Form 219
6/92

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Department of Water Resources

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES

BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No. 29-7699

1. Owner: Commercial Energy Management, Inc. Phone No. 237-8184
   Current Address: P.O. Box 4518, Pocatello, ID 83205-4518
2. Accompanied by: Maher F. Wissa EXAM DATE: 18 SEPT 96
   Address: P.O. Box 4518, Pocatello, ID 83205-4518 Phone No. 236-2305 237-3563
   Relationship to Permit Holder: President, C.E.M., Inc.
3. Source: Portneuf River tributary to Snake River

B. OVERLAP REVIEW

1. Other water rights with the same place of use: —
2. Other water rights with the same point of diversion: —

C. DIVERSION AND DELIVERY SYSTEM

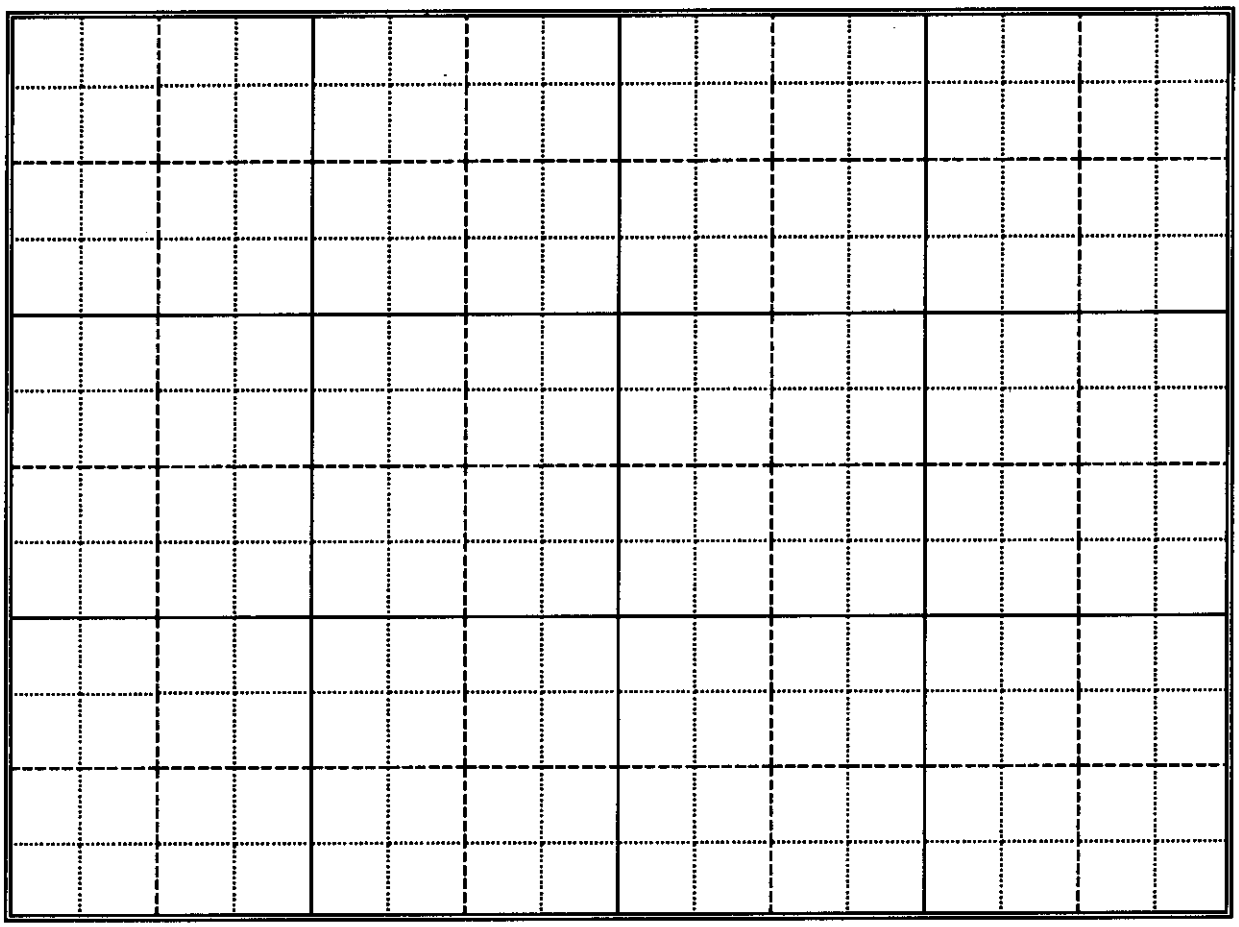
1. **Point(s) of Diversion:**

Ident No.	Gov't Lot	¼	¼	¼	Sec.	Twp.	Rge.	County	Method of Determination/Remarks
			NE	SW	22	09S	38E	Bannock	on site / USGS

2. **Place(s) of Use:** Indicate Method of Determination

TWP	RGE	SEC	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
09S	38E	22									C								

3. **Delivery System Diagram**: Indicate all major components and distances between components. Indicate weir size/ditch size/pipe I.d. as applicable.



Scale: 1" = _____.

____ Copy of USGS Quadrange Attached Showing location(s) of point(s) of diversion and place(s) of use (required).

____ Aerial Photo Attached (required for irrigation of 10+ acres)

____ Photo of Diversion and System Attached

4.

Well or Diversion Identification No.*	Motor Make	Hp	Water Turbine Type ~~Motor Serial No.~~	Pump Make	Pump Serial No. or Discharge Size
	Kunming Electrical		HL-340-WJ-110		Rated at 214 CFS
	Machinery works China		Generator Type		
	Hydro Set		SFW900-20/2600		

**Code to correspond with No. on map and aerial photo*

D. FLOW MEASUREMENTS

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date

2. **Measurements:** _____

_____

_____

COMMERCIAL EI RGY MANAGEMENT LAVA HYDI DIVERSION

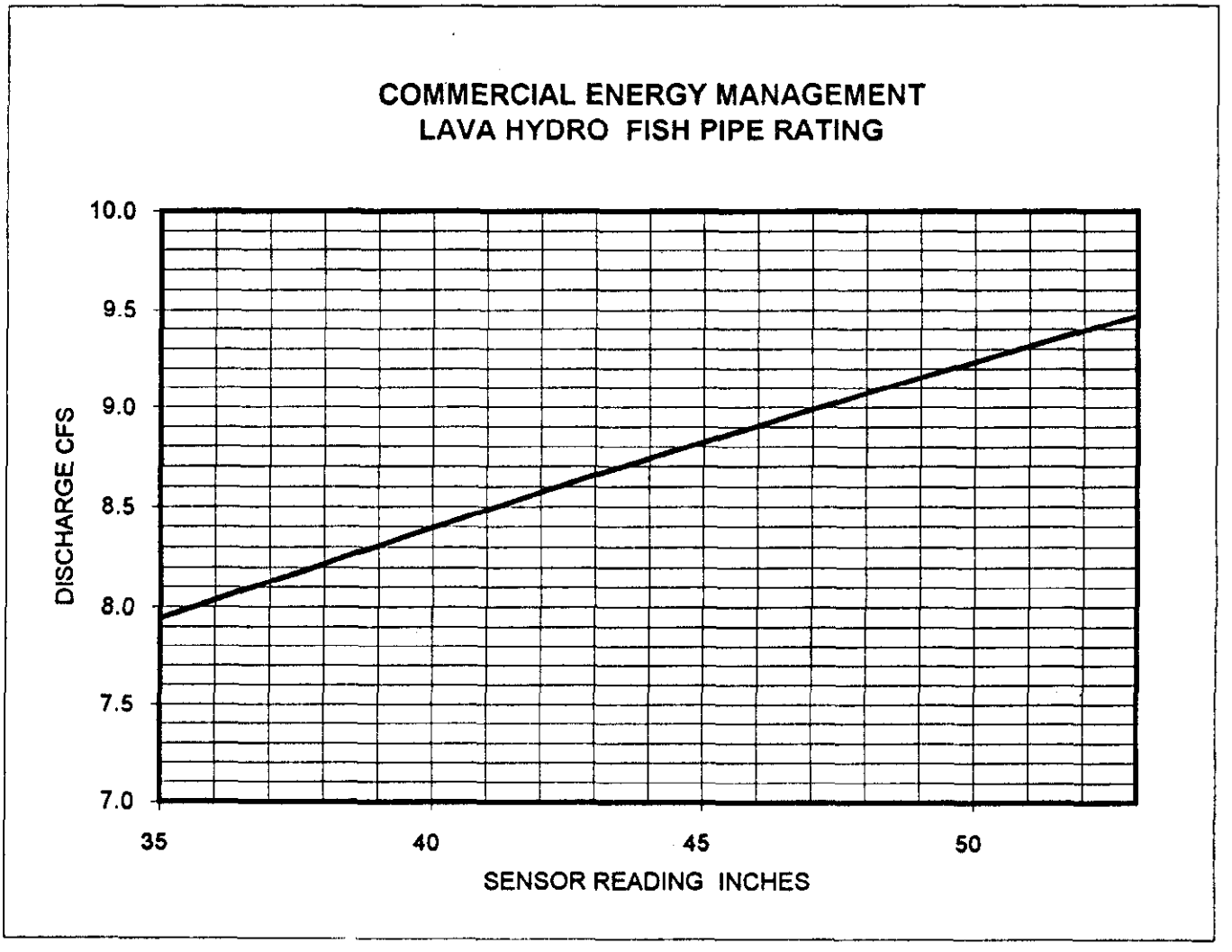
FISH PIPE DISCHARGE RATING C.E. BROCKWAY P.E. MAY 4, 1993

PIPE DIA= 10 IN. AREA= .55 SQ F L= 69 IN
ELEV TOP OF PIPE= 88.48 INLET K= 1
ELEV OF FLOOR= 88.70 D-W FRICTION= .020
ELEV WATER LEVEL=FLOOR+SENSOR/12
NET PIPE HEAD=SENSOR/12+(FLOOR-TOP OF PIPE)+(DIA/2)/12
NET PIPE HEAD=SENSOR+ 0.64 FT
VEL=SQRT((NET HEAD*2*D/12*32.2)/f*L-K/64.4))
QP=VEL*AREA

FREE FLOW GATE COEFFICIENT EQUATION
C=K-D*Y1/H^-N
D= 0.16
N= 0.54
K= 0.625

SENSOR WATER DEPTH Y1 INCHES	Y1 DEPTH FEET	Q CFS
35	2.92	7.9
35.5	2.96	8.0
36	3.00	8.0
36.5	3.04	8.1
37	3.08	8.1
37.5	3.13	8.2
38	3.17	8.2
38.5	3.21	8.3
39	3.25	8.3
39.5	3.29	8.4
40	3.33	8.4
40.5	3.38	8.4
41	3.42	8.5
41.5	3.46	8.5
42	3.50	8.6
42.5	3.54	8.6
43	3.58	8.7
43.5	3.63	8.7
44	3.67	8.7
44.5	3.71	8.8

SENSOR WATER DEPTH Y1 INCHES	Y1 DEPTH FEET	Q CFS
45	3.75	8.8
45.5	3.79	8.9
46	3.83	8.9
46.5	3.88	8.9
47	3.92	9.0
47.5	3.96	9.0
48	4.00	9.1
48.5	4.04	9.1
49	4.08	9.2
49.5	4.13	9.2
50	4.17	9.2
50.5	4.21	9.3
51	4.25	9.3
51.5	4.29	9.4
52	4.33	9.4
52.5	4.38	9.4
53	4.42	9.5


COMMERCIAL ENERGY MANAGEMENT
LAVA HYDRO FISH PIPE RATING
DISCHARGE CFS
10.0
9.5
9.0
8.5
8.0
7.5
7.0
35
40
45
50
SENSOR READING INCHES

COMMERCIAL ENERGY MANAGEMENT LAVA HYDRO DIVERSION

SHARP CRESTED WEIRS — C.E. BROCKWAY P.E. MAY 4, 1993

SUPPRESSED SHARP CRESTED WEIRS ON TOP BOARD OF CHECK STRUCTURES

ELEVATION OF FLOOR= 88.70 FT

ELEVATION OF WEIR CREST= 90.84

WATER LEVEL SENSOR INDICATES DEPTH IN INCHES ABOVE FLOOR=Y1

Q=C*L*h^3/2 h=HEAD ON WEIR=Y1-WEIR CREST ELEVATION

WEIR COEFFICIENT= 3.33

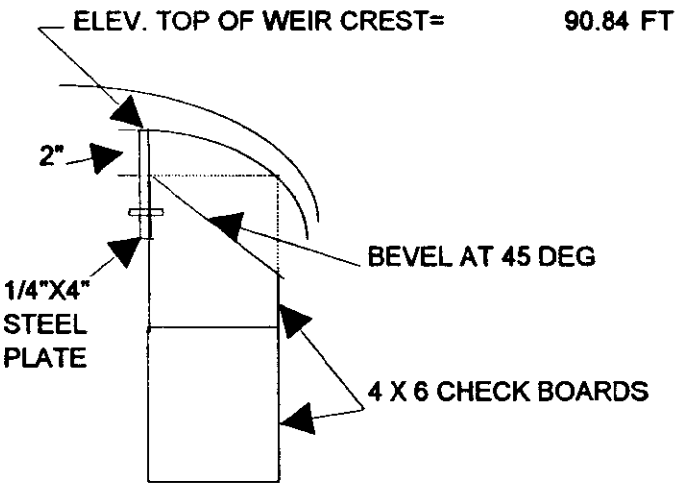
WEIR WIDTH L= 6.00 FT NO OF WEIRS= 2 D.S. DEPTH Y3= 0 FT, FREEFLOW

