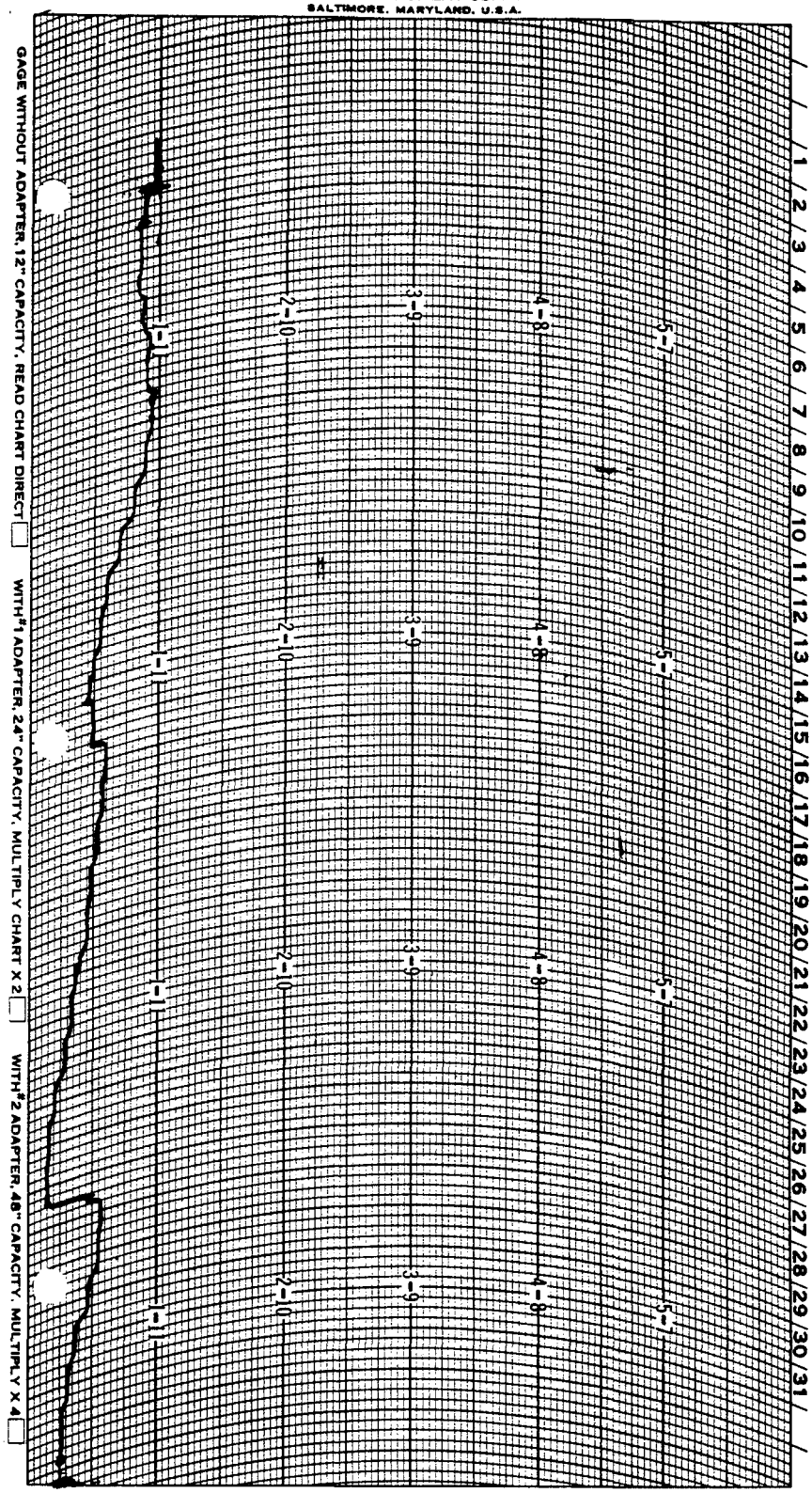


OBSERVER Karl R. Houstecpon ON 1016 A.M. P.M. 5-3 1983

STATION _____ OFF 954 A.M. P.M. 6-3 1983

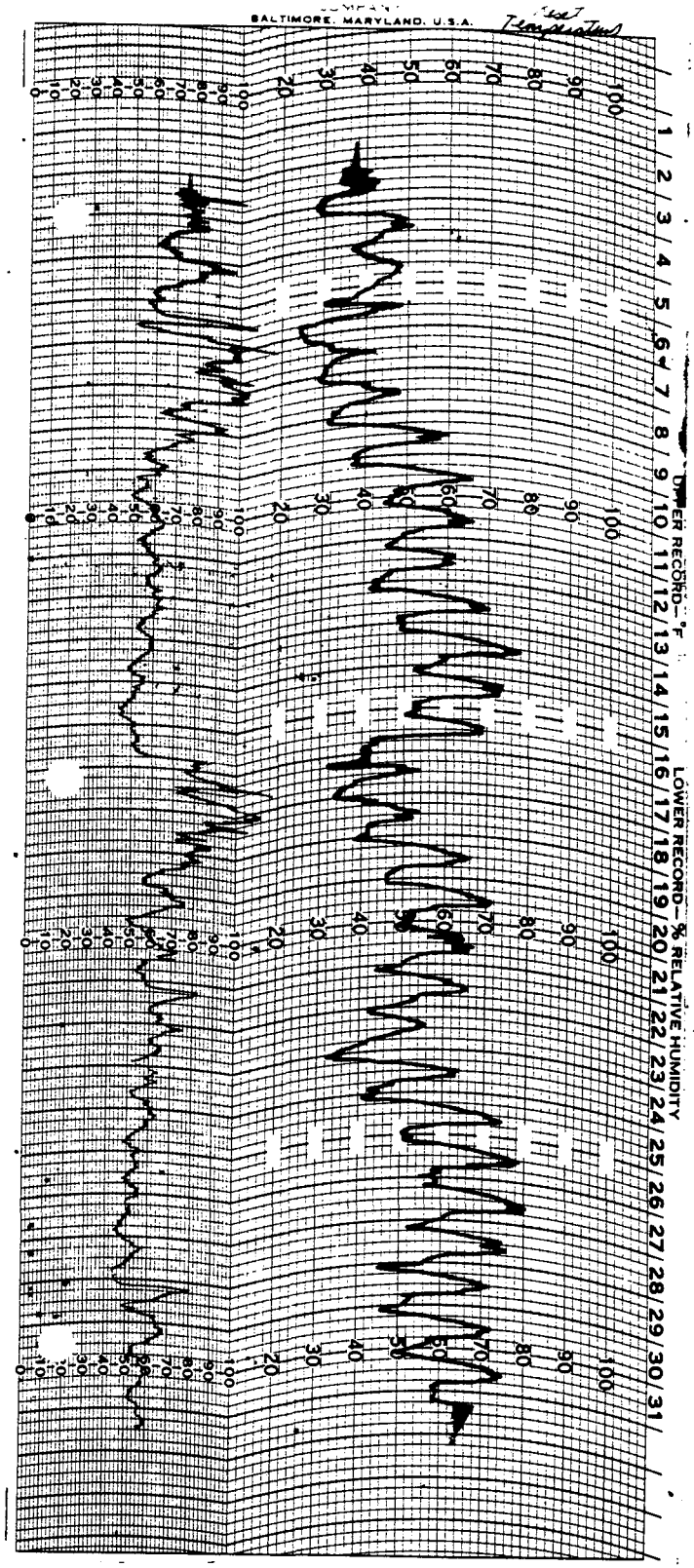
UNIVERSAL RAIN GAGE

BELFORT INSTRUMENT COMPANY
BALTIMORE, MARYLAND, U.S.A.



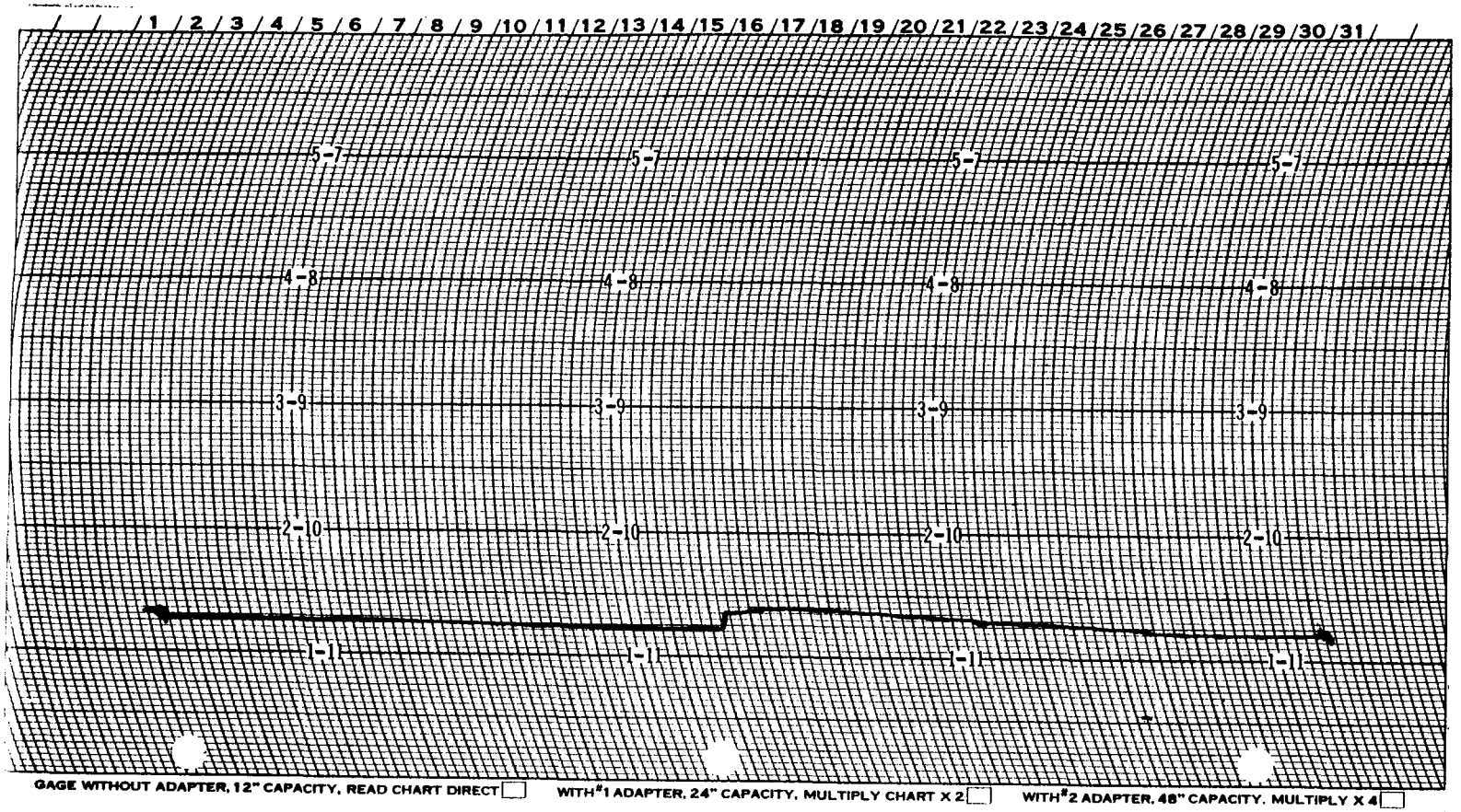
OBSERVER Karl R. Housteeper ON 1002 A.M. P.M. 5-3 19 93