DISCHARGE OVER WEIRS CFS

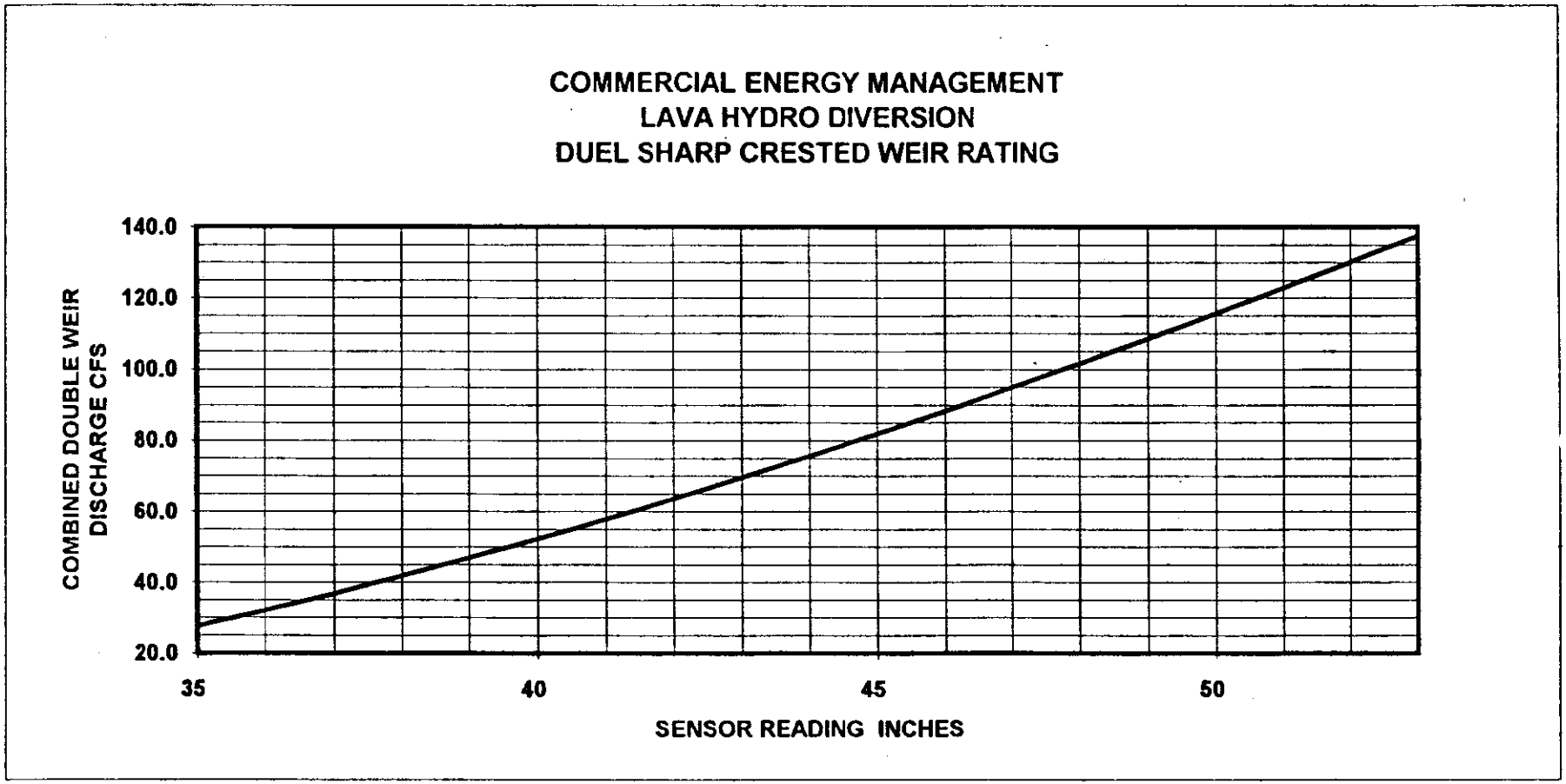
SENSOR WATER DEPTH Y1 INCHES	0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
35	27.5	28.0	28.4	28.8	29.3	29.7	30.2	30.7	31.1	31.6
35.5	29.7	30.2	30.7	31.1	31.6	32.0	32.5	33.0	33.4	33.9
36	32.0	32.5	33.0	33.4	33.9	34.4	34.9	35.3	35.8	36.3
36.5	34.4	34.9	35.3	35.8	36.3	36.8	37.3	37.8	38.3	38.7
37	36.8	37.3	37.8	38.3	38.7	39.2	39.7	40.2	40.7	41.2
37.5	39.2	39.7	40.2	40.7	41.2	41.8	42.3	42.8	43.3	43.8
38	41.8	42.3	42.8	43.3	43.8	44.3	44.8	45.3	45.9	46.4
38.5	44.3	44.8	45.3	45.9	46.4	46.9	47.4	48.0	48.5	49.0
39	46.9	47.4	48.0	48.5	49.0	49.6	50.1	50.7	51.2	51.7
39.5	49.6	50.1	50.7	51.2	51.7	52.3	52.8	53.4	53.9	54.5
40	52.3	52.8	53.4	53.9	54.5	55.0	55.6	56.2	56.7	57.3
40.5	55.0	55.6	56.2	56.7	57.3	57.8	58.4	59.0	59.5	60.1
41	57.8	58.4	59.0	59.5	60.1	60.7	61.3	61.8	62.4	63.0
41.5	60.7	61.3	61.8	62.4	63.0	63.6	64.2	64.8	65.3	65.9
42	63.6	64.2	64.8	65.3	65.9	66.5	67.1	67.7	68.3	68.9
42.5	66.5	67.1	67.7	68.3	68.9	69.5	70.1	70.7	71.3	71.9
43	69.5	70.1	70.7	71.3	71.9	72.5	73.1	73.8	74.4	75.0
43.5	72.5	73.1	73.8	74.4	75.0	75.6	76.2	76.8	77.5	78.1
44	75.6	76.2	76.8	77.5	78.1	78.7	79.3	80.0	80.6	81.2
44.5	78.7	79.3	80.0	80.6	81.2	81.9	82.5	83.1	83.8	84.4
45	81.9	82.5	83.1	83.8	84.4	85.1	85.7	86.3	87.0	87.6
45.5	85.1	85.7	86.3	87.0	87.6	88.3	88.9	89.6	90.2	90.9
46	88.3	88.9	89.6	90.2	90.9	91.6	92.2	92.9	93.5	94.2
46.5	91.6	92.2	92.9	93.5	94.2	94.9	95.5	96.2	96.9	97.5
47	94.9	95.5	96.2	96.9	97.5	98.2	98.9	99.6	100.3	100.9

← tenths of inches

EXAMPLE
SENSOR= 36.3 IN
Q= 35.1 CFS



47.5	98.2	98.9	99.6	100.3	100.9	101.6	102.3	103.0	103.7	104.4
48	101.6	102.3	103.0	103.7	104.4	105.0	105.7	106.4	107.1	107.8
48.5	105.0	105.7	106.4	107.1	107.8	108.5	109.2	109.9	110.6	111.3
49	108.5	109.2	109.9	110.6	111.3	112.0	112.7	113.4	114.1	114.8
49.5	112.0	112.7	113.4	114.1	114.8	115.5	116.3	117.0	117.7	118.4
50	115.5	116.3	117.0	117.7	118.4	119.1	119.8	120.6	121.3	122.0
50.5	119.1	119.8	120.6	121.3	122.0	122.7	123.5	124.2	124.9	125.7
51	122.7	123.5	124.2	124.9	125.7	126.4	127.1	127.9	128.6	129.3
51.5	126.4	127.1	127.9	128.6	129.3	130.1	130.8	131.6	132.3	133.0
52	130.1	130.8	131.6	132.3	133.0	133.8	134.5	135.3	136.0	136.8
52.5	133.8	134.5	135.3	136.0	136.8	137.5	138.3	139.1	139.8	140.6
53	137.5	138.3	139.1	139.8	140.6	141.3	142.1	142.9	143.6	144.4



COMMERCIAL ENERGY MANAGEMENT LAVA HYDRO DIVERSION

SHARP CRESTED WEIRS PLUS FISH PIPE DISCHARGE C.E. BROCKWAY P.E. MAY 4, 1993
SUPPRESSED SHARP CRESTED WEIRS ON TOP BOARD OF CHECK STRUCTURES
ELEVATION OF FLOOR= 88.70 FT
ELEVATION OF WEIR CREST= 90.84
WATER LEVEL SENSOR INDICATES DEPTH IN INCHES ABOVE FLOOR=Y1
Q=C*L*h^3/2 h=HEAD ON WEIR=Y1-WEIR CREST ELEVATION
WEIR COEFFICIENT= 3.33
WEIR WIDTH L= 6.00 FT NO OF WEIRS= 2 D.S. DEPTH Y3= 0 FT, FREEFLOW

PIPE DIA= 10 IN. AREA= .55 SQ FT L= 69 IN
ELEV TOP OF PIPE= 88.5 INLET K= 1
ELEV OF FLOOR= 88.70 D-W FRICTION= .020
ELEV WATER LEVEL=FLOOR+SENSOR/12
NET PIPE HEAD=SENSOR/12+(FLOOR-TOP OF PIPE)+(DIA/2)/12
NET PIPE HEAD=SENSOR+ 0.64 FT
VEL=SQRT((NET HEAD*2*D/12*32.2)/f*L-K/64.4))

QP=VEL*AREA

DISCHARGE OVER WEIRS PLUS PIPE FLOW CFS

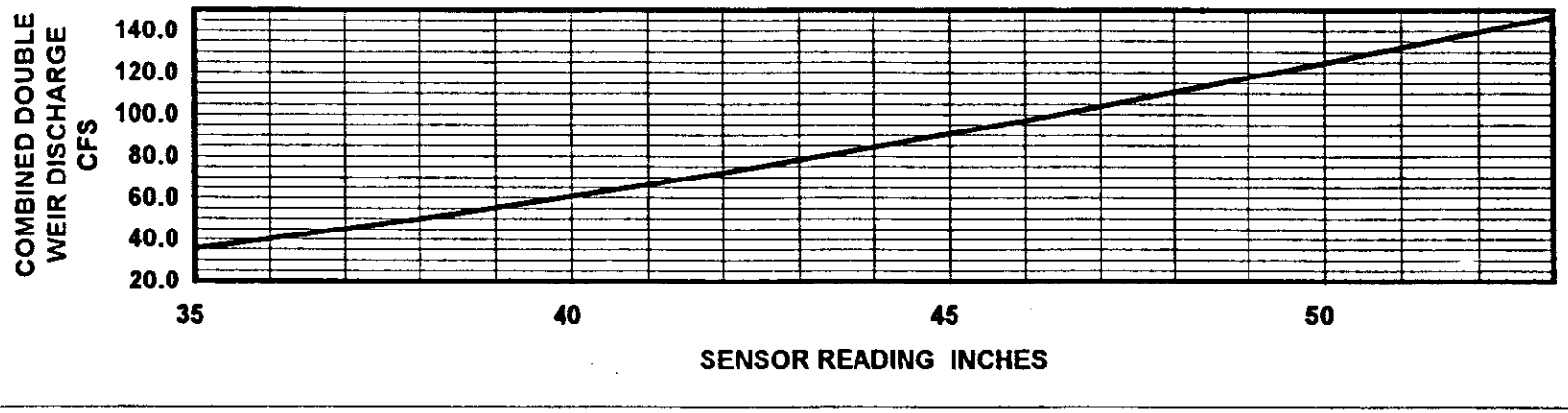
SENSOR WATER DEPTH Y1 INCHES	0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
35	35.4	35.8	36.2	36.7	37.1	37.6	38.0	38.5	39.0	39.4
35.5	37.6	38.1	38.5	39.0	39.5	39.9	40.4	40.9	41.3	41.8
36	40.0	40.4	40.9	41.4	41.8	42.3	42.8	43.3	43.8	44.2
36.5	42.4	42.8	43.3	43.8	44.3	44.8	45.3	45.7	46.2	46.7
37	44.8	45.3	45.8	46.3	46.8	47.3	47.8	48.3	48.8	49.3
37.5	47.3	47.8	48.3	48.8	49.3	49.8	50.3	50.8	51.4	51.9
38	49.9	50.4	50.9	51.4	51.9	52.4	53.0	53.5	54.0	54.5
38.5	52.5	53.0	53.5	54.0	54.6	55.1	55.6	56.2	56.7	57.2
39	55.1	55.7	56.2	56.7	57.3	57.8	58.3	58.9	59.4	60.0
39.5	57.8	58.4	58.9	59.5	60.0	60.6	61.1	61.6	62.2	62.8
40	60.6	61.1	61.7	62.2	62.8	63.4	63.9	64.5	65.0	65.6
40.5	63.4	64.0	64.5	65.1	65.6	66.2	66.8	67.3	67.9	68.5
41	66.2	66.8	67.4	67.9	68.5	69.1	69.7	70.2	70.8	71.4
41.5	69.1	69.7	70.3	70.9	71.4	72.0	72.6	73.2	73.8	74.4
42	72.1	72.7	73.2	73.8	74.4	75.0	75.6	76.2	76.8	77.4

← tenths of inches

EXAMPLE:
GAGE=36.3 INCHES
Q= 41.4 CFS

42.5	75.1	75.6	76.2	76.8	77.4	78.0	78.6	79.2	79.8	80.5
43	78.1	78.7	79.3	79.9	80.5	81.1	81.7	82.3	82.9	83.6
43.5	81.1	81.8	82.4	83.0	83.6	84.2	84.8	85.5	86.1	86.7
44	84.3	84.9	85.5	86.1	86.7	87.4	88.0	88.6	89.3	89.9
44.5	87.4	88.0	88.7	89.3	89.9	90.6	91.2	91.8	92.5	93.1
45	90.6	91.2	91.9	92.5	93.2	93.8	94.4	95.1	95.7	96.4
45.5	93.8	94.5	95.1	95.8	96.4	97.1	97.7	98.4	99.0	99.7
46	97.1	97.8	98.4	99.1	99.7	100.4	101.1	101.7	102.4	103.0
46.5	100.4	101.1	101.8	102.4	103.1	103.7	104.4	105.1	105.8	106.4
47	103.8	104.5	105.1	105.8	106.5	107.1	107.8	108.5	109.2	109.8
47.5	107.2	107.9	108.5	109.2	109.9	110.6	111.3	111.9	112.6	113.3
48	110.6	111.3	112.0	112.7	113.4	114.0	114.7	115.4	116.1	116.8
48.5	114.1	114.8	115.5	116.2	116.9	117.5	118.2	118.9	119.6	120.3
49	117.6	118.3	119.0	119.7	120.4	121.1	121.8	122.5	123.2	123.9
49.5	121.1	121.8	122.5	123.3	124.0	124.7	125.4	126.1	126.8	127.5
50	124.7	125.4	126.1	126.9	127.6	128.3	129.0	129.7	130.5	131.2
50.5	128.3	129.0	129.8	130.5	131.2	131.9	132.7	133.4	134.1	134.9
51	132.0	132.7	133.4	134.2	134.9	135.6	136.4	137.1	137.8	138.6
51.5	135.7	136.4	137.1	137.9	138.6	139.4	140.1	140.8	141.6	142.3
52	139.4	140.1	140.9	141.6	142.4	143.1	143.9	144.6	145.4	146.1
52.5	143.2	143.9	144.7	145.4	146.2	146.9	147.7	148.4	149.2	149.9
53	146.9	147.7	148.5	149.2	150.0	150.7	151.5	152.3	153.0	153.8

COMMERCIAL ENERGY MANAGEMENT
LAVA HYDRO DIVERSION
WEIRS AND FISH PIPE DISCHARGE



COMMERCIAL ENERGY MANAGEMENT LAVA HYDRO DIVERSION

VERTICAL SLUICE GATE C.E. BROCKWAY P.E. MAY 4, 1993
FREE FLOW AND SUBMERGED(Y3>0)
GATE COEFFICIENTS,C, FROM HENRY AS REPORTED BY CHOW
BY CHOW OPEN CHANNEL HYDRAULICS P509
WATER LEVEL SENSOR INDICATES DEPTH IN INCHES ABOVE FLOOR=Y1
Q=C*L*h*(2*g*(Y1-Y3))^.5 h=GATE OPENING
GATE WIDTH L= 4 FT NO OF GATES= 1 D.S. DEPTH Y3= 0 FT, FREEFLOW

DISCHARGE THROUGH GATE CFS

GATE OPENING FEET--h

ENSOR WATER DEPTH Y1 INCHES	0.5	0.6	0.7	0.8	0.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0
35	15.4	18.3	21.1	23.9	26.7	29.3	32.0	34.6	37.2	39.7	42.2	44.7	47.1	49.5	51.9	54.2
35.5	15.6	18.5	21.3	24.1	26.9	29.6	32.3	34.9	37.5	40.1	42.6	45.1	47.5	50.0	52.3	54.7
36	15.7	18.6	21.5	24.3	27.1	29.8	32.5	35.2	37.8	40.4	42.9	45.5	47.9	50.4	52.8	55.2
36.5	15.8	18.8	21.7	24.5	27.3	30.1	32.8	35.5	38.1	40.7	43.3	45.9	48.4	50.8	53.3	55.7
37	15.9	18.9	21.8	24.7	27.5	30.3	33.1	35.8	38.4	41.1	43.7	46.2	48.8	51.3	53.7	56.2
37.5	16.0	19.0	22.0	24.9	27.7	30.6	33.3	36.1	38.8	41.4	44.0	46.6	49.2	51.7	54.2	56.7
38	16.2	19.2	22.2	25.1	28.0	30.8	33.6	36.3	39.1	41.7	44.4	47.0	49.6	52.1	54.7	57.1
38.5	16.3	19.3	22.3	25.3	28.2	31.0	33.9	36.6	39.4	42.1	44.8	47.4	50.0	52.6	55.1	57.6
39	16.4	19.5	22.5	25.5	28.4	31.3	34.1	36.9	39.7	42.4	45.1	47.8	50.4	53.0	55.6	58.1
39.5	16.5	19.6	22.7	25.6	28.6	31.5	34.4	37.2	40.0	42.7	45.5	48.1	50.8	53.4	56.0	58.6
40	16.6	19.7	22.8	25.8	28.8	31.7	34.6	37.5	40.3	43.1	45.8	48.5	51.2	53.8	56.4	59.0
40.5	16.7	19.9	23.0	26.0	29.0	32.0	34.9	37.8	40.6	43.4	46.2	48.9	51.6	54.2	56.9	59.5
41	16.9	20.0	23.1	26.2	29.2	32.2	35.1	38.0	40.9	43.7	46.5	49.3	52.0	54.7	57.3	59.9
41.5	17.0	20.2	23.3	26.4	29.4	32.4	35.4	38.3	41.2	44.0	46.8	49.6	52.4	55.1	57.8	60.4
42	17.1	20.3	23.5	26.6	29.6	32.6	35.6	38.6	41.5	44.3	47.2	50.0	52.7	55.5	58.2	60.9
42.5	17.2	20.4	23.6	26.7	29.8	32.9	35.9	38.8	41.8	44.7	47.5	50.3	53.1	55.9	58.6	61.3
43	17.3	20.6	23.8	26.9	30.0	33.1	36.1	39.1	42.1	45.0	47.9	50.7	53.5	56.3	59.0	61.8
43.5	17.4	20.7	23.9	27.1	30.2	33.3	36.4	39.4	42.4	45.3	48.2	51.1	53.9	56.7	59.5	62.2
44	17.5	20.8	24.1	27.3	30.4	33.5	36.6	39.6	42.6	45.6	48.5	51.4	54.3	57.1	59.9	62.7
44.5	17.6	21.0	24.2	27.5	30.6	33.8	36.9	39.9	42.9	45.9	48.9	51.8	54.6	57.5	60.3	63.1
45	17.8	21.1	24.4	27.6	30.8	34.0	37.1	40.2	43.2	46.2	49.2	52.1	55.0	57.9	60.7	63.5
45.5	17.9	21.2	24.5	27.8	31.0	34.2	37.3	40.4	43.5	46.5	49.5	52.5	55.4	58.3	61.1	64.0
46	18.0	21.4	24.7	28.0	31.2	34.4	37.6	40.7	43.8	46.8	49.8	52.8	55.8	58.7	61.6	64.4
46.5	18.1	21.5	24.8	28.1	31.4	34.6	37.8	40.9	44.1	47.1	50.2	53.2	56.1	59.1	62.0	64.8
47	18.2	21.6	25.0	28.3	31.6	34.8	38.0	41.2	44.3	47.4	50.5	53.5	56.5	59.4	62.4	65.3
47.5	18.3	21.7	25.1	28.5	31.8	35.1	38.3	41.5	44.6	47.7	50.8	53.8	56.9	59.8	62.8	65.7
48	18.4	21.9	25.3	28.7	32.0	35.3	38.5	41.7	44.9	48.0	51.1	54.2	57.2	60.2	63.2	66.1
48.5	18.5	22.0	25.4	28.8	32.2	35.5	38.7	42.0	45.2	48.3	51.4	54.5	57.6	60.6	63.6	66.5
49	18.6	22.1	25.6	29.0	32.4	35.7	39.0	42.2	45.4	48.6	51.7	54.9	57.9	61.0	64.0	67.0
49.5	18.7	22.2	25.7	29.2	32.5	35.9	39.2	42.5	45.7	48.9	52.1	55.2	58.3	61.3	64.4	67.4
50	18.8	22.4	25.9	29.3	32.7	36.1	39.4	42.7	46.0	49.2	52.4	55.5	58.6	61.7	64.8	67.8
50.5	18.9	22.5	26.0	29.5	32.9	36.3	39.7	43.0	46.2	49.5	52.7	55.9	59.0	62.1	65.2	68.2
51	19.0	22.6	26.2	29.7	33.1	36.5	39.9	43.2	46.5	49.8	53.0	56.2	59.3	62.5	65.6	68.6
51.5	19.1	22.7	26.3	29.8	33.3	36.7	40.1	43.5	46.8	50.1	53.3	56.5	59.7	62.8	65.9	69.0
52	19.2	22.9	26.4	30.0	33.5	36.9	40.3	43.7	47.0	50.3	53.6	56.8	60.0	63.2	66.3	69.4
52.5	19.3	23.0	26.6	30.1	33.7	37.1	40.6	43.9	47.3	50.6	53.9	57.2	60.4	63.6	66.7	69.8
53	19.4	23.1	26.7	30.3	33.8	37.3	40.8	44.2	47.6	50.9	54.2	57.5	60.7	63.9	67.1	70.3

COMMERCIAL ENERGY MANAGEMENT LAVA HYDRO DIVERSION

VERTICAL SLUICE GATE PLUS FISH PIPE C.E. BROCKWAY P.E. MAY 4, 1993
FREE FLOW AND SUBMERGED(Y3>0)
GATE COEFFICIENTS,C, FROM HENRY AS REPORTED BY CHOW
BY CHOW OPEN CHANNEL HYDRAULICS P509
WATER LEVEL SENSOR INDICATES DEPTH IN INCHES ABOVE FLOOR=Y1
Q=C*L*h*(2*g*(Y1-Y3))^.5 h=GATE OPENING
GATE WIDTH L= 4.00 FT NO OF GATES= 1 D.S. DEPTH Y3= 0 FT, FF

PIPE DIA= 10 IN. AREA 0.5 SQ F L= 69 IN
ELEV TOP OF PIPE= 88.48 INLET K= 1
ELEV OF FLOOR= 88.70 D-W FRICTION= .020
ELEV WATER LEVEL=FLOOR+SENSOR/12
NET PIPE HEAD=SENSOR/12+(FLOOR-TOP OF PIPE)+(DIA/2)/12
NET PIPE HEAD=SENSOR+ 0.64 FT
VEL=SQRT((NET HEAD*2*D/12*32.2)/f*L-K/64.4))
QP=VEL*AREA

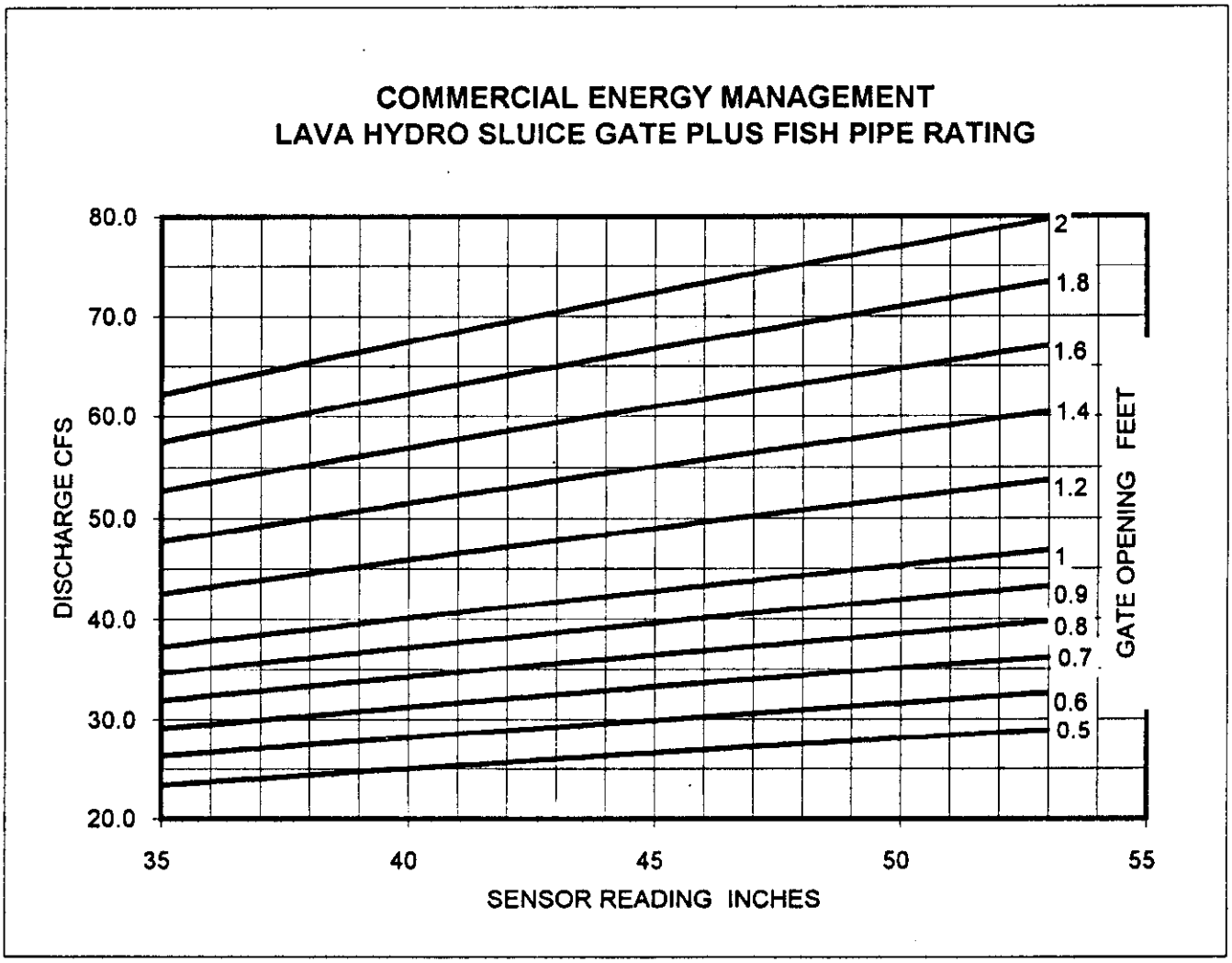
FREE FLOW GATE COEFFICIENT EQUATION
C=K-D*Y1/H^-N
D= 0.16
N= 0.54
K= 0.63

DISCHARGE THROUGH GATE AND PIPE CFS

GATE OPENING FEET–h

ENSOR WATER DEPTH Y1	0.5	0.6	0.7	0.8	0.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0
35	23.4	26.3	29.1	31.9	34.6	37.3	39.9	42.5	45.1	47.6	50.1	52.6	55.0	57.4	59.8	62.2
35.5	23.6	26.5	29.3	32.1	34.9	37.6	40.3	42.9	45.5	48.0	50.6	53.1	55.5	57.9	60.3	62.7
36	23.7	26.6	29.5	32.3	35.1	37.9	40.6	43.2	45.8	48.4	51.0	53.5	56.0	58.4	60.9	63.2
36.5	23.9	26.8	29.7	32.6	35.4	38.2	40.9	43.6	46.2	48.8	51.4	53.9	56.4	58.9	61.4	63.8
37	24.1	27.0	30.0	32.8	35.7	38.4	41.2	43.9	46.6	49.2	51.8	54.4	56.9	59.4	61.9	64.3
37.5	24.2	27.2	30.2	33.1	35.9	38.7	41.5	44.2	46.9	49.6	52.2	54.8	57.4	59.9	62.4	64.8
38	24.4	27.4	30.4	33.3	36.2	39.0	41.8	44.6	47.3	50.0	52.6	55.2	57.8	60.4	62.9	65.4
38.5	24.5	27.6	30.6	33.5	36.4	39.3	42.1	44.9	47.6	50.3	53.0	55.6	58.3	60.8	63.4	65.9
39	24.7	27.8	30.8	33.8	36.7	39.6	42.4	45.2	48.0	50.7	53.4	56.1	58.7	61.3	63.9	66.4
39.5	24.9	28.0	31.0	34.0	36.9	39.9	42.7	45.5	48.3	51.1	53.8	56.5	59.1	61.8	64.4	66.9
40	25.0	28.1	31.2	34.2	37.2	40.1	43.0	45.9	48.7	51.5	54.2	56.9	59.6	62.2	64.8	67.4
40.5	25.2	28.3	31.4	34.5	37.5	40.4	43.3	46.2	49.0	51.8	54.6	57.3	60.0	62.7	65.3	67.9
41	25.3	28.5	31.6	34.7	37.7	40.7	43.6	46.5	49.4	52.2	55.0	57.7	60.5	63.1	65.8	68.4
41.5	25.5	28.7	31.8	34.9	37.9	40.9	43.9	46.8	49.7	52.6	55.4	58.1	60.9	63.6	66.3	68.9
42	25.7	28.9	32.0	35.1	38.2	41.2	44.2	47.1	50.0	52.9	55.7	58.5	61.3	64.1	66.8	69.4
42.5	25.8	29.0	32.2	35.4	38.4	41.5	44.5	47.5	50.4	53.3	56.1	59.0	61.7	64.5	67.2	69.9
43	26.0	29.2	32.4	35.6	38.7	41.8	44.8	47.8	50.7	53.6	56.5	59.4	62.2	64.9	67.7	70.4
43.5	26.1	29.4	32.6	35.8	38.9	42.0	45.1	48.1	51.0	54.0	56.9	59.8	62.6	65.4	68.2	70.9
44	26.3	29.6	32.8	36.0	39.2	42.3	45.4	48.4	51.4	54.3	57.3	60.2	63.0	65.8	68.6	71.4
44.5	26.4	29.7	33.0	36.2	39.4	42.5	45.6	48.7	51.7	54.7	57.6	60.5	63.4	66.3	69.1	71.9
45	26.6	29.9	33.2	36.5	39.6	42.8	45.9	49.0	52.0	55.0	58.0	60.9	63.8	66.7	69.6	72.4
45.5	26.7	30.1	33.4	36.7	39.9	43.1	46.2	49.3	52.4	55.4	58.4	61.3	64.3	67.1	70.0	72.8
46	26.9	30.3	33.6	36.9	40.1	43.3	46.5	49.6	52.7	55.7	58.7	61.7	64.7	67.6	70.5	73.3
46.5	27.0	30.4	33.8	37.1	40.4	43.6	46.8	49.9	53.0	56.1	59.1	62.1	65.1	68.0	70.9	73.8