STATION _____ OFF 943 A.M. P.M. 6-3-93 19 _____



OBSERVER K. Housekeeper ON 957 A.M. P.M. 6-3 1993

STATION _____ OFF 1047 A.M. P.M. 7-2 1993



GAGE WITHOUT ADAPTER, 12" CAPACITY, READ CHART DIRECT ☐ WITH #1 ADAPTER, 24" CAPACITY, MULTIPLY CHART X 2 ☐ WITH #2 ADAPTER, 48" CAPACITY, MULTIPLY X 4 ☐

OBSERVER K. Houskeeper

STATION

ON 945 A.M. P.M. 6-3 1993

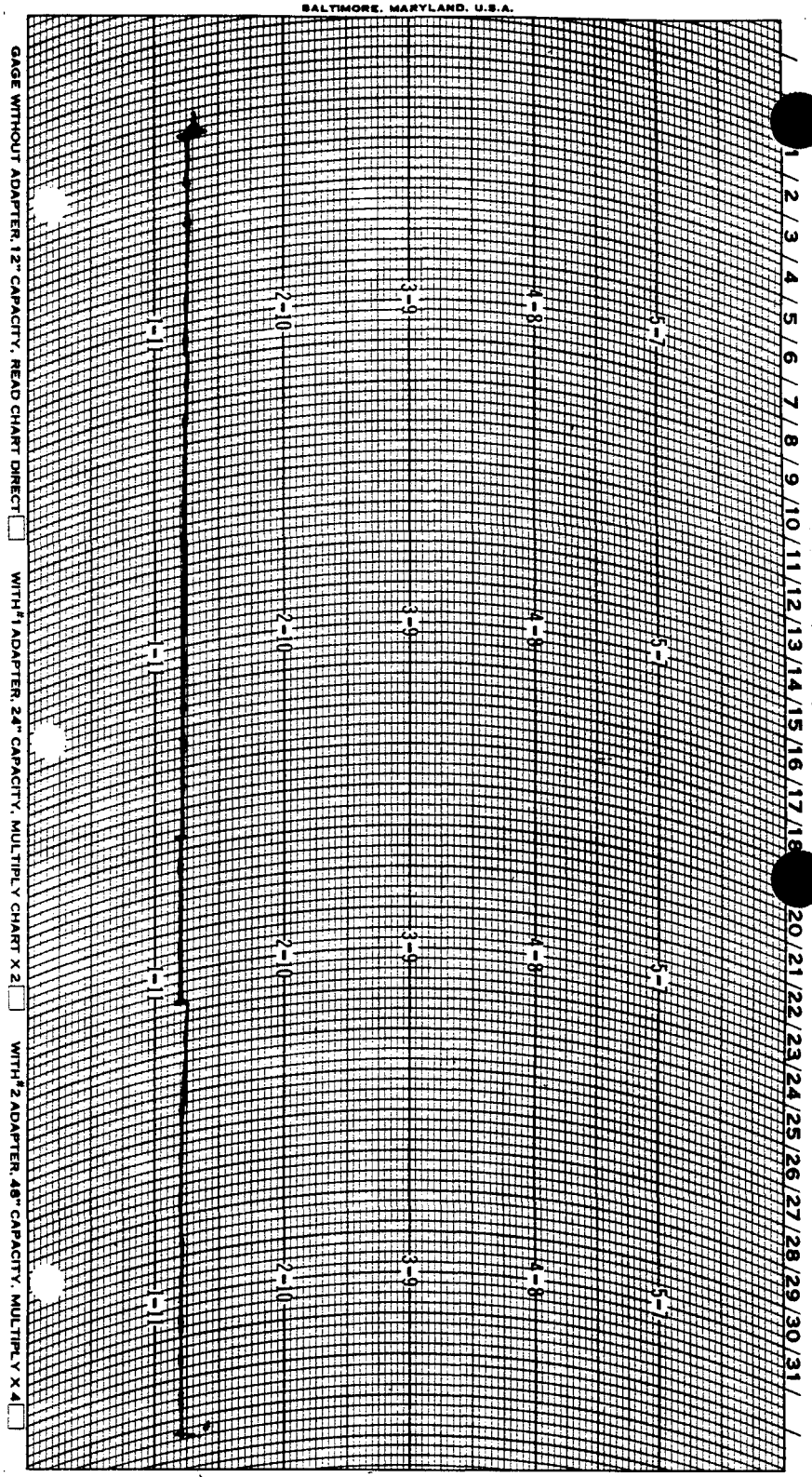
OFF 1036 A.M. P.M. 7-2 1993

12-INCH DUAL TRAVERSE MONTHLY-661 HRS.

UNIVERSAL RAIN GAGE

BELFORT INSTRUMENT COMPANY

BALTIMORE, MARYLAND, U.S.A.



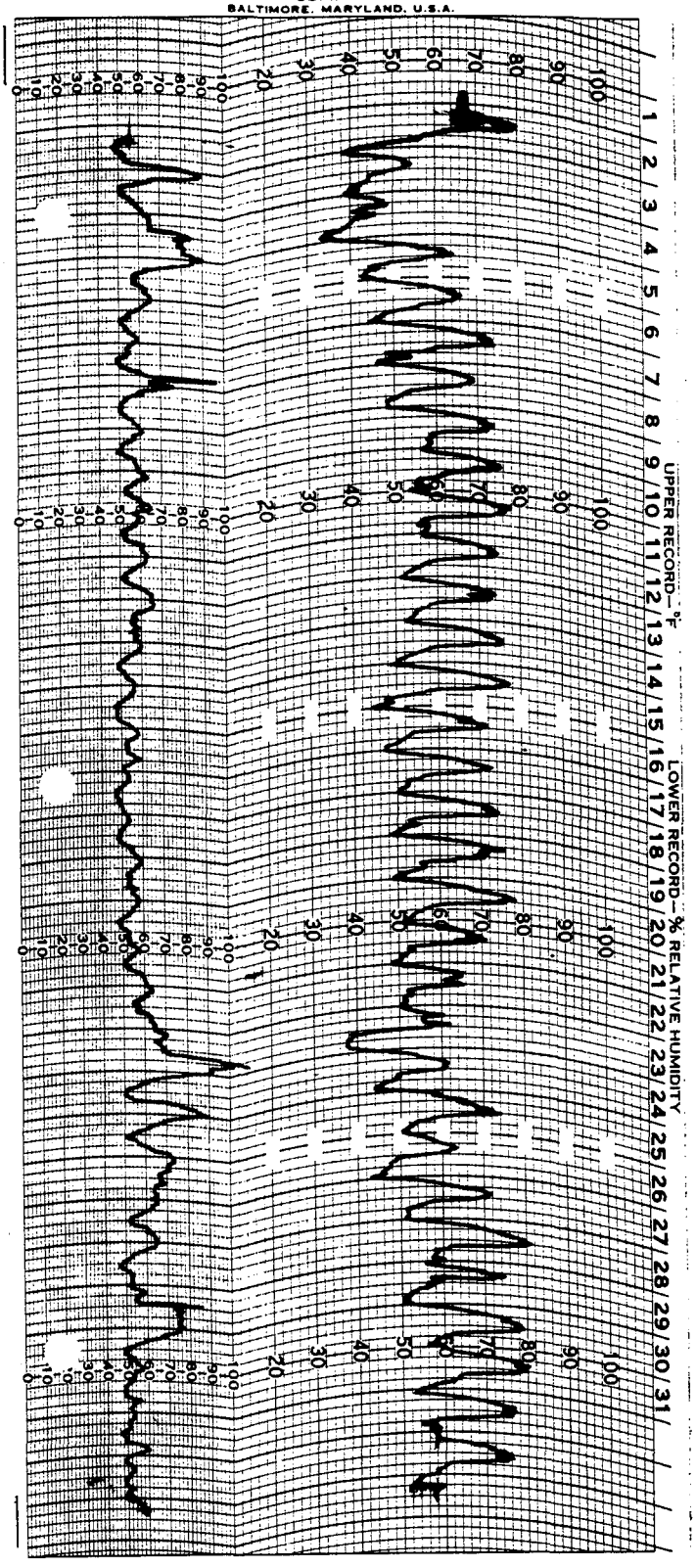
OBSERVER Karl R. Housekeeper ON 1038 A.M. P.M. 7-2 19 93

STATION _____ OFF 1004 A.M. P.M. 8-3 19 93

MONTHLY-861 HRS.

BELFORT INSTRUMENT COMPANY

BALTIMORE, MARYLAND, U.S.A.



OBSERVER Karl R. Hourstegeon ON 1050 A.M. P.M. 7-2 1993

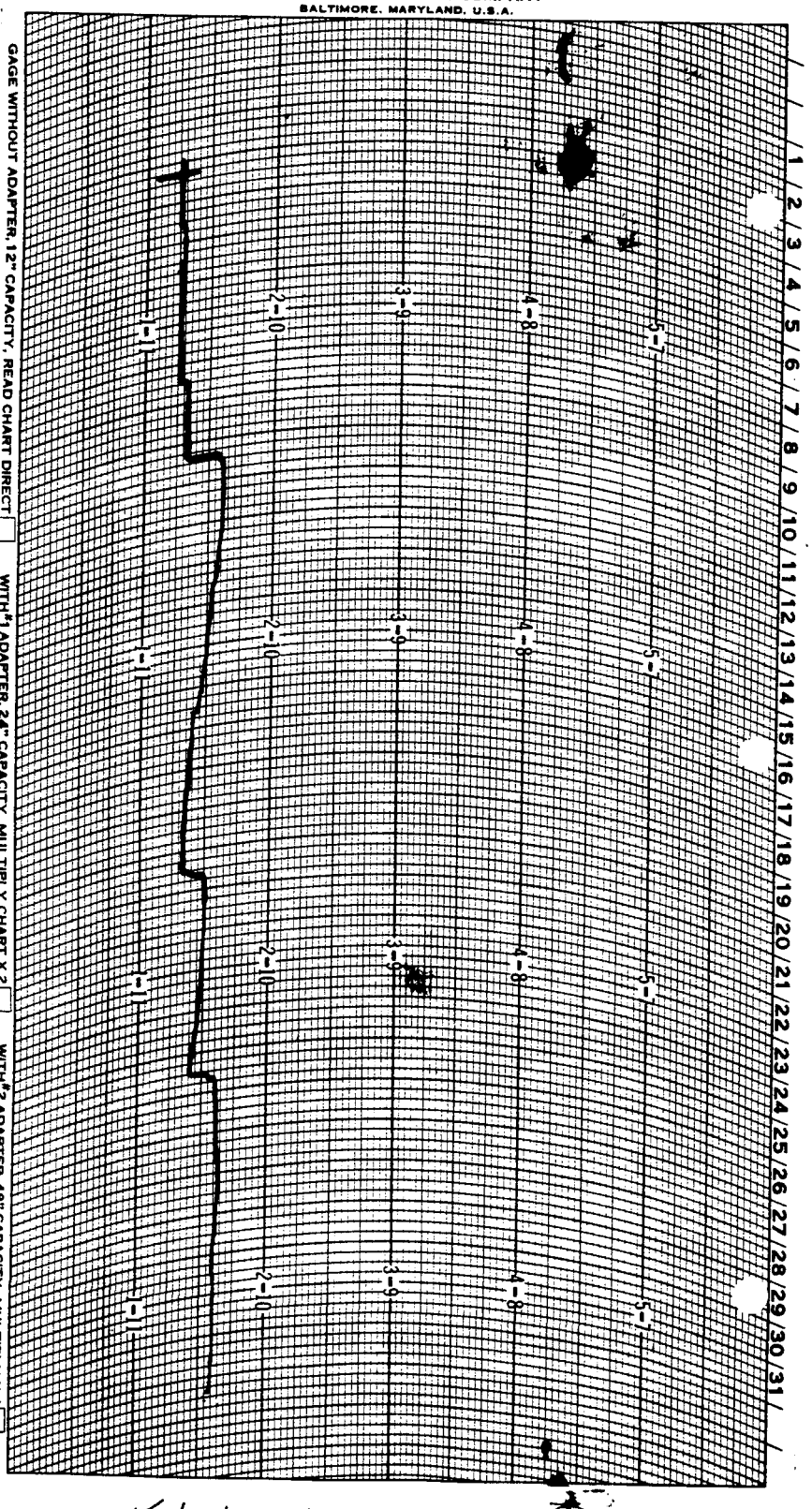
STATION _____ OFF 1011 A.M. P.M. 8-3 1993

PRINTED IN U.S.A.

CHART NO. 15668

12-INCH DUAL TRAVERSE MONTHLY-861 HRS.
UNIVERSAL RAIN GAGE

BELFORT INSTRUMENT COMPANY
BALTIMORE, MARYLAND, U.S.A.



GAGE WITHOUT ADAPTER, 12" CAPACITY, READ CHART DIRECT ☐ WITH #1 ADAPTER, 24" CAPACITY, MULTIPLY CHART X 2 ☐ WITH #2 ADAPTER, 48" CAPACITY, MULTIPLY X 4 ☐

OBSERVER K. Housteeper 1105 AM 8-3 22

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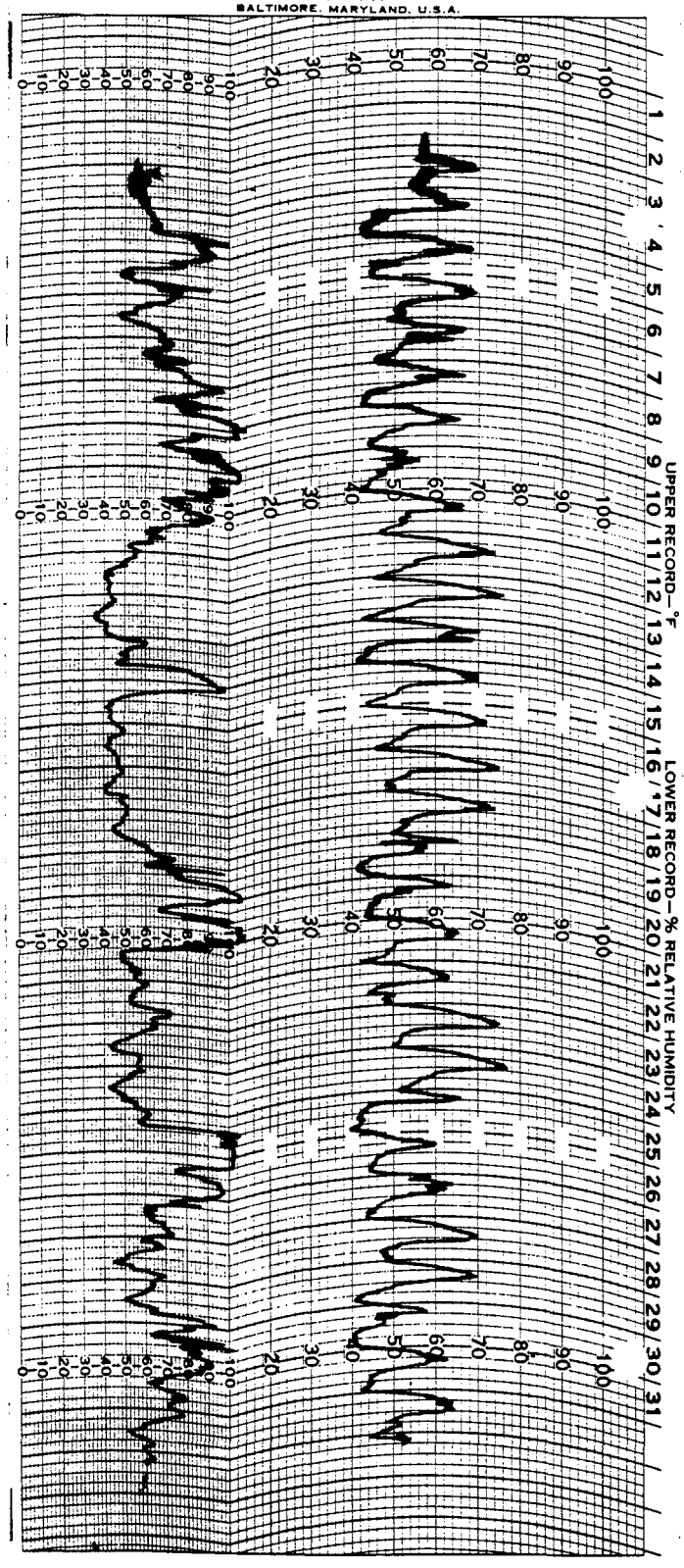
HYGROTHERMOGRAPH

CHART NO. 15627

MONTHLY-861 HRS.

BELFORT INSTRUMENT COMPANY

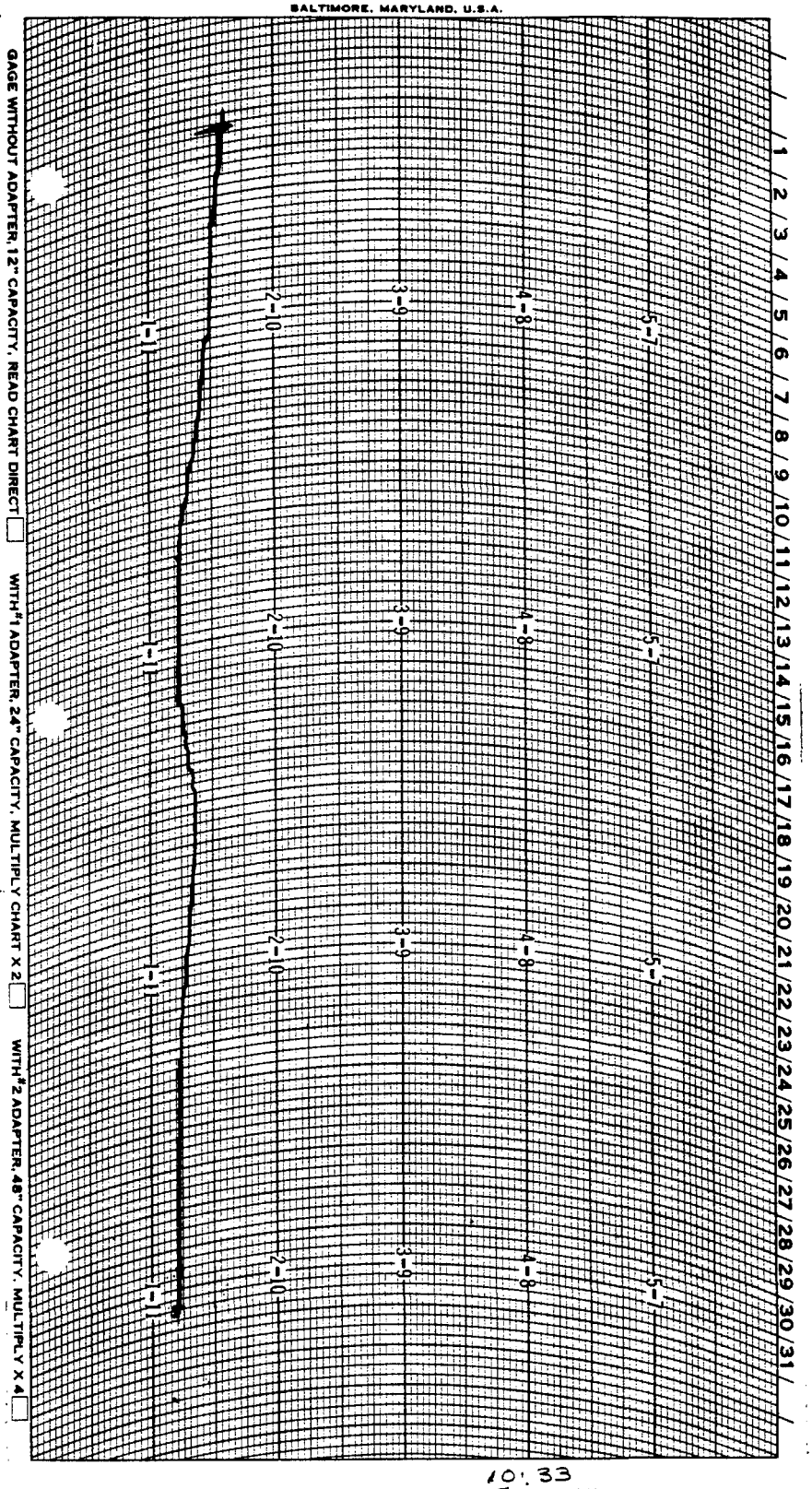
BALTIMORE, MARYLAND, U.S.A.



OBSERVER K. Housekeeper ON 10-13 AM PM 8-3 1993

12-INCH DUAL TRAVERSE MONTHLY-861 HRS.
UNIVERSAL RAIN GAGE

BELFORT INSTRUMENT COMPANY
BALTIMORE, MARYLAND, U.S.A.



GAGE WITHOUT ADAPTER, 12" CAPACITY, READ CHART DIRECT ☐ WITH #1 ADAPTER, 24" CAPACITY, MULTIPLY CHART X 2 ☐ WITH #2 ADAPTER, 48" CAPACITY, MULTIPLY X 4 ☐

OBSERVER Karl R. Housekeeper

STATION

ON 10:33 A.M. P.M. September 2 1943

OFF 1306 A.M. (P.M.) October 1 1943

PRINTED IN U.S.A.