47	27.2	30.6	34.0	37.3	40.6	43.8	47.0	50.2	53.3	56.4	59.5	62.5	65.5	68.4	71.4	74.3
47.5	27.3	30.8	34.2	37.5	40.8	44.1	47.3	50.5	53.6	56.8	59.8	62.9	65.9	68.9	71.8	74.7
48	27.5	30.9	34.4	37.7	41.1	44.3	47.6	50.8	54.0	57.1	60.2	63.3	66.3	69.3	72.3	75.2
48.5	27.6	31.1	34.5	37.9	41.3	44.6	47.9	51.1	54.3	57.4	60.5	63.6	66.7	69.7	72.7	75.7
49	27.8	31.3	34.7	38.1	41.5	44.8	48.1	51.4	54.6	57.8	60.9	64.0	67.1	70.1	73.1	76.1
49.5	27.9	31.4	34.9	38.3	41.7	45.1	48.4	51.7	54.9	58.1	61.3	64.4	67.5	70.5	73.6	76.6
50	28.0	31.6	35.1	38.6	42.0	45.3	48.7	52.0	55.2	58.4	61.6	64.8	67.9	71.0	74.0	77.0
50.5	28.2	31.8	35.3	38.8	42.2	45.6	48.9	52.2	55.5	58.8	62.0	65.1	68.3	71.4	74.4	77.5
51	28.3	31.9	35.5	39.0	42.4	45.8	49.2	52.5	55.8	59.1	62.3	65.5	68.7	71.8	74.9	77.9
51.5	28.5	32.1	35.6	39.2	42.6	46.1	49.5	52.8	56.1	59.4	62.6	65.9	69.0	72.2	75.3	78.4
52	28.6	32.2	35.8	39.4	42.9	46.3	49.7	53.1	56.4	59.7	63.0	66.2	69.4	72.6	75.7	78.8
52.5	28.7	32.4	36.0	39.6	43.1	46.6	50.0	53.4	56.7	60.1	63.3	66.6	69.8	73.0	76.2	79.3
53	28.9	32.6	36.2	39.8	43.3	46.8	50.2	53.7	57.0	60.4	63.7	67.0	70.2	73.4	76.6	79.7



COMMERCIAL ENERGY MANAGEMENT LAVA HYDRO DIVERSION

OVERFLOW WEIR C.E. BROCKWAY P.E. MAY 8, 1993

BROAD CRESTED WEIR- 12 INCH CONCRETE CONCRETE

ELEVATION OF FLOOR= 88.70 FT

ELEVATION OF WEIR CREST= 92.70 FT

WATER LEVEL SENSOR INDICATES DEPTH IN INCHES ABOVE FLOOR=Y1

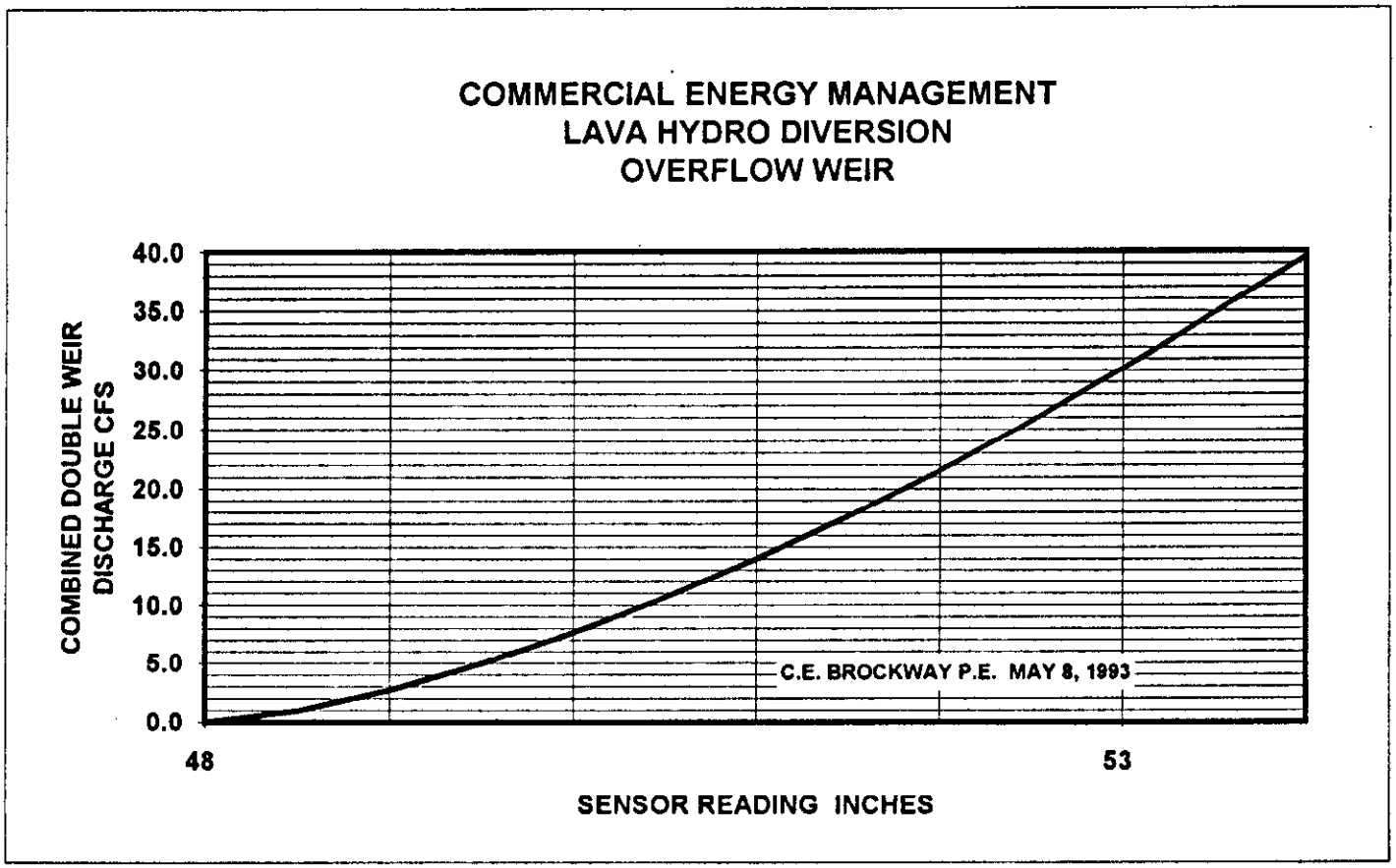
Q=C*L*h^3/2 h=HEAD ON WEIR=Y1-WEIR CREST ELEVATION

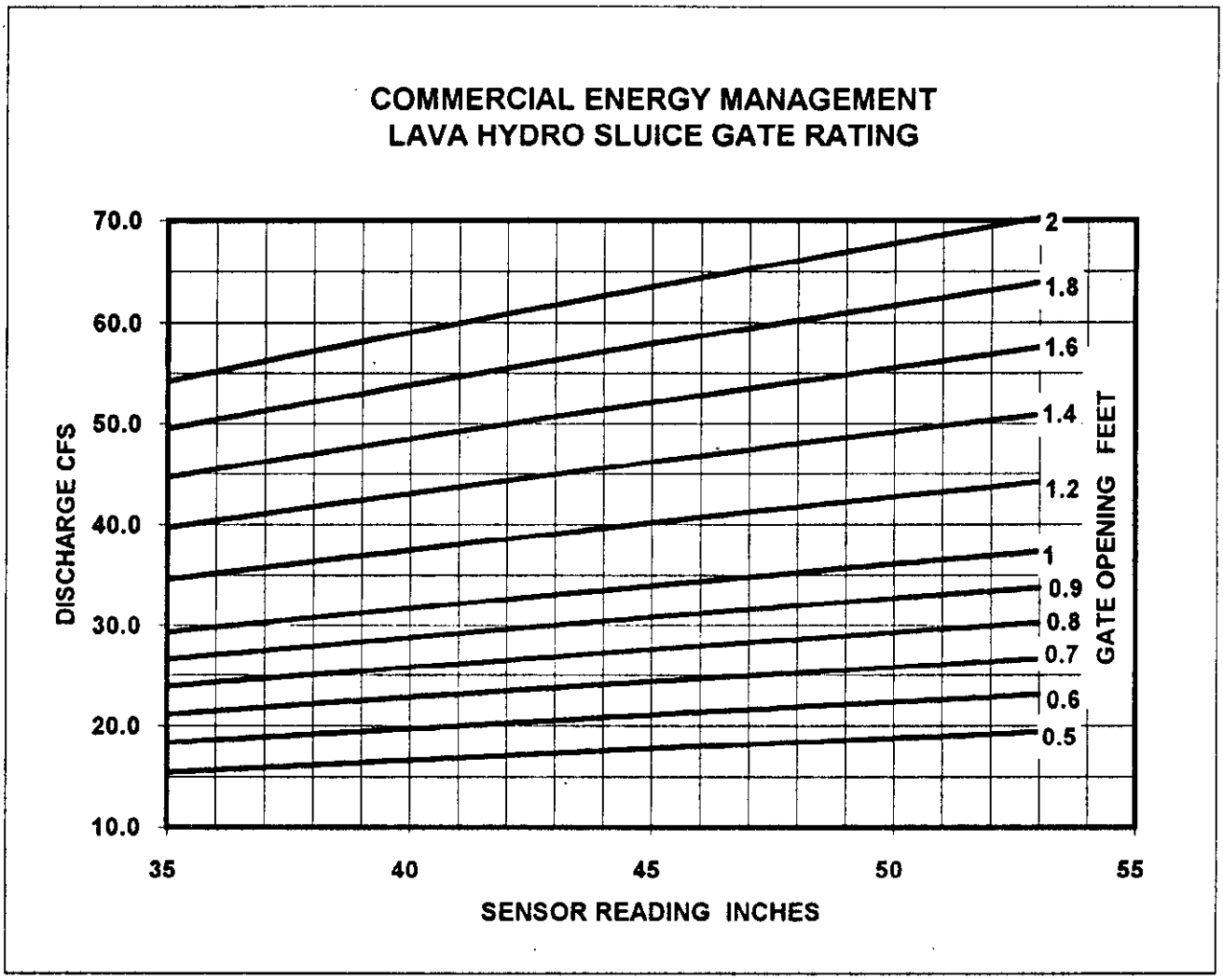
WEIR COEFFICIENT= 2.80

WEIR WIDTH L= 40.00 FT NO OF WEIRS= 1 D.S. DEPTH Y3= 0 FT, FREEFLOW

DISCHARGE- OVERFLOW WEIR CFS

SENSOR WATER DEPTH Y1 INCHES	0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
48	0.0	0.1	0.2	0.4	0.7	1.0	1.3	1.6	1.9	2.3
48.5	1.0	1.3	1.6	1.9	2.3	2.7	3.1	3.5	4.0	4.5
49	2.7	3.1	3.5	4.0	4.5	4.9	5.5	6.0	6.5	7.1
49.5	4.9	5.5	6.0	6.5	7.1	7.6	8.2	8.8	9.4	10.0
50	7.6	8.2	8.8	9.4	10.0	10.7	11.3	12.0	12.6	13.3
50.5	10.7	11.3	12.0	12.6	13.3	14.0	14.7	15.4	16.2	16.9
51	14.0	14.7	15.4	16.2	16.9	17.6	18.4	19.2	20.0	20.8
51.5	17.6	18.4	19.2	20.0	20.8	21.6	22.4	23.2	24.0	24.9
52	21.6	22.4	23.2	24.0	24.9	25.7	26.6	27.5	28.3	29.2
52.5	25.7	26.6	27.5	28.3	29.2	30.1	31.0	31.9	32.9	33.8
53	30.1	31.0	31.9	32.9	33.8	34.8	35.7	36.7	37.6	38.6




COMMERCIAL ENERGY MANAGEMENT
LAVA HYDRO SLUICE GATE RATING
DISCHARGE CFS
70.0
60.0
50.0
40.0
30.0
20.0
10.0
35
40
45
50
55
SENSOR READING INCHES
GATE OPENING FEET
2
1.8
1.6
1.4
1.2
1
0.9
0.8
0.7
0.6
0.5

CEM COMMERCIAL ENERGY MGMT, INC.

P.O. Box 4518 • Pocatello, Idaho 83205 • Telephone (208) 237-3563 • Fax (208) 237-3563

September 19, 1996
Ref: CEM/1072

Mr. Steven Garrison
Idaho Department of Water Resources
900 N. Skyline Dr.
Idaho Falls, ID 83402

RECEIVED
SEP 23 1996
Department of Water Resources
Eastern Region

Subject: Portneuf River Hydroelectric Project
Lava Hot Springs, Idaho
FERC Project No. 7447-002
Permit Nos. 29-7699

Dear Mr. Garrison:

As per your request during the power plant inspection on Wednesday September 18, 1996, attached please find the specifications on power generation capabilities.

Please note on page 1 the manufacturer specifications of turbine list the water flow as Q=6.06 cubic meter per second. This is equivalent to 213.8 cubic feet per second. Also, page 2 provides you with the generator kilowatts capabilities.

I trust this information will satisfy your requirement. Should there be any further questions, please advise.

Thank you for your cooperation.

Sincerely,

Maher F. Wissa
President

Attachments: 2

design flow	Q=6.06	m^3/s
rated speed	n=360	r/min
rated power	N=900	kw

2.2 Performance parameters

2.2.1 axial hydro-thrust

P=110, 422 N

2.2.2 runaway speed

n_R=765 r/min

2.3 Guaranteed calculation for regulation

Calculate according to full load rejection under design head and rated load.

closing time	Ts (s)	12	13	14	15
maximum relative increase of pressure	ξ_{max}(%)	66.1	59.8	54.6	50.3
relative increase of spiral case pressure	ξ_c(%)	65.1	58.9	53.8	49.5
relative increase of speed	β (%)	51.2	52.7	54.2	55.6

3.Brief Introduction for the Structure and the Main Parts of the Water Turbine

3.1 Influent pipe

The influent pipe is composed of PDF30-WY-175 butterfly valve, erection joint, cone influent pipe, influent bend and straight influent pipe (ϕ1810 mm). The flange joint plane adopts rubber seal (ϕ8mm). The butterfly valve is used for static closing when the unit stops, or emergency closing and cutting off the flow when the unit occurs emergency accidents of the distributor running away.The erection joint is used for compensating the length error of installation and easy overhauling. ϕ1810mm straight influent pipe (ordinary carbon steel), set up in front of the butterfly valve,

1 GENERAL

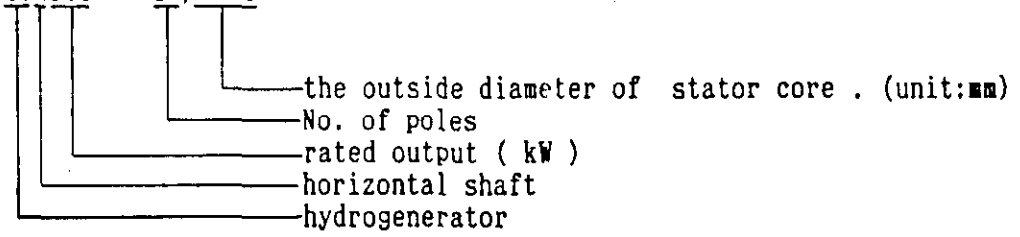
This machine is designed and manufactured for Portneuf River-Hydroelectric Project , USA . It is driven by a Mixed flow turbine ,The runner of the turbine is directly fixed on an end of generator's shaft .This machine having a horizontal synchronous shaft and structures that protect against of dripping water is of salient-pole synchronous type . The cooling air enter into machine through guarde plate on both ends of the frame into the machine ,and it passed through the rotor and ventilating duct of stator core ,then vented to outside from the top of the frame . The whole rotatory parts is supported by a Φ280 (mm) plain journal bearing and a Φ320 (mm) plain thrust-journal bearing . The brush bearing and the speed detector are fixed on the thrust-journal bearing side end of the shaft.