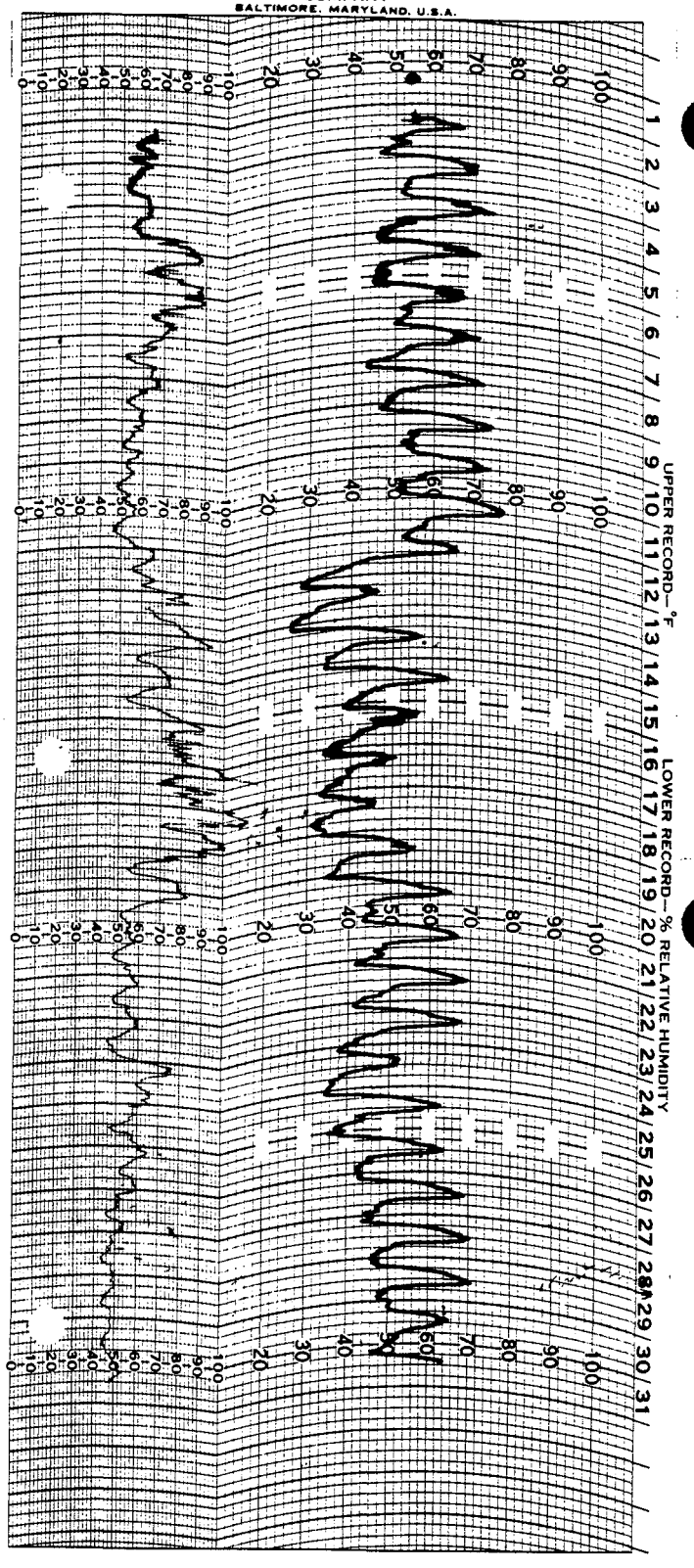
HYGROTHERMOGRAPH

CHART NO. 15627

MONTHLY-861 HRS.

BELFORT INSTRUMENT COMPANY

BALTIMORE, MARYLAND, U.S.A.



OBSERVER Karl R. Houskeeper ON 10:39 (A.M.) P.M. September 2 1993

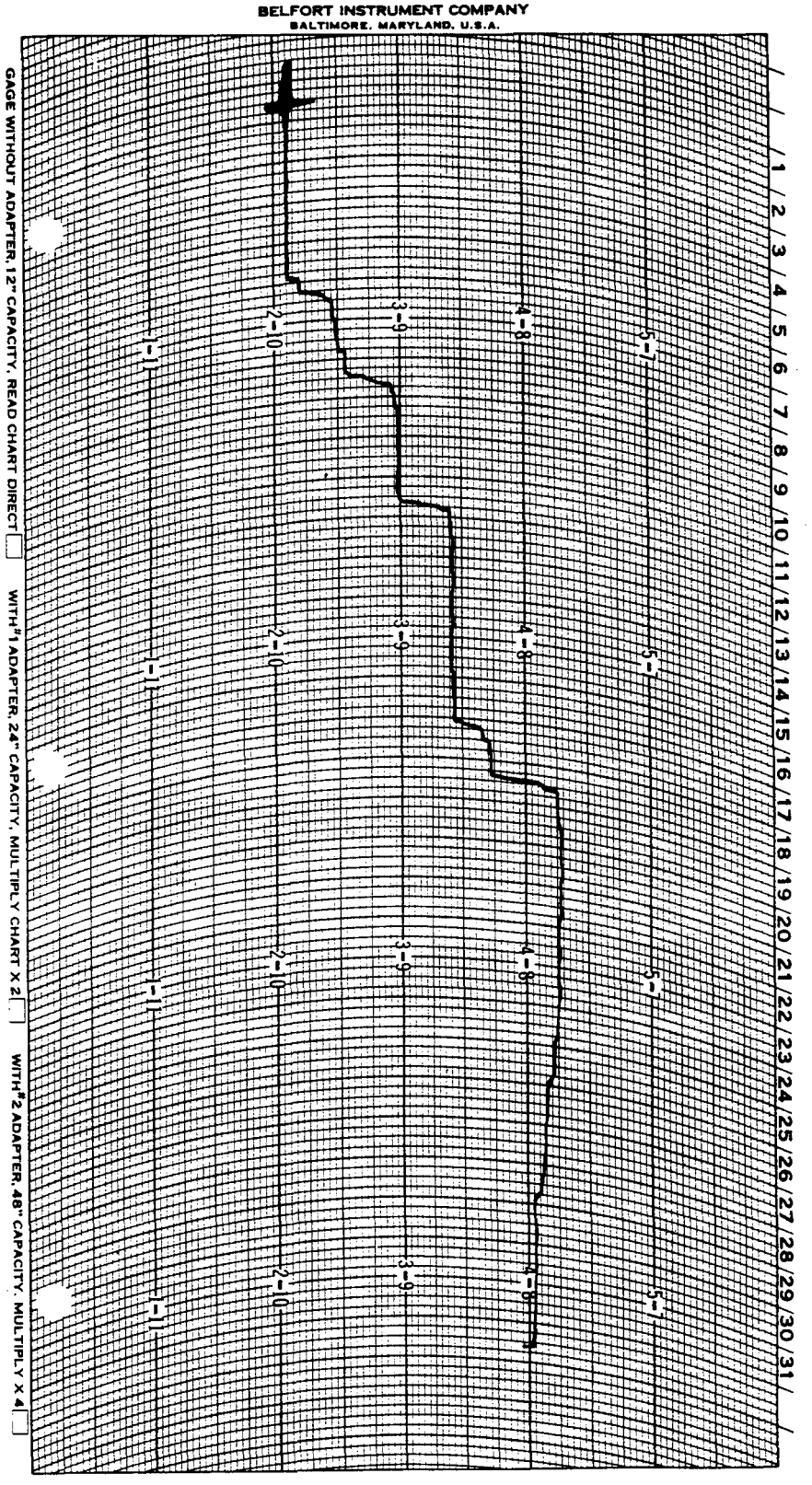
STATION _____ OFF 12:57 A.M. (P.M.) october 1 1993

PRINTED IN U.S.A.

CHART NO. 15668

12-INCH DUAL TRAVERSE MONTHLY-861 HRS.
UNIVERSAL RAIN GAGE

BELFORT INSTRUMENT COMPANY
BALTIMORE, MARYLAND, U.S.A.



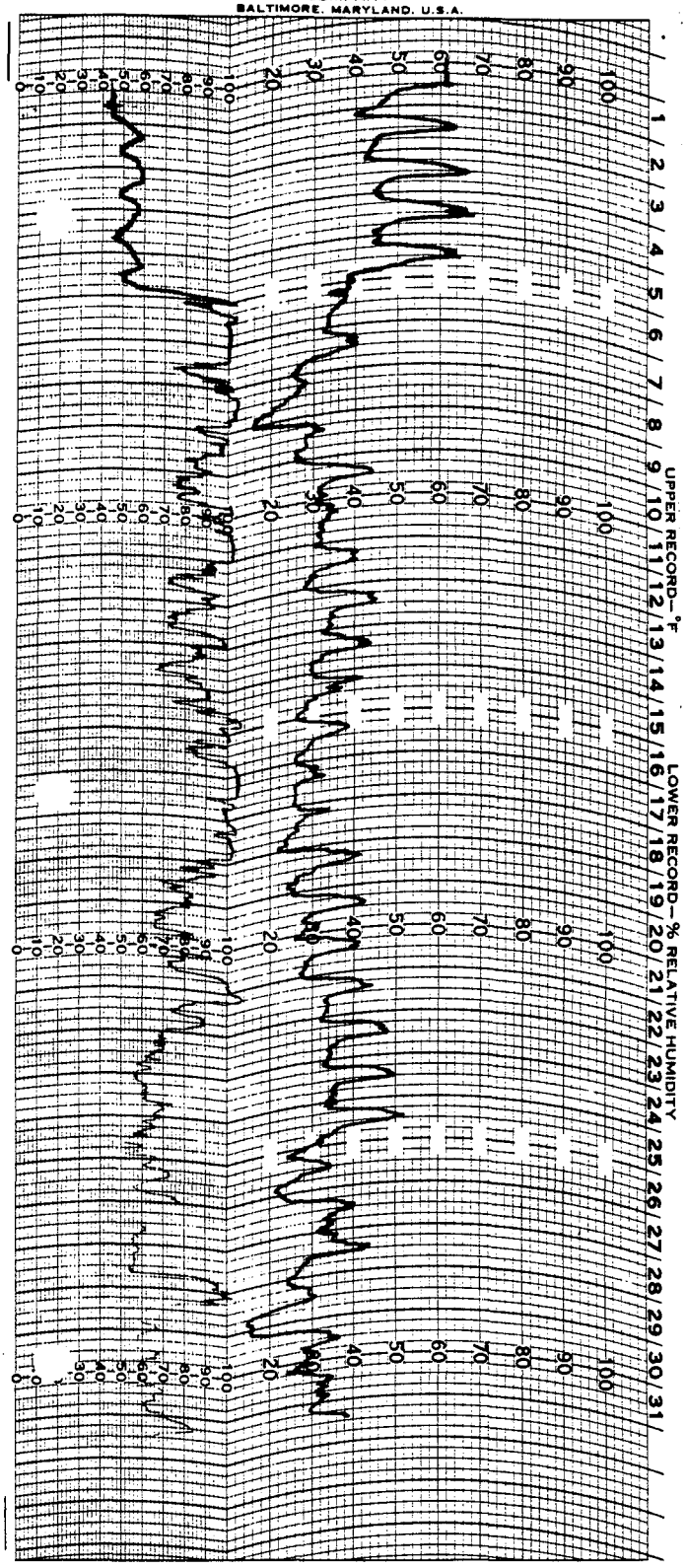
GAGE WITHOUT ADAPTER, 12" CAPACITY, READ CHART DIRECT ☐ WITH #1 ADAPTER, 24" CAPACITY, MULTIPLY CHART X 2 ☐ WITH #2 ADAPTER, 48" CAPACITY, MULTIPLY X 4 ☐

OBSERVER Karl P. Houstenpor ON 1315 A.M. (P.M.) October 19 93

STATION _____ OFF 1212 A.M. P.M. 11-1 19 93

PRINTED IN U.S.A.

HYGROTHERMOGRAPH
CHART NO. 15627
MONTHLY-861 HRS.
BELFORT INSTRUMENT COMPANY
BALTIMORE, MARYLAND, U.S.A.



OBSERVER Karl R. Houstepson 12:59 A.M. P.M. october 1 1993

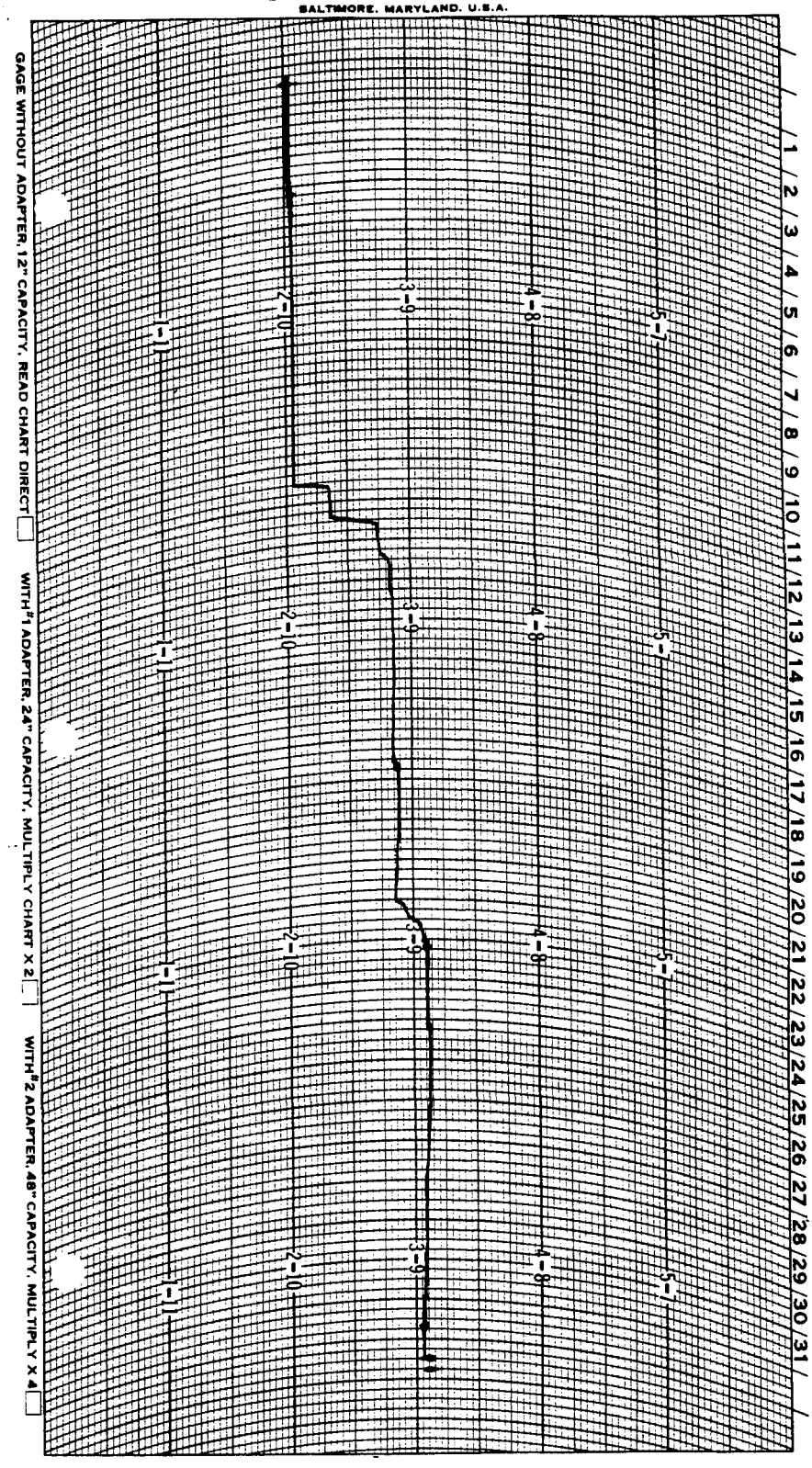
STATION _____ OFF 12:23 A.M. P.M. NOVEMBER 1 1993

PRINTED IN U.S.A.

CHART NO. 15668

12-INCH DUAL TRAVERSE MONTHLY-861 HRS.
UNIVERSAL RAIN GAGE

BELFORT INSTRUMENT COMPANY
BALTIMORE, MARYLAND, U.S.A.

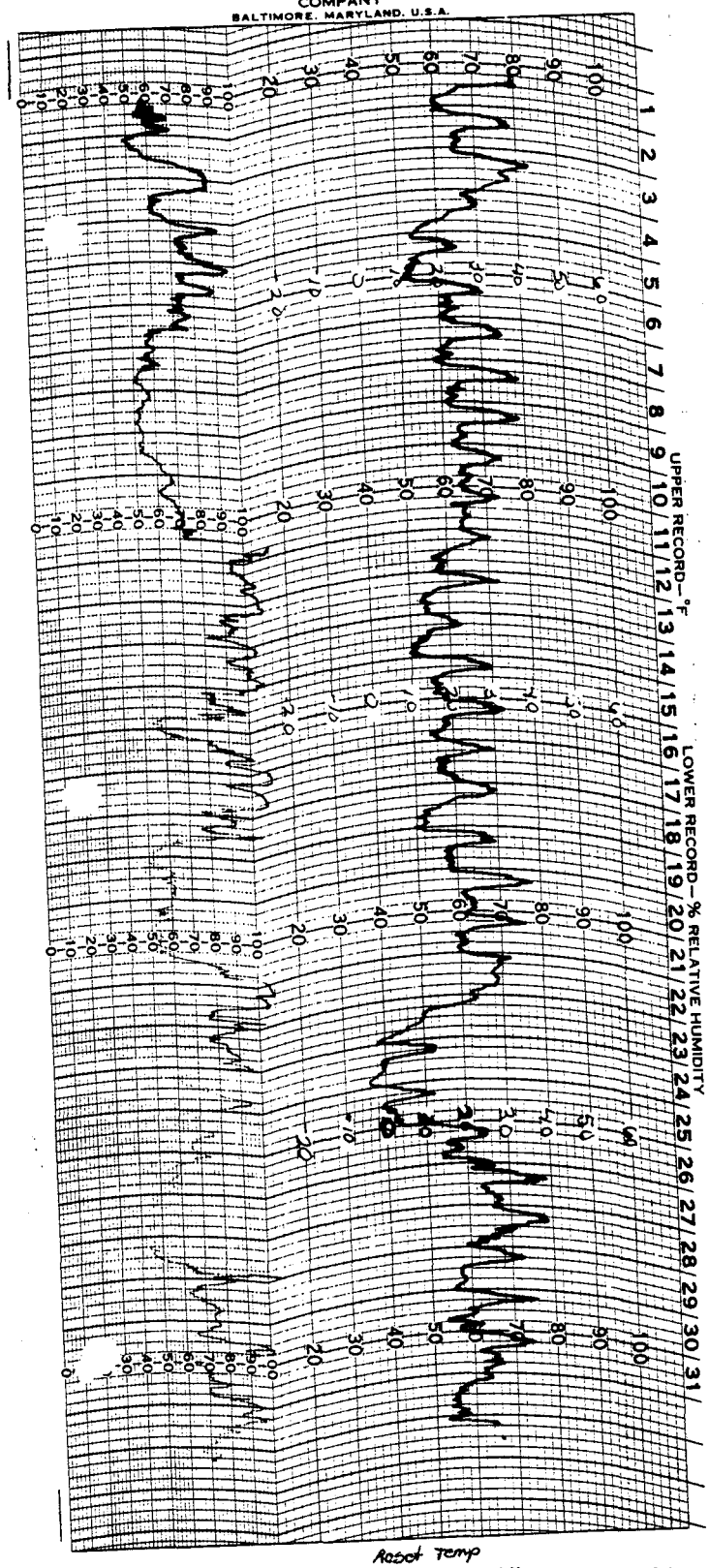


OBSERVER Karl R. Houskeeper ON 12:15 A.M. (P.M.) 11-1 1993

STATION _____ OFF 11:45 A.M. P.M. 12-3 1993

PRINTED IN U.S.A.

HYGROTHERMOGRAPH
CHART NO. 15627
MONTHLY-861 HRS.
BELFORT INSTRUMENT COMPANY
BALTIMORE, MARYLAND, U.S.A.



Robot Temp

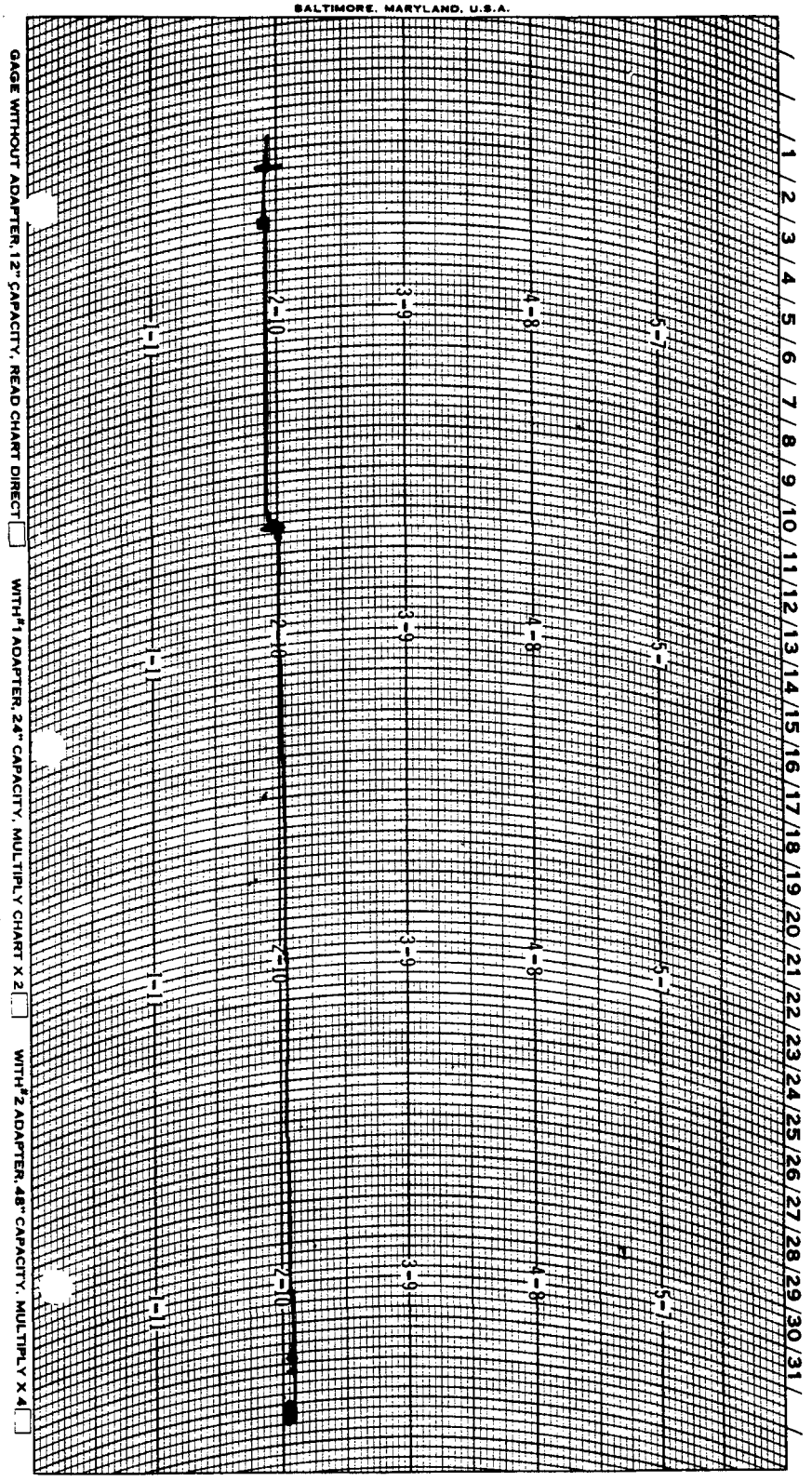
OBSERVER Karl R. Hinsdale ON 12 26 A.M. P.M. November 1993