There are two earthing bolts at bottom of the frame on side of thrust journal bearing can be used to earth fault protection.

The machine is running in counter clockwise while viewing the generator in front of turbine .

The meaning of generator type symbol:

TYPE : SFW900 — 20/2600



2 TECHNICAL DATA

Capacity :	900	KW
Voltage :	4160	V
Current :	147	A
Power factor :	0.85	
Frequency:	60	Hz
Number of phases	3	
Connection of stator	Y	
Number of poles	20	
Rated speed :	360	rpm
Runaway speed:	765	rpm
Rated excitation current:	318	A
Rated excitation voltage:	55	V
Insulation class of stator:	B	
Insulation class of rotor:	B	
Rotational inertia WR :	119000	lb.f
Direct—axis reactance Xd:	1.066	
Direct—axis transient reactance X'd :	0.287	
Direct—axis subtransient reactance X''d :	0.225	
Zero—sequence reactance Xo :	0.066	
Negative—sequence reactance X2 :	0.236	
Efficiency n% :	93.59%	

CEM COMMERCIAL ENERGY MGMT, INC.

P.O. Box 4518 • Pocatello, Idaho 83205 • Telephone (208) 237-3563 • Fax (208) 237-3563

September 19, 1996
Ref: CEM/1072

Mr. Steven Garrison
Idaho Department of Water Resources
900 N. Skyline Dr.
Idaho Falls, ID 83402

Subject: Portneuf River Hydroelectric Project
Lava Hot Springs, Idaho
FERC Project No. 7447-002
Permit Nos. 29-7699

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Sincerely,

Maher F. Wissa
President

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rated speed	n=360	r/min
rated power	N=900	kw

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P=110, 422 N

2.2.2 runaway speed

n_R=765 r/min

2.3 Guaranteed calculation for regulation

Calculate according to full load rejection under design head and rated load.

closing time	Ts (s)	12	13	14	15
maximum relative increase of pressure	ξ_{max} (%)	66.1	59.8	54.6	50.3
relative increase of spiral case pressure	ξ_c (%)	65.1	58.9	53.8	49.5
relative increase of speed	β (%)	51.2	52.7	54.2	55.6

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3.1 Influent pipe

The influent pipe is composed of PDF30-WY-175 butterfly valve, erection joint, cone influent pipe, influent bend and straight influent pipe (ϕ 1810 mm). The flange joint plane adopts rubber seal (ϕ 8mm). The butterfly valve is used for static closing when the unit stops, or emergency closing and cutting off the flow when the unit occurs emergency accidents of the distributor running away.The erection joint is used for compensating the length error of instaliation and easy overhauling. ϕ 1810mm straight influent pipe (ordinary carbon steel), set up in front of the butterfly valve,

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There are two earthing bolts at bottom of the frame on side of thrust journal bearing can be used to earth fault protection.

The machine is running in counter clockwise while viewing the generator in front of turbine .

The meaning of generator type symbol:

TYPE : SFW900 — 20/2600

- SFW900 — 20/2600 — the outside diameter of stator core . (unit:mm)
- SFW900 — 20/ — No. of poles
- SFW900 — — rated output (kW)
- SFW — — horizontal shaft
- SF — — hydrogenerator

2 TECHNICAL DATA

Capacity :	900	KW
Voltage :	4160	V
Current :	147	A
Power factor :	0.85	
Frequency:	60	Hz
Number of phases	3	
Connection of stator	Y	
Number of poles	20	
Rated speed :	360	rpm
Runaway speed:	765	rpm
Rated excitation current:	318	A
Rated excitation voltage:	55	V
Insulation class of stator:	B	
Insulation class of rotor:	B	
Rotational inertia WR :	119000	lb.f
Direct—axis reactance Xd:	1.066	
Direct—axis transient reactance X'd :	0.287	
Direct—axis subtransient reactance X''d :	0.225	
Zero—sequence reactance Xo :	0.066	
Negative—sequence reactance X2 :	0.230	
Efficiency n% :	93.59%	

Flow Readings taken once each hr.

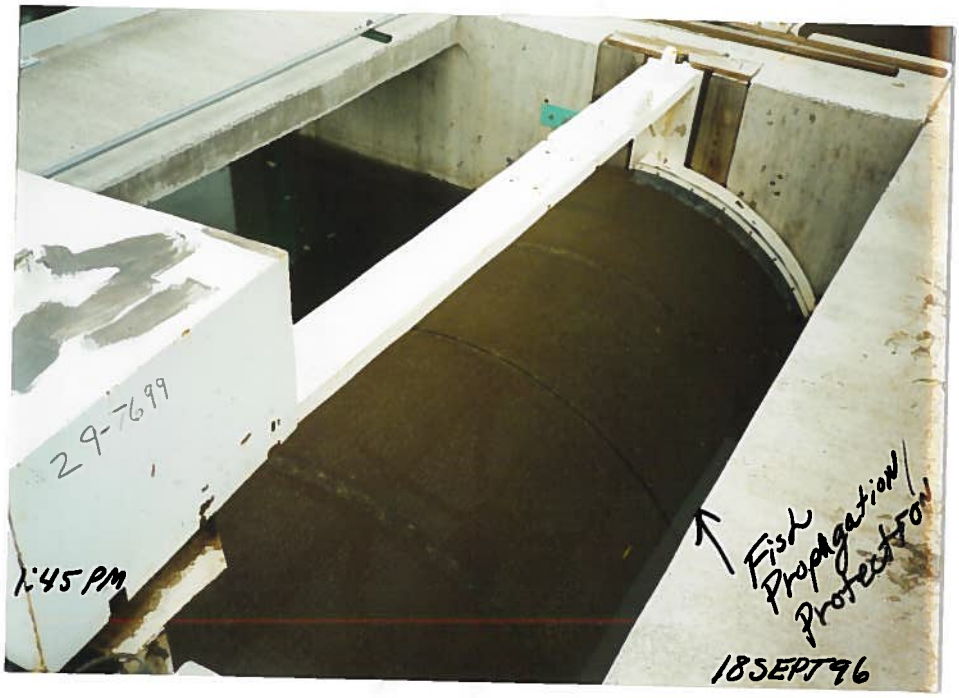
By-pass by 10" pipe + bypass weir

S Martman Level Control Module with
by pass information available each week

By-pass gates converted to weir + third gate for
High Flow bypass - Also 10" bypass pipe under
intake channel
Intake with Rotating Fish screen drums (4)

Call Karin on Aug. 2

Examiner: Steven Garrison.



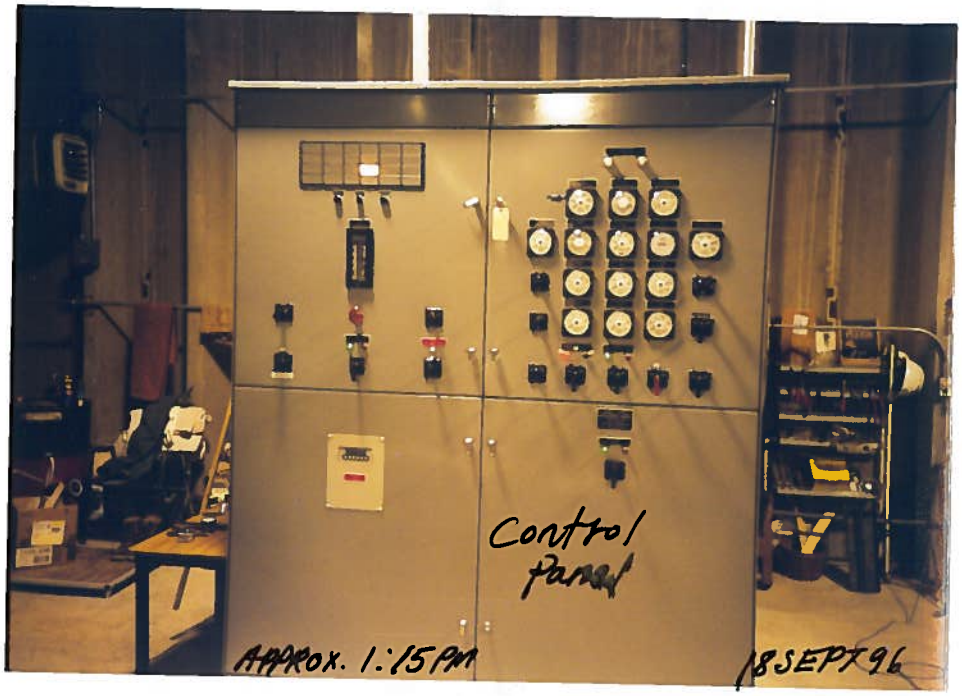
29-7699

Examiner: Steven Garrison

29-7699

Examiner : Steven Garrison

29-7699



Examiner: Steven Garrison

29-7699

T 9 S

R 38 E

Point of Diversion

Place of use

Generation Plant

29-7699

Point of Diversion

Place of USE Generation Plant

29-7699

Lot 4	Lot 3	Lot 2	Lot 1
Lot 5			
Lot 6			
Lot 7			

Examiner: Steven Garrison

29-7699

E. NARRATIVE/REMARKS/COMMENTS

Note: Generation plant not operating at time of span. Mr. Wissa stated that the plant needed at least 40 CFS to operate and there was not sufficient water at the present time. He produced a copy of state document — adjudication claim - A29-11773, indicating that Dempsey and Topaz Irrigation (Two Canal Companies) were allowed to divert 32.0 CFS of water for irrigation and stock use during the period beginning September 16 and ending November 15. Mr. Wissa stated that with the reservoir not delivering water and the canal companies diverting water, the generation plant shut down on 15SEPT96, due to insufficient water to operate system.

Note: Metal Plate affixed to generator indicates that system is capable of producing 214 CFS. Photographs of metal plate will hopefully display this information. Mr. Wissa faxed the appropriate documentation (See Attachments), to IDWR.

*Note: Plant operating about 210.00 CFS, during May and June, according to Mr. Wissa.

Recommend — 210 CFS requested on permit.

Have conditions of permit approval been met? ___ yes ___ no

F. FLOW CALCULATIONS ____ Additional Computation Sheets Attached

Measured Method:

G. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$V_{I.R.}$ = (Acres Irrigated) x (Irrigation Requirement) = _____

$V_{D.R.}$ = [Diversion Rate (cfs)] x (Days in Irrigation Season) x 1.9835 = _____

V = Smaller of $V_{I.R.}$ and $V_{D.R.}$ = _____

2. Volume Calculations for Other Uses:

H. RECOMMENDATIONS

1. Recommended Amounts

Beneficial Use	Period of Use From	Period of Use To	Rate of Diversion Q (cfs)	Annual Volume V (afa)
Power Generation (Commercial)	1-1	12-31	210.0 CFS	
		Totals:	210.0 CFS	

2. Recommended Amendments

___ Change P.D. as reflected above ___ Add P.D. as reflected above ✓ None

___ Change P.U. as reflected above ___ Add P.U. as reflected above ___ Other

I. AUTHENTICATION

Field Examiner's Name Steve A Harrison Date 18SEPT96

Reviewer _____ Date _____ SEAL

State of Idaho
DEPARTMENT OF WATER RESOURCES
1301 North Orchard Street, P.O. BOX 83720, Boise, Idaho 83720-0098
Phone: (208) 327-7900 FAX: (208) 327-7866

PHILIP E. BATT
GOVERNOR

KARL J. DREHER
DIRECTOR

September 24, 1997

Commercial Energy Management
c/o Maher F. Wissa
P.O. Box 4518
Pocatello, ID 83205

RE: PERMIT NO. 29-07699

Dear Mr. Wissa:

Enclosed is a Preliminary Order which relaxes the reporting condition of flows in the bypass channel for your Portneuf River Hydroelectric Project near Lava Hot Springs, Idaho.

The changed condition provides that in the future you will only need to submit bypass measurements to the department upon request of the department rather than within 30 days of collection. This less stringent reporting requirement should be acceptable to you. Thank you for your past cooperation in complying with the original permit conditions.

If you have questions, please feel free to contact me or the department.

Sincerely,

L. GLEN SAXTON, Chief
Water Allocation Bureau

Encl: 1

c: IDWR - E. Region

BEFORE THE DEPARTMENT OF WATER RESOURCES

OF THE STATE OF IDAHO

IN THE MATTER OF PERMIT NO. 29-07699 IN THE NAME OF COMMERCIAL ENERGY MANAGEMENT, INC.

PRELIMINARY ORDER

On July 20, 1988, the Department of Water Resources (department) issued Permit No. 29-07699 (permit) with the following condition of approval:

> 6. Prior to diversion of any water, a measuring device and lockable controlling works of a type acceptable to the department shall be permanently installed and maintained as part of the diverting works. Also, a measuring device with a continuous strip chart recorder (or other recording device) as approved by the department shall be installed and maintained on the natural channel to measure the flow in the bypassed reach. Records from the bypass channel shall be sent to the department within thirty (30) days of collection.

The department has determined that a less stringent reporting requirement is appropriate.

ORDER

IT IS THEREFORE, HEREBY ORDERED that the above described condition be changed to read as follows:

> 6. Prior to diversion of any water, a measuring device and lockable controlling works of a type acceptable to the department shall be permanently installed and maintained as part of the diverting works. Also, a measuring device with a continuous strip chart recorder (or other recording device) as approved by the department shall be installed and maintained on the natural channel to measure the flow in the bypassed reach. Records of bypass flows shall be sent to the department upon specific request of the department but not more frequent than 30 days after collection.

Dated this 24th day of September, 1997.