STATION _____ OFF 1155 A.M. P.M. 12-3 1993

UNIVERSAL RAIN GAGE

BELFORT INSTRUMENT COMPANY

BALTIMORE, MARYLAND, U.S.A.

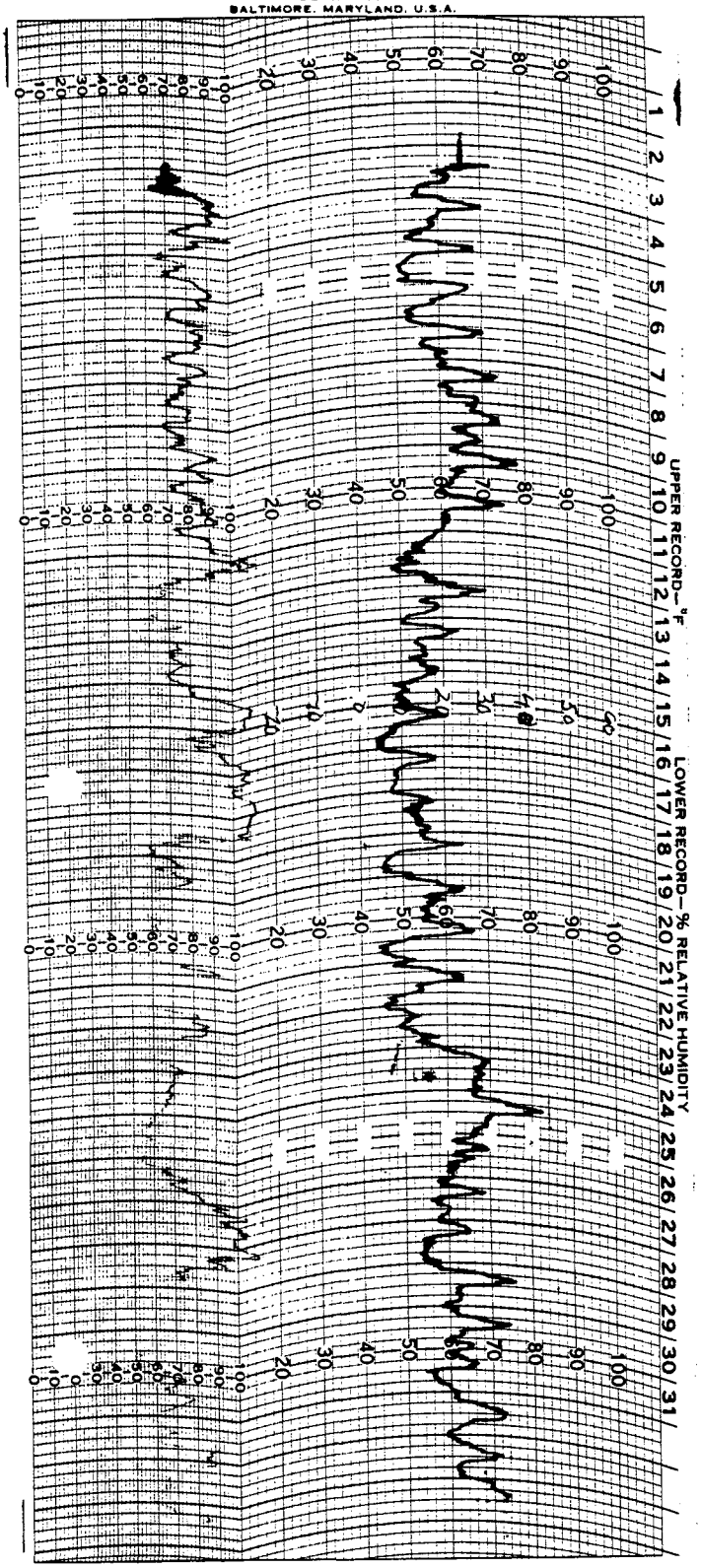


GAGE WITHOUT ADAPTER, 12" CAPACITY, READ CHART DIRECT ☐ WITH #1 ADAPTER, 24" CAPACITY, MULTIPLY CHART X 2 ☐ WITH #2 ADAPTER, 48" CAPACITY, MULTIPLY X 4 ☐

OBSERVER Karl Hawkeeper ON 1150 A.M. P.M. 12-3 19 93

STATION 1 OFF 1008 A.M. P.M. 1-3 19 94

CHART NO. 15627
MONTHLY-861 HRS.
BELFORT INSTRUMENT COMPANY
BALTIMORE, MARYLAND, U.S.A.



OBSERVER Karl Housekeeper ON 1158 A.M. P.M. 12-3 19 93

STATION _____ OFF 1015 A.M. P.M. 1-3 19 94

PACIFICORP
ENERGY WEST
HYDROLOGIC MONITORING PROGRAM
DEER CREEK, WILBERG/COTTONWOOD, and DES-BEE-DOVE MINES

I. Monitoring Locations

A. Surface Water Hydrology (see Map HM-1 for locations listed below)

1. Cottonwood Creek Drainage System

a. Cottonwood Canyon Creek - USGS Flume:
700 feet North, 200 feet East of the Southwest corner of Section 31, Township 17 South, Range 7 East.
Reclamation monitoring at the Cottonwood Fan Portal will occur at points above and below the two sediment basins (see Map 3-14).

b. Grimes Wash

(1) GWR01 - Right Fork:
(Approximately 1500 feet upstream from the inlet culvert for the disturbed area.) 550 feet North, 1500 feet West of the Southwest corner of Section 22, Township 17 South, Range 7 East.

(2) GWR02 - Left Fork:
(Approximately 50 feet upstream from the inlet culvert for the disturbed area.) 200 feet South, 2350 feet East of the Northwest corner of Section 27, Township 17 South, Range 7 East.

(3) GWR03 - Below the mine:
(Approximately 500 feet downstream from the outlet culvert below the disturbed area.) 1770 feet South, 1820 feet West of the Northeast corner of Section 27, Township 17 South, Range 7 East.

(4) Reclamation Monitoring: In addition to location (3) above, monitoring will occur at a point immediately above the sediment ponds (see Map 4-1).

2. Huntington Creek Drainage System

a. Huntington Creek: *UP&L's Environmental Department monitors the following four sites along Huntington Creek:

(1) Below Electric Lake**

(2) Above the Forks**

(3) Above the power plant diversion

(4) Below the power plant

b. Huntington Creek - Energy West

(1) HCC01 - Above Deer Creek Confluence: 1400 feet north, 2200 feet west of the southeast corner of Section 36, Township 16 South, Range 7 East.

(2) HCC02 - Below Deer Creek Confluence: 300 feet north, 300 feet west of the southwest corner of Section 31, Township 16 South, Range 8 East.

(3) HCC03 - Below Huntington Power Plant: 2500 feet north, 1500 feet east of the southeast corner of Section 6, Township 17 South, Range 8 East.

(4) HCC04 - @ Research Farm**
800 feet north, 200 feet east of the southwest corner of Section 5, Township 17 South, Range 8 East.

* The sites listed above are not considered part of PacifiCorp's Hydrologic Monitoring Program but will be included in the annual report as long as data is available.

** Not listed on map due to scale.

c. Deer Creek

(1) DCR01 - Above the mine:
(Approximately 600 feet upstream from the mine facility.) 200 feet North, 800 feet West of the Southeast corner of Section 10, Township 17 South, Range 7 East.

(2) DCR02 - Near Discharge:
• (Exit of undisturbed drainage)
2700 feet north, 700 feet east of the southwest corner of Section 10, Township 17 South, Range 7 East.

(3) DCR03 - Below Coal Pile:
(Below old American Fuel Mine)
1200 feet south, 1900 feet east of the northwest corner of Section 11, Township 1 South, Range 7 East.

(4) DCR04 - At Permit:
(Approximately 5,000 feet downstream from the mine facility.) 480 feet North, 3360 feet East of the Northwest corner of Section 1, Township 17 South, Range 7 East.

(5) DCR05 - Below the Mine:
(Approximately 12,000 feet downstream from the mine facility.) 480 feet South, 3360 feet East of the Northwest corner of Section 1, Township 17 South, Range 7 East.

(6) DCR06 - @ Huntington Creek Confluence:
(Approximately 15,000 feet downstream from the facility)
1400 feet north, 1100 feet east of the southeast corner of Section 36, Township 16 South, Range 7 East.

d. Meetinghouse Canyon - South Fork:
(Approximately 200 feet upstream from the north and south convergence.) 800 feet North, 1500 feet East of the Southwest corner of Section 35, Township 16 South, Range 7 East.

e. Rilda Canyon:

(1) RCF-1 - Rilda Canyon - Right Fork: 400 feet South, 200 feet West of the Northeast corner of Section 30, Township 16 South, Range 7 East.

(2) RCLF1 - Rilda Canyon - Left Fork: 2400 feet North, 2100 feet West of the Southeast corner of Section 29, Township 16 South, Range 7 East.

(3) RCF2 - Rilda Canyon: 2500 feet South, 400 feet West of the Northeast corner of Section 29, Township 16 South, Range 7 East.

(4) RCF3 - Rilda Canyon: 2550 feet South, 1000 feet East of the Northeast corner of Section 28, Township 16 South, Range 7 East.

(5) RCW4 - Rilda Canyon: 850 feet North, 1900 feet West of the Southeast corner of Section 26, Township 16 South, Range 7 East.

3. Reclamation Monitoring: Following stage 1 final reclamation backfilling and grading monitoring will be conducted at points immediately above and below the last sediment pond(s).

B. Groundwater Hydrology

1. East Mountain Springs (see maps HM-4 and 5 for spring locations)

Burnt Tree * +
Elk Spring * +
Sheba Springs * +
Ted's Tub
79-2
79-10 * +
79-15
79-23 * +
79-24
79-26 * +
79-28 (Flag Lake)
79-29 * +
79-32
79-34
79-35 * +
79-38
79-40
80-41
80-43
80-44 * +
80-46 * +
80-47
80-48
82-51
82-52 * +
84-56 * +
89-60 (Alpine Spring)
89-61
89-65
89-66
89-67
89-68

* Recession Study Springs
+ Baseline analysis performed in 1991 and will be repeated every five years.

2. Piezometric Data
   a. Surface
      (1) Rilda Canyon (see Map HM-1 for locations)
         P1
         P2 (terminated)
         P3 (terminated)
         P4
         P5
         P6
         P7
         EM-47
      (2) Cottonwood Canyon Creek
         EM-31
   b. Underground: In-Mine
      (1) Deer Creek Mine (see Map HM-2 for locations)
         (a) DCP1 3rd N xc-8
         (b) DCP2 3rd N xc-29 (terminated)
         (c) DCP3 3rd N xc-55 (terminated)
         (d) DCP4 1st W xc-29 (terminated)
      (2) Wilberg/Cottonwood Mine (see Map HM-3 for locations)
         (a) WCP1 5th W xc-16 (terminated)
         (b) WCP2 3rd S xc-14 (terminated)
         (c) WCP3 3rd S xc-44 (terminated)

3. In-Mine
   a. Deer Creek Mine (see Map HM-2 for locations)
      (a) Main North - Main East
      (b) 3rd North xc-65 (TW-10)
   b. Wilberg/Cottonwood Mines (see Map HM-3 for location)
      2nd South xc-11

4. Waste Rock Wells (see Map HM-1 for locations)
   a. Deer Creek
   b. Cottonwood

II. Monitoring Schedule

A. Field Measurement: Listed below are the sites which will be monitored by PacifiCorp - Fuel Resources in accordance with the guidelines established by DOGM; i.e.,

- Date and Time
- Flow
- pH
- Temperature
- Conductivity
- Dissolved oxygen (perennial streams only)

1. Cottonwood Canyon Creek
   a. Cottonwood Canyon Creek - USGS Flume
   b. Grimes Wash
      (1) GWR01
      (2) GWR02
      (3) GWR03

2. Huntington Canyon Drainage
   a. Deer Creek
      (1) DCR01
      (2) DCR04
      (3) DCR06
   b. Huntington Creek
      (1) HCC01
      (2) HCC02
      (3) HCC04
   c. Meetinghouse Canyon - South Fork
   d. Rilda Canyon
      (1) RCF1
      (2) RCF3
      (3) RCW4

3. East Mountain Springs (see monitoring location list)

4. In-Mine
   a. Deer Creek
   b. Wilberg/Cottonwood

5. Waste Rock Wells
   a. Deer Creek
   b. Cottonwood

All sites will be monitored monthly except for East Mountain Springs, in-mine locations, and waste rock wells. East Mountain Springs will be field tested during the months of July and October. In addition, the Recession Study Springs (denoted by asterisks in the Monitoring Location section) will be field tested from July through October. In-mine locations will be field tested for all field parameters except pH, conductivity, and dissolved oxygen. Waste rock wells will be field tested quarterly.

B. Quality Sampling (Laboratory Measurements)

1. Surface Water Hydrology: Water samples will be collected and analyzed quarterly (one sample at low flow and high flow) during the first or second week of the quarter. Parameters analyzed are those listed in the DOGM Guidelines for Surface Water Quality (see Table #1). Quarterly sampling was initiated during March 1988 and will continue throughout the year; i.e., June, September, and December. Baseline analysis was performed in 1991 and will be repeated every five years thereafter.
   a. Cottonwood Creek Drainage, Grimes Wash
      (1) GWR01
      (2) GWR02
      (3) GWR03
   b. Huntington Creek Drainage
      (1) Deer Creek
         (a) DCR01
         (b) DCR04
         (c) DCR06
      (2) Huntington Creek
         (a) HCC01
         (b) HCC02
         (c) HCC04
      (3) Meetinghouse Canyon - South Fork: MCH01
      (4) Rilda Canyon
         (a) RCF1
         (b) RCF3
         (c) RCW4

2. Groundwater Hydrology
   a. East Mountain Springs: Water samples will be collected and analyzed during the months of July and October. Parameters analyzed are those listed in the DOGM Guidelines for Groundwater Water Quality (see Table #2).

b. In-Mine: Two water samples will be collected and analyzed per mine quarterly. Parameters analyzed are those listed in the DOGM Guidelines for Groundwater Water Quality (see Table #2).

c. Waste Rock Wells: One water sample will be collected and analyzed per location quarterly. Parameters analyzed are those listed in the DOGM Guidelines for Groundwater Water Quality (see Table #2).

III. Annual Reports

All data collected regarding the hydrology of East Mountain will be summarized by the applicant in an annual Hydrologic Monitoring Report. Copies of the report will be submitted to the OSM; U.S. Forest Service; and the Utah State Division of Oil, Gas and Mining. In addition, any raw data collected will be submitted to the Utah State Division of Oil, Gas and Mining on a quarterly basis.

YEAR -- 1992-1995

	LOCATION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
HYDROLOGY — COTTONWOOD CREEK DRAINAGE SYSTEM	COTTONWOOD CANYON CREEK	field	field	field	field	field	field	field	field	field	field	field	field
	GRIMES WASH		TABLE 1										
	GWR01	field	field	operational	field	field	operational	field	field	operational	field	field	operational
	GWR02	field	field	operational	field	field	operational	field	field	operational	field	field	operational
	GWR03	field	field	operational	field	field	operational	field	field	operational	field	field	operational
HYDROLOGY — HUNTINGTON CREEK DRAINAGE SYSTEM	DEER CREEK		TABLE 1										
	DCR01	field	field	operational	field	field	operational	field	field	operational	field	field	operational
	DCR04	field	field	operational	field	field	operational	field	field	operational	field	field	operational
	DCR06	field	field	operational	field	field	operational	field	field	operational	field	field	operational
	MEETINGHOUSE CANYON		TABLE 1										
	MCH01	field	field	operational	field	field	operational	field	field	operational	field	field	operational
	RILDA CANYON		TABLE 1										
	FLUME 1 RCF1	field	field	operational	field	field	baseline	field	field	operational	field	field	baseline
	FLUME 2 RCF2	field	field	field	field	field	field	field	field	field	field	field	field
	FLUME 3 RCF3	field	field	operational	field	field	baseline	field	field	operational	field	field	baseline
	WEIR 4 RCW4	field	field	operational	field	field	baseline	field	field	operational	field	field	baseline
	RCLF1	field	field	field	field	field	field	field	field	field	field	field	field
	HUNTINGTON CREEK		TABLE 1										
	HCC01	field	field	operational	field	field	operational	field	field	operational	field	field	operational
	HCC02	field	field	operational	field	field	operational	field	field	operational	field	field	operational
	HCC04	field	field	operational	field	field	operational	field	field	operational	field	field	operational
GROUNDWATER HYDROLOGY	EAST MOUNTAIN SPRINGS		TABLE 2					operational *			operational *		
	RECESSION STUDY SPRINGS								field	field			
	IN-MINE		TABLE 2										
	DEER CREEK			operational			operational			operational			operational
	WILBERG/ COTTONWOOD			operational			operational			operational			operational

* includes recession study springs

YEAR -- 1992-1995

LOCATION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
MINE DISCHARGE												
TABLE 3												
DEER CREEK	operational	operational	operational	operational	operational	operational	operational	operational	operational	operational	operational	operational
TABLE 3 - WILBERG/COTTONWOOD												
Grimes Wash	operational	operational	operational	operational	operational	operational	operational	operational	operational	operational	operational	operational
Miller Canyon	operational	operational	operational	operational	operational	operational	operational	operational	operational	operational	operational	operational
SEDIMENT PONDS												
TABLE 3												
DEER CREEK	operational	operational	operational	operational	operational	operational	operational	operational	operational	operational	operational	operational
TABLE 3 - DES-BEE-DOVE												
	Sampled on an as-needed basis											
TABLE 3 - WILBERG/COTTONWOOD												
Wilberg Mine	operational	operational	operational	operational	operational	operational	operational	operational	operational	operational	operational	operational
Cottonwood Canyon	Sampled on an as-needed basis											
WASTE ROCK WELLS												
TABLE 3 - DEER CREEK												
DCWR 1			operational			operational			operational			operational
TABLE 3 - WILBERG/COTTONWOOD												
WCWR 1			operational			operational			operational			operational

YEAR -- 1996
(Baseline monitoring)

	LOCATION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
SURFACE HYDROLOGY	COTTONWOOD CREEK DRAINAGE SYSTEM												
	COTTONWOOD CANYON CREEK	field	field	field	field	field	field	field	field	field	field	field	field
	GRIMES WASH		TABLE 1										
	GWR01	field	field	operational	field	field	baseline	field	field	operational	field	field	baseline
	GWR02	field	field	operational	field	field	baseline	field	field	operational	field	field	baseline
	GWR03	field	field	operational	field	field	baseline	field	field	operational	field	field	baseline
	HUNTINGTON CREEK DRAINAGE SYSTEM												
	DEER CREEK		TABLE 1										
	DCR01	operational		January	through	May	baseline	operational		July	through	November	baseline
	DCR04	operational		January	through	May	baseline	operational		July	through	November	baseline
	DCR06	operational		January	through	May	baseline	operational		July	through	November	baseline
	MEETINGHOUSE CANYON		TABLE 1										
	MCH01	field	field	operational	field	field	baseline	field	field	operational	field	field	baseline
	RILDA CANYON		TABLE 1										
	FLUME 1 RCF1	field	field	operational	field	field	baseline	field	field	operational	field	field	baseline
	FLUME 2 RCF2	field	field	field	field	field	field	field	field	field	field	field	field
	FLUME 3 RCF3	field	field	operational	field	field	baseline	field	field	operational	field	field	baseline
	WEIR 4 RCW4	field	field	operational	field	field	baseline	field	field	operational	field	field	baseline
	RCLF1	field	field	field	field	field	field	field	field	field	field	field	field
	HUNTINGTON CREEK		TABLE 1										
	HCC01	operational		January	through	May	baseline	operational		July	through	November	baseline
	HCC02	operational		January	through	May	baseline	operational		July	through	November	baseline
	HCC04	operational		January	through	May	baseline	operational		July	through	November	baseline
GROUNDWATER HYDROLOGY	EAST MOUNTAIN SPRINGS		TABLE 2					baseline *			baseline *		
	RECESSION STUDY SPRINGS								field	field			
	IN-MINE		TABLE 2										
	DEER CREEK			operational			baseline			operational			baseline
	WILBERG/ COTTONWOOD			operational			baseline			operational			baseline