L. GLEN SAXTON, Chief
Water Allocation Bureau

CEM COMMERCIAL ENERGY MGMT, INC.
P.O. Box 4518 • Pocatello, Idaho 83205 • Telephone (208) 237-3563 • Fax (208) 237-3563

September 22, 1997
Ref: CEM/1098

RECEIVED
SEP 2 4 1997
Department of Water Resources

Mr. L. GLEN SAXTON
Chief, Water Allocation Bureau
State of Idaho, Department of Water Resources
1301 North Orchard Street
Statehouse Mail
Boise, ID 83720-9000

Subject: Portneuf River Hydroelectric Project
Lava Hot Springs, Idaho
FERC Project No. 7447-002
Permit No. 29-7699

Dear Mr. Saxton:

Attached please find copies of the bypass channel flow records for the period from July 1 to August 31, 1997.

Sincerely,

Maher F. Wissa
President

Attachments: 32 sheets

DATE 08-31-97

TIME	LEVEL	FLOW
23:00:00	46.0	41.6
22:00:00	45.9	41.1
21:00:00	45.9	41.1
20:00:00	46.3	43.0
19:00:00	45.8	40.7
18:00:00	46.2	42.6
17:00:00	46.2	42.6
16:00:00	46.3	43.0
15:00:00	46.3	43.0
14:00:00	46.2	42.6
13:00:00	46.1	42.1
12:00:00	46.1	42.1
11:00:00	48.8	57.7
10:00:00	50.7	78.2
09:00:00	46.3	43.0
08:00:00	46.1	42.1
07:00:00	46.1	42.1
06:00:00	46.4	43.5
05:00:00	46.4	43.5
04:00:00	46.3	43.0
03:00:00	46.2	42.6
02:00:00	46.1	42.1
01:00:00	45.9	41.1
00:00:00	46.3	43.0

DATE 08-30-97

TIME	LEVEL	FLOW
23:00:00	46.3	43.0
22:00:00	45.9	41.1
21:00:00	46.6	44.5
20:00:00	45.8	40.7
19:00:00	46.1	42.1
18:00:00	46.2	42.6
17:00:00	46.2	42.6
16:00:00	47.5	49.0
15:00:00	50.6	77.0
14:00:00	46.2	42.6
13:00:00	46.2	42.6
12:00:00	46.1	42.1
11:00:00	46.0	41.6
10:00:00	46.3	43.0
09:00:00	46.1	42.1
08:00:00	46.1	42.1
07:00:00	46.3	43.0
06:00:00	46.4	43.5
05:00:00	46.3	43.0
04:00:00	46.4	43.5
03:00:00	46.3	43.0
02:00:00	46.4	43.5
01:00:00	46.3	43.0
00:00:00	46.3	43.0

DATE 08-29-97

TIME	LEVEL	FLOW
23:00:00	46.4	43.5
22:00:00	46.4	43.5
21:00:00	46.3	43.0
20:00:00	45.8	40.7
19:00:00	46.2	42.6
18:00:00	46.0	41.6
17:00:00	45.9	41.1
16:00:00	46.1	42.1
15:00:00	46.1	42.1
14:00:00	46.0	41.6
13:00:00	46.0	41.6
12:00:00	46.0	41.6
11:00:00	46.1	42.1
10:00:00	46.1	42.1
09:00:00	46.3	43.0
08:00:00	46.4	43.5
07:00:00	45.8	40.7
06:00:00	46.1	42.1
05:00:00	46.4	43.5
04:00:00	46.3	43.0
03:00:00	46.2	42.6
02:00:00	46.1	42.1
01:00:00	46.1	42.1
00:00:00	46.1	42.1

DATE 08-28-97

TIME	LEVEL	FLOW
23:00:00	46.2	42.6
22:00:00	46.3	43.0
21:00:00	46.4	43.5
20:00:00	46.4	43.5
19:00:00	46.1	42.1
18:00:00	46.2	42.6
17:00:00	46.1	42.1
16:00:00	46.1	42.1
15:00:00	46.0	41.6
14:00:00	46.0	41.6
13:00:00	46.1	42.1
12:00:00	46.2	42.6
11:00:00	46.2	42.6
10:00:00	46.3	43.0
09:00:00	46.3	43.0
08:00:00	46.3	43.0
07:00:00	46.2	42.6
06:00:00	46.2	42.6
05:00:00	46.1	42.1
04:00:00	46.0	41.6
03:00:00	46.0	41.6
02:00:00	46.0	41.6
01:00:00	46.1	42.1
00:00:00	46.1	42.1

DATE 08-27-97

TIME	LEVEL	FLOW
23:00:00	46.0	41.6
22:00:00	46.0	41.6
21:00:00	46.1	42.1
20:00:00	46.0	41.6
19:00:00	46.0	41.6
18:00:00	46.0	41.6
17:00:00	46.0	41.6
16:00:00	46.1	42.1
15:00:00	46.0	41.6
14:00:00	46.3	43.0
13:00:00	46.0	41.6
12:00:00	46.1	42.1
11:00:00	46.4	43.5
10:00:00	46.4	43.5
09:00:00	46.3	43.0
08:00:00	46.3	43.0
07:00:00	46.2	42.6
06:00:00	46.3	43.0
05:00:00	46.3	43.0
04:00:00	46.4	43.5
03:00:00	46.2	42.6
02:00:00	46.1	42.1
01:00:00	46.0	41.6
00:00:00	46.1	42.1

DATE 08-26-97

TIME	LEVEL	FLOW
23:00:00	46.1	42.1
22:00:00	46.0	41.6
21:00:00	46.0	41.6
20:00:00	46.1	42.1
19:00:00	46.3	43.0
18:00:00	46.3	43.0
17:00:00	46.1	42.1
16:00:00	46.2	42.6
15:00:00	46.2	42.6
14:00:00	46.2	42.6
13:00:00	46.0	41.6
12:00:00	45.9	41.1
11:00:00	46.0	41.6
10:00:00	46.1	42.1
09:00:00	46.3	43.0
08:00:00	46.1	42.1
07:00:00	46.0	41.6
06:00:00	46.0	41.6
05:00:00	46.4	43.5
04:00:00	46.3	43.0
03:00:00	46.1	42.1
02:00:00	46.0	41.6
01:00:00	46.1	42.1
00:00:00	46.4	43.5

DATE 08-25-97

TIME	LEVEL	FLOW
23:00:00	46.3	43.0
22:00:00	45.7	40.2
21:00:00	45.9	41.1
20:00:00	46.	42.1
19:00:00	46.0	41.6
18:00:00	46.0	41.6
17:00:00	46.0	41.6
16:00:00	46.1	42.1
15:00:00	46.1	42.1
14:00:00	46.0	41.6
13:00:00	46.0	41.6
12:00:00	46.0	41.6
11:00:00	46.0	41.6
10:00:00	46.1	42.1
09:00:00	46.2	42.6
08:00:00	46.1	42.1
07:00:00	46.1	42.1
06:00:00	46.0	41.6
05:00:00	46.2	42.6
04:00:00	46.4	43.5
03:00:00	46.4	43.5
02:00:00	46.3	43.0
01:00:00	46.3	43.0
00:00:00	46.4	43.5

DATE 08-24-97

TIME	LEVEL	FLOW
23:00:00	46.1	42.1
22:00:00	46.1	42.1
21:00:00	46.3	43.0
20:00:00	46.4	43.5
19:00:00	46.2	42.6
18:00:00	45.9	41.1
17:00:00	46.2	42.6
16:00:00	46.3	43.0
15:00:00	46.3	43.0
14:00:00	46.2	42.6
13:00:00	45.9	41.1
12:00:00	46.0	41.6
11:00:00	46.2	42.6
10:00:00	46.4	43.5
09:00:00	47.3	48.0
08:00:00	46.3	43.0
07:00:00	46.3	43.0
06:00:00	45.9	41.1
05:00:00	46.3	43.0
04:00:00	46.4	43.5
03:00:00	46.2	42.6
02:00:00	46.1	42.1
01:00:00	46.0	41.6
00:00:00	46.1	42.1

DATE 08-23-97

TIME	LEVEL	FLOW
23:00:00	46.1	42.1
22:00:00	46.2	42.6
21:00:00	46.1	42.1
20:00:00	46.0	41.6
19:00:00	46.0	41.6
18:00:00	46.3	43.0
17:00:00	46.0	41.6
16:00:00	46.1	42.1
15:00:00	46.3	43.0
14:00:00	46.4	43.5
13:00:00	46.2	42.6
12:00:00	45.9	41.1
11:00:00	46.0	41.6
10:00:00	45.9	41.1
09:00:00	46.3	43.0
08:00:00	47.9	51.0
07:00:00	46.0	41.6
06:00:00	46.1	42.1
05:00:00	46.4	43.5
04:00:00	46.4	43.5
03:00:00	46.4	43.5
02:00:00	46.2	42.6
01:00:00	46.1	42.1
00:00:00	46.4	43.5

DATE 08-22-97

TIME	LEVEL	FLOW
23:00:00	46.1	42.1
22:00:00	46.0	41.6
21:00:00	46.2	42.6
20:00:00	45.9	41.1
19:00:00	46.2	42.6
18:00:00	46.1	42.1
17:00:00	46.0	41.6
16:00:00	46.0	41.6
15:00:00	46.1	42.1
14:00:00	46.0	41.6
13:00:00	46.0	41.6
12:00:00	46.0	41.6
11:00:00	45.9	41.1
10:00:00	46.0	41.6
09:00:00	46.2	42.6
08:00:00	46.4	43.5
07:00:00	46.1	42.1
06:00:00	45.9	41.1
05:00:00	46.5	44.0
04:00:00	46.3	43.0
03:00:00	46.2	42.6
02:00:00	46.1	42.1
01:00:00	46.0	41.6
00:00:00	46.1	42.1

DATE 08-21-97

TIME	LEVEL	FLOW
23:00:00	46.2	42.6
22:00:00	46.2	42.6
21:00:00	46.2	42.6
20:00:00	46.0	41.6
19:00:00	46.2	42.6
18:00:00	46.1	42.1
17:00:00	45.9	41.1
16:00:00	46.1	42.1
15:00:00	46.3	43.0
14:00:00	46.0	41.6
13:00:00	46.1	42.1
12:00:00	46.2	42.6
11:00:00	46.3	43.0
10:00:00	46.3	43.0
09:00:00	46.4	43.5
08:00:00	46.1	42.1
07:00:00	45.8	40.7
06:00:00	46.3	43.0
05:00:00	46.3	43.0
04:00:00	46.4	43.5
03:00:00	46.3	43.0
02:00:00	46.2	42.6
01:00:00	46.2	42.6
00:00:00	46.2	42.6

DATE 08-20-97

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	46.1	42.1
21:00:00	46.1	42.1
20:00:00	45.9	41.1
19:00:00	46.3	43.0
18:00:00	46.0	41.6
17:00:00	46.1	42.1
16:00:00	46.2	42.6
15:00:00	46.0	41.6
14:00:00	46.0	41.6
13:00:00	46.1	42.1
12:00:00	46.1	42.1
11:00:00	46.0	41.6
10:00:00	46.0	41.6
09:00:00	46.1	42.1
08:00:00	46.1	42.1
07:00:00	45.8	40.7
06:00:00	47.4	48.5
05:00:00	46.5	44.0
04:00:00	46.0	41.6
03:00:00	46.3	43.0
02:00:00	46.3	43.0
01:00:00	45.9	41.1
00:00:00	46.3	43.0

DATE 08-19-97

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	45.8	40.7
21:00:00	46.3	43.0
20:00:00	46.4	43.5
19:00:00	46.2	42.6
18:00:00	45.9	41.1
17:00:00	45.9	41.1
16:00:00	46.4	43.5
15:00:00	46.4	43.5
14:00:00	46.1	42.1
13:00:00	46.3	43.0
12:00:00	46.5	44.0
11:00:00	46.3	43.0
10:00:00	46.4	43.5
09:00:00	46.4	43.5
08:00:00	46.4	43.5
07:00:00	46.3	43.0
06:00:00	46.2	42.6
05:00:00	46.2	42.6
04:00:00	46.1	42.1
03:00:00	46.1	42.1
02:00:00	45.9	41.1
01:00:00	46.2	42.6
00:00:00	46.4	43.5

DATE 08-18-97

TIME	LEVEL	FLOW
23:00:00	46.4	43.5
22:00:00	46.4	43.5
21:00:00	46.2	42.6
20:00:00	46.1	42.1
19:00:00	46.0	41.6
18:00:00	45.9	41.1
17:00:00	46.0	41.6
16:00:00	46.3	43.0
15:00:00	46.4	43.5
14:00:00	45.9	41.1
13:00:00	46.1	42.1
12:00:00	46.4	43.5
11:00:00	46.0	41.6
10:00:00	45.9	41.1
09:00:00	46.3	43.0
08:00:00	45.8	40.7
07:00:00	46.2	42.6
06:00:00	46.1	42.1
05:00:00	46.3	43.0
04:00:00	46.3	43.0
03:00:00	46.2	42.6
02:00:00	46.2	42.6
01:00:00	46.1	42.1
00:00:00	46.1	42.1

DATE 08-17-97

TIME	LEVEL	FLOW
23:00:00	46.2	42.6
22:00:00	46.2	42.6
21:00:00	46.2	42.6
20:00:00	46.2	42.6
19:00:00	45.9	41.1
18:00:00	46.0	41.6
17:00:00	46.0	41.6
16:00:00	45.9	41.1
15:00:00	46.0	41.6
14:00:00	46.0	41.6
13:00:00	46.1	42.1
12:00:00	46.1	42.1
11:00:00	46.1	42.1
10:00:00	46.2	42.6
09:00:00	46.4	43.5
08:00:00	46.4	43.5
07:00:00	46.4	43.5
06:00:00	46.3	43.0
05:00:00	46.2	42.6
04:00:00	46.1	42.1
03:00:00	46.1	42.1
02:00:00	46.0	41.6
01:00:00	46.0	41.6
00:00:00	46.1	42.1

DATE 08-16-97

TIME	LEVEL	FLOW
23:00:00	46.2	42.6
22:00:00	46.3	43.0
21:00:00	46.4	43.5
20:00:00	46.4	43.5
19:00:00	46.3	43.0
18:00:00	45.9	41.1
17:00:00	46.2	42.6
16:00:00	46.0	41.6
15:00:00	46.0	41.6
14:00:00	46.1	42.1
13:00:00	46.2	42.6
12:00:00	46.3	43.0
11:00:00	46.2	42.6
10:00:00	46.2	42.6
09:00:00	46.0	41.6
08:00:00	46.1	42.1
07:00:00	46.4	43.5
06:00:00	46.4	43.5
05:00:00	46.2	42.6
04:00:00	46.3	43.0
03:00:00	46.1	42.1
02:00:00	46.1	42.1
01:00:00	45.9	41.1
00:00:00	45.9	41.1

DATE 08-15-97

TIME	LEVEL	FLOW
23:00:00	46.2	42.6
22:00:00	46.4	43.5
21:00:00	46.3	43.0
20:00:00	45.9	41.1
19:00:00	46.0	41.6
18:00:00	46.2	42.6
17:00:00	46.0	41.6
16:00:00	45.9	41.1
15:00:00	45.9	41.1
14:00:00	46.2	42.6
13:00:00	46.3	43.0
12:00:00	45.9	41.1
11:00:00	46.0	41.6
10:00:00	46.1	42.1
09:00:00	45.9	41.1
08:00:00	46.1	42.1
07:00:00	46.1	42.1
06:00:00	46.1	42.1
05:00:00	46.2	42.6
04:00:00	46.4	43.5
03:00:00	47.8	50.5
02:00:00	46.2	42.6
01:00:00	46.3	43.0
00:00:00	46.3	43.0