* includes recession study springs

YEAR -- 1996

BASELINE

LOCATION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
MINE DISCHARGE												
TABLE 3												
DEER CREEK	operational	operational	operational	operational	operational	operational	operational	operational	operational	operational	operational	operational
TABLE 3 - WILBERG/COTTONWOOD												
Grimes Wash	operational	operational	operational	operational	operational	operational	operational	operational	operational	operational	operational	operational
Miller Canyon	operational	operational	operational	operational	operational	operational	operational	operational	operational	operational	operational	operational
SEDIMENT PONDS												
TABLE 3												
DEER CREEK	operational	operational	operational	operational	operational	operational	operational	operational	operational	operational	operational	operational
TABLE 3 - DES-BEE-DOVE												
	Sampled on an as-needed basis											
TABLE 3 - WILBERG/COTTONWOOD												
Wilberg Mine	operational	operational	operational	operational	operational	operational	operational	operational	operational	operational	operational	operational
Cottonwood Canyon		Sampled on an as-needed basis										
WASTE ROCK WELLS												
TABLE 3 - DEER CREEK												
DCWR 1			baseline			operational			baseline			operational
TABLE 3 - WILBERG/COTTONWOOD												
WCWR 1			baseline			operational			baseline			operational

TABLE 1

SURFACE WATER BASELINE, OPERATIONAL, AND POSTMINING WATER QUALITY PARAMETER LIST

FIELD MEASUREMENTS:

- • - Water Levels or Flow
- • - pH
- • - Specific Conductivity (umhos/cm)
- • - Temperature (degrees Centigrade)
- • - Dissolved Oxygen (ppm) [perennial streams only]

LABORATORY MEASUREMENTS: (mg/l) [Major, minor ions and trace elements are to be analyzed in total and dissolved forms.]

- • - Total Dissolved Solids
- # • - Total Settleable Solids
- # • - Total Suspended Solids
- • - Total Hardness (as $CaCO_3$)
- • - Acidity ($CaCO_3$)
- • - Alkalinity - Total
- - Aluminum (Al)
- - Arsenic (As)
- - Barium (Ba)
- - Boron (B)
- • - Carbonate (CO_3^{-2})
- • - Bicarbonate (HCO_3^-)
- - Cadmium (Cd)
- • - Calcium (Ca)
- • - Chloride (Cl^-)
- - Chromium (Cr)
- • - Conductivity
- - Copper (Cu)
- • - Dissolved Oxygen
- - Fluoride (F^-)
- • - Iron (Fe) - Total and Dissolved
- - Lead (Pb)
- • - Magnesium (Mg)
- • - Total Manganese (Mn)
- - Mercury (Hg)
- - Molybdenum (Mo)
- - Nickel (Ni)
- - Nitrogen: Ammonia (HN_3)
- - Nitrate (NO_2)
- - Nitrite (NO_3)
- • - Oil and Grease
- • - pH
- • - Potassium (K)
- - Phosphate (PO_4^{-3})
- - Selenium (Se)
- • - Sodium (Na)
- • - Sulfate (SO_4^{-2})
- - Sulfide (S^-)
- # • - Turbidity
- - Zinc (Zn)
- • - Cation-Anion Balance

Sampling Period:

- - Baseline
- • Operational, Postmining
- # Construction

Sampling Locations:

Deer Creek	1)	DCR01 - Above Mine
	2)	DCR04 - @ Permit Boundary
	3)	DCR06 - @ Huntington Creek Confluence
Grimes Wash	1)	GWR01 - Right Fork (Above Mine)
	2)	GWR02 - Left Fork (Above Mine)
	3)	GWR03 - Below Mine
Huntington Canyon	1)	HCC01 - Above Plant
	2)	HCC02 - Above Plant, Below DC Confluence
	3)	HCC04 - Below Plant, @ Research Farm
Meetinghouse Canyon		MHC01 - Left Fork
Rilda Canyon	1)	RCF1
	2)	RCF3
	3)	RCW4

TABLE 2

GROUNDWATER BASELINE, OPERATIONAL, AND POSTMINING WATER QUALITY PARAMETER LIST

FIELD MEASUREMENTS:

- • Water Levels or Flow
- • pH
- • Specific Conductivity (umhos/cm)
- • Temperature (degrees Centigrade)

LABORATORY MEASUREMENTS: (mg/l) [Major, minor ions and trace elements are to be analyzed in total and dissolved forms.]

- • Total Dissolved Solids
- • Total Suspended Solids
- • Total Hardness (as $CaCO_3$)
- • Alkalinity ($CaCO_3$)
- Aluminum (Al)
- Arsenic (As)
- Barium (Ba)
- Boron (B)
- • Carbonate (CO_3^{-2})
- • Bicarbonate (HCO_3^-)
- Cadmium (Cd)
- • Calcium (Ca)
- • Chloride (Cl^-)
- Chromium (Cr)
- • Conductivity
- Copper (Cu)
- • Dissolved Oxygen
- Fluoride (F^-)
- • Iron (Fe)
- Lead (Pb)
- • Magnesium (Mg)
- • Manganese (Mn)
- Mercury (Hg)
- Molybdenum (Mo)
- Nickel (Ni)
- Nitrogen: Ammonia (HN_3)
- Nitrate (NO_2)
- Nitrite (NO_3)
- • pH
- • Potassium (K)
- Phosphate (PO_4^{-3})
- Selenium (Se)
- • Sodium (Na)
- • Sulfate (SO_4^{-2})
- Sulfide (S^-)
- Zinc (Zn)
- • Cation-Anion Balance

Sampling Period:

- Baseline
- • Operational, Postmining

Sampling Locations:

In-Mine
  Deer Creek
  Wilberg/Cottonwood
East Mountain Springs
Waste Rock Wells
  Deer Creek
  Wilberg/Cottonwood

TABLE 3

MINE DISCHARGE AND SEDIMENT POND

FIELD MEASUREMENTS:

•	-	Water Levels or Flow
•	-	pH
•	-	Specific Conductivity (umhos/cm)
•	-	Temperature

LABORATORY MEASUREMENTS: (mg/l) [Major, minor ions and trace elements are to be analyzed in total and dissolved forms.]

•	x	-	Total Dissolved Solids
•		-	Total Settleable Solids
•	x	-	Total Suspended Solids
•	x	-	Total Hardness (as $CaCO_3$)
•	x	-	Acidity ($CaCO_3$)
•	x	-	Alkalinity - Total
		-	Aluminum (Al)
		-	Arsenic (As)
		-	Barium (Ba)
		-	Boron (B)
•	x	-	Carbonate (CO_3^{-2})
•	x	-	Bicarbonate (HCO_3^-)
		-	Cadmium (Cd)
•	x	-	Calcium (Ca)
•	x	-	Chloride (Cl^-)
		-	Chromium (Cr)
•	x	-	Conductivity
		-	Copper (Cu)
•	x	-	Dissolved Oxygen
		-	Fluoride (F^-)
•	x	-	Iron (Fe) - Total and Dissolved
		-	Lead (Pb)
•	x	-	Magnesium (Mg)
•	x	-	Total Manganese (Mn)
		-	Mercury (Hg)
		-	Molybdenum (Mo)
		-	Nickel (Ni)
		-	Nitrogen: Ammonia (HN_3)
		-	Nitrate (NO_2)
		-	Nitrite (NO_3)
•	x	-	Oil and Grease
•	x	-	pH
•	x	-	Potassium (K)
		-	Phosphate (PO_4^{-3})
		-	Selenium (Se)
•	x	-	Sodium (Na)
•	x	-	Sulfate (SO_4^{-2})
		-	Sulfide (S^-)
	x	-	Turbidity
		-	Zinc (Zn)
•	x	-	Cation-Anion Balance

Sampling Period:

- Baseline
- • Sediment Pond Discharge
- x Mine Discharge

Sampling Locations:

Mine Discharge
- Deer Creek
- Wilberg/Cottonwood
  - 1) Grimes Wash
  - 2) Miller Canyon

Sediment Ponds
- Deer Creek
- Des-Bee-Dove
- Wilberg/Cottonwood

WATER SAMPLE DOCUMENTATION

The following information will be included on the lab sheets:

1. Sample time and date
2. Individual taking sample
3. Field parameters (except in-mine)
   - Temperature
   - Flow
   - pH (units)
   - Conductivity (umhos/cm)
   - Dissolved Oxygen (PPM), depending on location
4. Precipitation date if applicable
5. Date and time each parameter is analyzed at the lab

ANALYTICAL METHOD AND DETECTION LIMIT

Parameter	MDL	UNITS	Method
Acidity	1	mg/l $CaCO_3$	EPA 305.1
Alkalinity, Bicarbonate	1	mg/l $CaCO_3$	EPA 310.1
Alkalinity, Carbonate	1	mg/l $CaCO_3$	EPA 310.1
Alkalinity, Total	1	mg/l $CaCO_3$	EPA 310.1
Aluminum	.5	mg/l	EPA 202.1
Anions	----	meq/l	----------
Arsenic	.002	ug/l	EPA 206.3
Barium	.03	mg/l	EPA 208.1
Boron	.01	mg/l	EPA 212.3
Cadmium	.005	mg/l	EPA 213.1
Calcium	.1	mg/l	EPA 215.1
Cations	----	meq/l	----------
Chloride	.1	mg/l	EPA 325.3
Chromium	.02	mg/l	EPA 218.1
Conductivity	2	umhos/cm	EPA 120.1
Copper	.01	mg/l	EPA 220.1
Fluoride	.01	mg/l	EPA 340.2
Hardness, Total	1	mg/l $CaCO_3$	----------
Iron	.02	mg/l	EPA 236.1
Iron, Dissolved	.02	mg/l	EPA 236.1
Lead	.05	mg/l	EPA 239.1
Magnesium	.01	mg/l	EPA 242.1
Manganese	.01	mg/l	EPA 243.1
Mercury	.002	mg/l	EPA 245.1
Nickel	.02	mg/l	EPA 249.1
Nitrogen, Ammonia	.01	mg/l	EPA 350.3
Nitrogen, Nitrate	.01	mg/l	EPA 353.3
Nitrogen, Nitrite	.01	mg/l	EPA 354.1
Oil & Grease	1	mg/l	EPA 413.1
Oxygen, Dissolved	.01	mg/l	EPA 360.1
pH	----	Units	EPA 150.1
Phosphorus, Total	.01	mg/l	EPA 365.2
Potassium	.01	mg/l	EPA 258.1
Selenium	.002	ug/l	EPA 270.3
Sodium	.01	mg/l	EPA 273.1
Solids, Settleable	.5	mg/l	EPA 160.5
Solids, Total Dissolved	.5	mg/l	EPA 160.1
Solids, Total Suspended	.5	mg/l	EPA 160.2
Sulfate	.1	mg/l	EPA 375.4
Sulfide	.1	mg/l	EPA 376.1
Turbidity	.1	NTU	EPA 180.1
Zinc	.01	mg/l	EPA 289.1