DATE 08-14-97

TIME	LEVEL	FLOW
23:00:00	46.1	42.1
22:00:00	46.0	41.6
21:00:00	46.0	41.6
20:00:00	46.0	41.6
19:00:00	46.2	42.6
18:00:00	46.2	42.6
17:00:00	45.8	40.7
16:00:00	46.0	41.6
15:00:00	46.2	42.6
14:00:00	45.9	41.1
13:00:00	46.1	42.1
12:00:00	46.2	42.6
11:00:00	46.3	43.0
10:00:00	46.3	43.0
09:00:00	46.4	43.5
08:00:00	46.3	43.0
07:00:00	46.2	42.6
06:00:00	46.1	42.1
05:00:00	46.1	42.1
04:00:00	46.1	42.1
03:00:00	46.0	41.6
02:00:00	46.0	41.6
01:00:00	46.0	41.6
00:00:00	46.2	42.6

DATE 08-11-97

TIME	LEVEL	FLOW
23:00:00	46.3	43.0
22:00:00	46.4	43.5
21:00:00	46.3	43.0
20:00:00	46.4	43.5
19:00:00	46.4	43.5
18:00:00	46.1	42.1
17:00:00	46.0	41.6
16:00:00	46.5	44.0
15:00:00	46.2	42.6
14:00:00	46.3	43.0
13:00:00	46.3	43.0
12:00:00	46.2	42.6
11:00:00	46.0	41.6
10:00:00	46.2	42.6
09:00:00	46.4	43.5
08:00:00	46.1	42.1
07:00:00	46.0	41.6
06:00:00	46.4	43.5
05:00:00	46.1	42.1
04:00:00	46.1	42.1
03:00:00	46.2	42.6
02:00:00	46.1	42.1
01:00:00	46.0	41.6
00:00:00	46.0	41.6

DATE 08-10-97

TIME	LEVEL	FLOW
23:00:00	46.3	43.0
22:00:00	45.9	41.1
21:00:00	46.1	42.1
20:00:00	46.0	41.6
19:00:00	46.0	41.6
18:00:00	46.0	41.6
17:00:00	46.3	43.0
16:00:00	46.3	43.0
15:00:00	46.2	42.6
14:00:00	46.3	43.0
13:00:00	45.9	41.1
12:00:00	46.5	44.0
11:00:00	46.3	43.0
10:00:00	46.3	43.0
09:00:00	46.4	43.5
08:00:00	46.4	43.5
07:00:00	46.4	43.5
06:00:00	46.3	43.0
05:00:00	46.2	42.6
04:00:00	46.1	42.1
03:00:00	46.0	41.6
02:00:00	46.1	42.1
01:00:00	46.1	42.1
00:00:00	46.2	42.6

DATE 08-09-97

TIME	LEVEL	FLOW
23:00:00	46.2	42.6
22:00:00	46.2	42.6
21:00:00	46	43.0
20:00:00	46.3	43.0
19:00:00	46.1	42.1
18:00:00	45.9	41.1
17:00:00	45.9	41.1
16:00:00	46.0	41.6
15:00:00	46.2	42.6
14:00:00	46.3	43.0
13:00:00	46.3	43.0
12:00:00	46.3	43.0
11:00:00	46.3	43.0
10:00:00	46.2	42.6
09:00:00	46.3	43.0
08:00:00	46.3	43.0
07:00:00	46.4	43.5
06:00:00	46.3	43.0
05:00:00	46.2	42.6
04:00:00	46.2	42.6
03:00:00	46.2	42.6
02:00:00	46.0	41.6
01:00:00	46.0	41.6
00:00:00	46.0	41.6

DATE 08-08-97

TIME	LEVEL	FLOW
23:00:00	46.0	41.6
22:00:00	46.0	41.6
21:00:00	46.0	41.6
20:00:00	45.9	41.1
19:00:00	45.9	41.1
18:00:00	46.0	41.6
17:00:00	46.4	43.5
16:00:00	46.4	43.5
15:00:00	46.1	42.1
14:00:00	46.1	42.1
13:00:00	46.1	42.1
12:00:00	46.3	43.0
11:00:00	46.5	44.0
10:00:00	46.2	42.6
09:00:00	45.8	40.7
08:00:00	46.0	41.6
07:00:00	46.0	41.6
06:00:00	46.0	41.6
05:00:00	46.0	41.6
04:00:00	46.0	41.6
03:00:00	46.0	41.6
02:00:00	45.9	41.1
01:00:00	46.0	41.6
00:00:00	45.9	41.1

DATE 08-07-97

TIME	LEVEL	FLOW
23:00:00	46.0	41.6
22:00:00	46.0	41.6
21:00:00	46.2	42.6
20:00:00	46.2	42.6
19:00:00	46.4	43.5
18:00:00	46.3	43.0
17:00:00	46.3	43.0
16:00:00	46.4	43.5
15:00:00	46.2	42.6
14:00:00	46.2	42.6
13:00:00	46.2	42.6
12:00:00	46.1	42.1
11:00:00	46.0	41.6
10:00:00	46.0	41.6
09:00:00	46.1	42.1
08:00:00	46.0	41.6
07:00:00	46.0	41.6
06:00:00	46.0	41.6
05:00:00	45.9	41.1
04:00:00	46.1	42.1
03:00:00	46.0	41.6
02:00:00	46.0	41.6
01:00:00	46.1	42.1
00:00:00	46.0	41.6

DATE 08-06-97

TIME	LEVEL	FLOW
23:00:00	46.0	41.6
22:00:00	46.0	41.6
21:00:00	46.0	41.6
20:00:00	46.1	42.1
19:00:00	46.2	42.6
18:00:00	46.2	42.6
17:00:00	46.3	43.0
16:00:00	46.4	43.5
15:00:00	46.4	43.5
14:00:00	46.3	43.0
13:00:00	46.2	42.6
12:00:00	46.0	41.6
11:00:00	46.2	42.6
10:00:00	46.4	43.5
09:00:00	46.4	43.5
08:00:00	46.4	43.5
07:00:00	46.3	43.0
06:00:00	46.3	43.0
05:00:00	46.3	43.0
04:00:00	46.3	43.0
03:00:00	46.3	43.0
02:00:00	46.2	42.6
01:00:00	46.2	42.6
00:00:00	46.3	43.0

DATE 08-05-97

TIME	LEVEL	FLOW
23:00:00	46.4	43.5
22:00:00	46.3	43.0
21:00:00	46.4	43.5
20:00:00	46.4	43.5
19:00:00	46.3	43.0
18:00:00	46.3	43.0
17:00:00	46.2	42.6
16:00:00	46.1	42.1
15:00:00	46.1	42.1
14:00:00	46.1	42.1
13:00:00	46.4	43.5
12:00:00	46.4	43.5
11:00:00	46.2	42.6
10:00:00	46.2	42.6
09:00:00	46.2	42.6
08:00:00	46.2	42.6
07:00:00	46.3	43.0
06:00:00	46.4	43.5
05:00:00	46.4	43.5
04:00:00	46.3	43.0
03:00:00	46.4	43.5
02:00:00	46.4	43.5
01:00:00	46.4	43.5
00:00:00	46.4	43.5

DATE 08-04-97

TIME	LEVEL	FLOW
23:00:00	46.3	43.0
22:00:00	46.4	43.5
21:00:00	46.4	43.5
20:00:00	46.3	43.0
19:00:00	46.2	42.6
18:00:00	46.1	42.1
17:00:00	46.0	41.6
16:00:00	46.0	41.6
15:00:00	46.4	43.5
14:00:00	46.4	43.5
13:00:00	46.4	43.5
12:00:00	46.3	43.0
11:00:00	46.3	43.0
10:00:00	46.1	42.1
09:00:00	46.0	41.6
08:00:00	45.9	41.1
07:00:00	46.4	43.5
06:00:00	46.3	43.0
05:00:00	46.3	43.0
04:00:00	46.3	43.0
03:00:00	46.3	43.0
02:00:00	46.4	43.5
01:00:00	46.4	43.5
00:00:00	46.0	41.6

DATE 08-03-97

TIME	LEVEL	FLOW
23:00:00	46.1	42.1
22:00:00	46.2	42.6
21:00:00	46.1	42.1
20:00:00	46.0	41.6
19:00:00	46.0	41.6
18:00:00	46.1	42.1
17:00:00	46.2	42.6
16:00:00	46.1	42.1
15:00:00	46.1	42.1
14:00:00	46.0	41.6
13:00:00	46.1	42.1
12:00:00	46.2	42.6
11:00:00	46.2	42.6
10:00:00	46.2	42.6
09:00:00	46.2	42.6
08:00:00	46.4	43.5
07:00:00	46.4	43.5
06:00:00	46.3	43.0
05:00:00	46.2	42.6
04:00:00	46.1	42.1
03:00:00	46.0	41.6
02:00:00	46.0	41.6
01:00:00	46.0	41.6
00:00:00	46.0	41.6

DATE 08-02-97

TIME	LEVEL	FLOW
23:00:00	46.0	41.6
22:00:00	46.0	41.6
21:00:00	46.0	41.6
20:00:00	46.0	41.6
19:00:00	45.9	41.1
18:00:00	46.0	41.6
17:00:00	46.0	41.6
16:00:00	46.1	42.1
15:00:00	46.3	43.0
14:00:00	46.4	43.5
13:00:00	46.0	41.6
12:00:00	46.0	41.6
11:00:00	46.5	44.0
10:00:00	45.9	41.1
09:00:00	46.1	42.1
08:00:00	46.3	43.0
07:00:00	46.2	42.6
06:00:00	46.1	42.1
05:00:00	45.9	41.1
04:00:00	46.4	43.5
03:00:00	46.2	42.6
02:00:00	46.0	41.6
01:00:00	46.0	41.6
00:00:00	46.0	41.6

DATE 08-01-97

TIME	LEVEL	FLOW
23:00:00	46.1	42.1
22:00:00	46.4	43.5
21:00:00	45.9	41.1
20:00:00	46.0	41.6
19:00:00	46.2	42.6
18:00:00	46.0	41.6
17:00:00	46.1	42.1
16:00:00	46.2	42.6
15:00:00	46.1	42.1
14:00:00	45.9	41.1
13:00:00	46.1	42.1
12:00:00	46.2	42.6
11:00:00	46.2	42.6
10:00:00	46.2	42.6
09:00:00	46.3	43.0
08:00:00	46.4	43.5
07:00:00	46.3	43.0
06:00:00	46.4	43.5
05:00:00	46.4	43.5
04:00:00	46.4	43.5
03:00:00	46.4	43.5
02:00:00	46.3	43.0
01:00:00	46.3	43.0
00:00:00	46.2	42.6

DATE 07-31-97

TIME	LEVEL	FLOW
23:00:00	46.2	42.6
22:00:00	46.1	42.1
21:00:00	46.0	41.6
20:00:00	46.0	41.6
19:00:00	46.0	41.6
18:00:00	46.0	41.6
17:00:00	46.0	41.6
16:00:00	46.0	41.6
15:00:00	46.0	41.6
14:00:00	46.1	42.1
13:00:00	46.2	42.6
12:00:00	46.3	43.0
11:00:00	46.3	43.0
10:00:00	46.3	43.0
09:00:00	46.4	43.5
08:00:00	46.4	43.5
07:00:00	46.3	43.0
06:00:00	46.2	42.6
05:00:00	46.1	42.1
04:00:00	46.0	41.6
03:00:00	46.0	41.6
02:00:00	46.0	41.6
01:00:00	46.0	41.6
00:00:00	46.0	41.6

DATE 07-30-97

TIME	LEVEL	FLOW
23:00:00	46.0	41.6
22:00:00	46.0	41.6
21:00:00	46.1	42.1
20:00:00	45.9	41.1
19:00:00	46.2	42.6
18:00:00	46.1	42.1
17:00:00	45.9	41.1
16:00:00	46.0	41.6
15:00:00	46.0	41.6
14:00:00	46.0	41.6
13:00:00	46.1	42.1
12:00:00	46.0	41.6
11:00:00	46.0	41.6
10:00:00	46.0	41.6
09:00:00	46.0	41.6
08:00:00	45.9	41.1
07:00:00	46.0	41.6
06:00:00	46.1	42.1
05:00:00	46.1	42.1
04:00:00	46.0	41.6
03:00:00	46.0	41.6
02:00:00	46.1	42.1
01:00:00	46.1	42.1
00:00:00	46.2	42.6

DATE 07-29-97

TIME	LEVEL	FLOW
23:00:00	46.2	42.6
22:00:00	46.1	42.1
21:00:00	46.1	42.1
20:00:00	46.1	42.1
19:00:00	46.1	42.1
18:00:00	46.1	42.1
17:00:00	46.1	42.1
16:00:00	46.1	42.1
15:00:00	46.2	42.6
14:00:00	46.2	42.6
13:00:00	46.1	42.1
12:00:00	46.0	41.6
11:00:00	46.1	42.1
10:00:00	46.1	42.1
09:00:00	46.1	42.1
08:00:00	46.0	41.6
07:00:00	46.2	42.6
06:00:00	46.2	42.6
05:00:00	46.1	42.1
04:00:00	46.0	41.6
03:00:00	46.0	41.6
02:00:00	45.9	41.1
01:00:00	45.9	41.1
00:00:00	46.1	42.1

DATE 07-28-97

TIME	LEVEL	FLOW
23:00:00	46.5	44.0
22:00:00	46.1	42.1
21:00:00	46.1	42.1
20:00:00	46.0	41.6
19:00:00	46.1	42.1
18:00:00	46.2	42.6
17:00:00	46.4	43.5
16:00:00	46.3	43.0
15:00:00	46.3	43.0
14:00:00	46.2	42.6
13:00:00	45.9	41.1
12:00:00	46.2	42.6
11:00:00	46.3	43.0
10:00:00	46.0	41.6
09:00:00	46.5	44.0
08:00:00	46.3	43.0
07:00:00	46.3	43.0
06:00:00	46.0	41.6
05:00:00	46.0	41.6
04:00:00	46.0	41.6
03:00:00	46.1	42.1
02:00:00	46.3	43.0
01:00:00	46.3	43.0
00:00:00	46.2	42.6

DATE 07-27-97

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	46.3	43.0
21:00:00	46.0	41.6
20:00:00	46.0	41.6
19:00:00	46.2	42.6
18:00:00	46.4	43.5
17:00:00	46.3	43.0
16:00:00	46.0	41.6
15:00:00	46.0	41.6
14:00:00	46.0	41.6
13:00:00	46.0	41.6
12:00:00	46.0	41.6
11:00:00	46.1	42.1
10:00:00	46.2	42.6
09:00:00	46.2	42.6
08:00:00	46.1	42.1
07:00:00	46.3	43.0
06:00:00	46.2	42.6
05:00:00	46.2	42.6
04:00:00	45.9	41.1
03:00:00	46.2	42.6
02:00:00	46.2	42.6
01:00:00	46.2	42.6
00:00:00	46.5	44.0

DATE 07-26-97

TIME	LEVEL	FLOW
23:00:00	46.5	44.0
22:00:00	45.8	40.7
21:00:00	46.0	41.6
20:00:00	46.2	42.6
19:00:00	46.3	43.0
18:00:00	46.3	43.0
17:00:00	46.4	43.5
16:00:00	46.4	43.5
15:00:00	46.4	43.5
14:00:00	46.2	42.6
13:00:00	45.9	41.1
12:00:00	45.9	41.1
11:00:00	46.2	42.6
10:00:00	46.2	42.6
09:00:00	46.4	43.5
08:00:00	46.3	43.0
07:00:00	46.2	42.6
06:00:00	46.2	42.6
05:00:00	46.1	42.1
04:00:00	46.0	41.6
03:00:00	46.0	41.6
02:00:00	46.0	41.6
01:00:00	46.1	42.1
00:00:00	46.2	42.6

DATE 07-25-97

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	46.2	42.6
21:00:00	46.2	42.6
20:00:00	46.3	43.0
19:00:00	46.4	43.5
18:00:00	46.2	42.6
17:00:00	46.3	43.0
16:00:00	46.4	43.5
15:00:00	46.2	42.6
14:00:00	46.2	42.6
13:00:00	46.3	43.0
12:00:00	46.3	43.0
11:00:00	46.3	43.0
10:00:00	46.0	41.6
09:00:00	46.4	43.5
08:00:00	46.2	42.6
07:00:00	46.0	41.6
06:00:00	46.4	43.5
05:00:00	46.3	43.0
04:00:00	46.2	42.6
03:00:00	46.0	41.6
02:00:00	46.0	41.6
01:00:00	46.3	43.0
00:00:00	46.2	42.6

DATE 07-24-97

TIME	LEVEL	FLOW
23:00:00	46.0	41.6
22:00.00	46.4	43.5
21:00:00	46.2	42.6
20:00:00	46.3	43.0
19:00:00	46.4	43.5
18:00:00	46.3	43.0
17:00:00	45.9	41.1
16:00:00	46.4	43.5
15:00:00	46.2	42.6
14:00:00	45.9	41.1
13:00:00	46.2	42.6
12:00:00	46.3	43.0
11:00:00	46.3	43.0
10:00:00	46.3	43.0
09:00:00	46.3	43.0
08:00:00	46.3	43.0
07:00:00	46.4	43.5
06:00:00	46.3	43.0
05:00:00	46.3	43.0
04:00:00	46.2	42.6
03:00:00	46.2	42.6
02:00:00	46.2	42.6
01:00:00	46.1	42.1
00:00:00	46.1	42.1

DATE 07-23-97

TIME	LEVEL	FLOW
23:00:00	46.0	41.6
22:00:00	46.1	42.1
21:00:00	46.1	42.1
20:00:00	46.2	42.6
19:00:00	46.4	43.5
18:00:00	46.1	42.1
17:00:00	45.8	40.7
16:00:00	46.5	44.0
15:00:00	46.2	42.6
14:00:00	46.2	42.6
13:00:00	46.2	42.6
12:00:00	46.2	42.6
11:00:00	46.3	43.0
10:00:00	46.3	43.0
09:00:00	46.2	42.6
08:00:00	46.2	42.6
07:00:00	46.2	42.6
06:00:00	46.2	42.6
05:00:00	46.1	42.1
04:00:00	45.9	41.1
03:00:00	46.1	42.1
02:00:00	46.2	42.6
01:00:00	46.4	43.5
00:00:00	46.3	43.0

DATE 07-22-97

TIME	LEVEL	FLOW
23:00:00	46.4	43.5
22:00:00	46.3	43.0
21:00:00	46.2	42.6
20:00:00	46.1	42.1
19:00:00	45.9	41.1
18:00:00	46.0	41.6
17:00:00	46.1	42.1
16:00:00	46.1	42.1
15:00:00	46.1	42.1
14:00:00	46.0	41.6
13:00:00	45.9	41.1
12:00:00	46.0	41.6
11:00:00	46.1	42.1
10:00:00	46.3	43.0
09:00:00	46.4	43.5
08:00:00	46.2	42.6
07:00:00	46.6	44.5
06:00:00	46.2	42.6
05:00:00	46.2	42.6
04:00:00	46.1	42.1
03:00:00	45.9	41.1
02:00:00	46.0	41.6
01:00:00	46.1	42.1
00:00:00	46.2	42.6

DATE 07-21-97

TIME	LEVEL	FLOW
23:00:00	46.3	43.0
22:00:00	46.1	42.1
21:00:00	46.0	41.6
20:00:00	46.2	42.6
19:00:00	46.3	43.0
18:00:00	46.1	42.1
17:00:00	46.1	42.1
16:00:00	46.5	44.0
15:00:00	46.0	41.6
14:00:00	46.0	41.6
13:00:00	46.1	42.1
12:00:00	46.1	42.1
11:00:00	46.0	41.6
10:00:00	46.0	41.6
09:00:00	46.1	42.1
08:00:00	46.5	44.0
07:00:00	46.4	43.5
06:00:00	46.1	42.1
05:00:00	46.5	44.0
04:00:00	46.3	43.0
03:00:00	46.5	44.0
02:00:00	46.3	43.0
01:00:00	46.2	42.6
00:00:00	46.1	42.1

DATE 07-20-97

TIME	LEVEL	FLOW
23:00:00	46.2	42.6
22:00:00	46.2	42.6
21:00:00	46.2	42.6
20:00:00	46.1	42.1
19:00:00	46.0	41.6
18:00:00	46.1	42.1
17:00:00	46.0	41.6
16:00:00	46.0	41.6
15:00:00	46.2	42.6
14:00:00	46.3	43.0
13:00:00	46.4	43.5
12:00:00	46.4	43.5
11:00:00	46.4	43.5
10:00:00	46.3	43.0
09:00:00	46.3	43.0
08:00:00	46.2	42.6
07:00:00	46.1	42.1
06:00:00	46.1	42.1
05:00:00	46.1	42.1
04:00:00	46.1	42.1
03:00:00	46.1	42.1
02:00:00	46.1	42.1
01:00:00	45.9	41.1
00:00:00	46.0	41.6

DATE 07-19-97

TIME	LEVEL	FLOW
23:00:00	46.3	43.0
22:00:00	46.4	43.5
21:00:00	46.4	43.5
20:00:00	46.2	42.6
19:00:00	46.1	42.1
18:00:00	46.0	41.6
17:00:00	46.1	42.1
16:00:00	46.3	43.0
15:00:00	46.4	43.5
14:00:00	46.4	43.5
13:00:00	46.4	43.5
12:00:00	46.4	43.5
11:00:00	46.3	43.0
10:00:00	45.9	41.1
09:00:00	46.4	43.5
08:00:00	46.4	43.5
07:00:00	46.3	43.0
06:00:00	46.2	42.6
05:00:00	46.1	42.1
04:00:00	46.0	41.6
03:00:00	46.0	41.6
02:00:00	46.0	41.6
01:00:00	46.1	42.1
00:00:00	46.4	43.5

DATE 07-18-97

TIME	LEVEL	FLOW
23:00:00	46.3	43.0
22:00:00	45.8	40.7
21:00:00	45.8	40.7
20:00:00	45.8	40.7
19:00:00	46.1	42.1
18:00:00	46.0	41.6
17:00:00	46.0	41.6
16:00:00	46.0	41.6
15:00:00	46.1	42.1
14:00:00	46.1	42.1
13:00:00	46.1	42.1
12:00:00	46.0	41.6
11:00:00	46.1	42.1
10:00:00	46.0	41.6
09:00:00	46.1	42.1
08:00:00	46.4	43.5
07:00:00	46.3	43.0
06:00:00	45.8	40.7
05:00:00	46.3	43.0
04:00:00	46.4	43.5
03:00:00	46.4	43.5
02:00:00	46.3	43.0
01:00:00	46.3	43.0
00:00:00	46.3	43.0

DATE 07-17-97

TIME	LEVEL	FLOW
23:00:00	46.4	43.5
22:00:00	46.3	43.0
21:00:00	45.8	40.7
20:00:00	46.0	41.6
19:00:00	46.0	41.6
18:00:00	45.9	41.1
17:00:00	46.1	42.1
16:00:00	46.1	42.1
15:00:00	46.0	41.6
14:00:00	46.0	41.6
13:00:00	46.1	42.1
12:00:00	46.1	42.1
11:00:00	46.1	42.1
10:00:00	46.1	42.1
09:00:00	46.2	42.6
08:00:00	46.2	42.6
07:00:00	46.2	42.6
06:00:00	46.1	42.1
05:00:00	46.1	42.1
04:00:00	46.1	42.1
03:00:00	46.1	42.1
02:00:00	46.1	42.1
01:00:00	46.1	42.1
00:00:00	45.9	41.1

DATE 07-16-97

TIME	LEVEL	FLOW
23:00:00	46.0	41.6
22:00:00	46.0	41.6
21:00:00	46.1	42.1
20:00:00	46.0	41.6
19:00:00	46.0	41.6
18:00:00	46.0	41.6
17:00:00	46.0	41.6
16:00:00	45.9	41.1
15:00:00	45.9	41.1
14:00:00	45.9	41.1
13:00:00	46.1	42.1
12:00:00	46.1	42.1
11:00:00	46.2	42.6
10:00:00	46.3	43.0
09:00:00	46.4	43.5
08:00:00	46.0	41.6
07:00:00	46.2	42.6
06:00:00	46.3	43.0
05:00:00	46.0	41.6
04:00:00	46.0	41.6
03:00:00	46.1	42.1
02:00:00	45.9	41.1
01:00:00	46.2	42.6
00:00:00	46.3	43.0

DATE 07-15-97

TIME	LEVEL	FLOW
23:00:00	46.1	42.1
22:00:00	45.8	40.7
21:00:00	46.4	43.5
20:00:00	46.0	41.6
19:00:00	45.9	41.1
18:00:00	46.1	42.1
17:00:00	46.0	41.6
16:00:00	45.9	41.1
15:00:00	46.0	41.6
14:00:00	46.1	42.1
13:00:00	46.1	42.1
12:00:00	45.8	40.7
11:00:00	46.0	41.6
10:00:00	45.8	40.7
09:00:00	45.9	41.1
08:00:00	46.0	41.6
07:00:00	46.3	43.0
06:00:00	46.2	42.6
05:00:00	46.0	41.6
04:00:00	46.0	41.6
03:00:00	46.0	41.6
02:00:00	46.0	41.6
01:00:00	46.2	42.6
00:00:00	46.3	43.0

DATE 07-14-97

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	46.0	41.6
21:00:00	46.0	41.6
20:00:00	46.0	41.6
19:00:00	46.0	41.6
18:00:00	46.0	41.6
17:00:00	46.0	41.6
16:00:00	46.0	41.6
15:00:00	46.1	42.1
14:00:00	46.0	41.6
13:00:00	46.1	42.1
12:00:00	46.1	42.1
11:00:00	46.0	41.6
10:00:00	46.4	43.5
09:00:00	46.0	41.6
08:00:00	46.2	42.6
07:00:00	46.4	43.5
06:00:00	46.2	42.6
05:00:00	46.0	41.6
04:00:00	46.0	41.6
03:00:00	46.0	41.6
02:00:00	46.1	42.1
01:00:00	46.0	41.6
00:00:00	46.2	42.6

DATE 07-13-97

TIME	LEVEL	FLOW
23:00:00	46.4	43.5
22:00:00	46.1	42.1
21:00:00	45.9	41.1
20:00:00	46.0	41.6
19:00:00	46.1	42.1
18:00:00	46.0	41.6
17:00:00	46.1	42.1
16:00:00	46.0	41.6
15:00:00	46.1	42.1
14:00:00	46.3	43.0
13:00:00	46.3	43.0
12:00:00	46.3	43.0
11:00:00	46.1	42.1
10:00:00	46.1	42.1
09:00:00	46.1	42.1
08:00:00	46.1	42.1
07:00:00	46.1	42.1
06:00:00	46.2	42.6
05:00:00	46.3	43.0
04:00:00	46.4	43.5
03:00:00	46.3	43.0
02:00:00	46.4	43.5
01:00:00	46.5	44.0
00:00:00	46.3	43.0

DATE 07-12-97

TIME	LEVEL	FLOW
23:00:00	46.2	42.6
22:00:00	46.1	42.1
21:00:00	46.4	43.5
20:00:00	46.2	42.6
19:00:00	46.1	42.1
18:00:00	46.1	42.1
17:00:00	46.3	43.0
16:00:00	46.4	43.5
15:00:00	46.0	41.6
14:00:00	45.8	40.7
13:00:00	46.2	42.6
12:00:00	46.4	43.5
11:00:00	46.4	43.5
10:00:00	46.4	43.5
09:00:00	46.4	43.5
08:00:00	46.1	42.1
07:00:00	46.1	42.1
06:00:00	46.5	44.0
05:00:00	46.3	43.0
04:00:00	46.3	43.0
03:00:00	46.3	43.0
02:00:00	46.4	43.5
01:00:00	46.4	43.5
00:00:00	46.3	43.0

DATE 07-11-97

TIME	LEVEL	FLOW
23:00:00	46.2	42.6
22:00:00	46.1	42.1
21:00:00	46.4	43.5
20:00:00	46.2	42.6
19:00:00	46.1	42.1
18:00:00	46.1	42.1
17:00:00	46.3	43.0
16:00:00	46.4	43.5
15:00:00	46.0	41.6
14:00:00	45.8	40.7
13:00:00	46.2	42.6
12:00:00	46.4	43.5
11:00:00	46.4	43.5
10:00:00	46.4	43.5
09:00:00	46.4	43.5
08:00:00	46.1	42.1
07:00:00	46.1	42.1
06:00:00	46.5	44.0
05:00:00	46.3	43.0
04:00:00	46.3	43.0
03:00:00	46.3	43.0
02:00:00	46.4	43.5
01:00:00	46.4	43.5
00:00:00	46.3	43.0

DATE 07-10-97

TIME	LEVEL	FLOW
23:00:00	46.1	42.1
22:00:00	46.2	42.6
21:00:00	46.3	43.0
20:00:00	46.0	41.6
19:00:00	45.9	41.1
18:00:00	46.0	41.6
17:00:00	46.3	43.0
16:00:00	46.3	43.0
15:00:00	46.1	42.1
14:00:00	46.1	42.1
13:00:00	46.1	42.1
12:00:00	46.2	42.6
11:00:00	46.2	42.6
10:00:00	46.2	42.6
09:00:00	46.0	41.6
08:00:00	46.0	41.6
07:00:00	46.5	44.0
06:00:00	46.0	41.6
05:00:00	46.2	42.6
04:00:00	46.4	43.5
03:00:00	46.4	43.5
02:00:00	46.4	43.5
01:00:00	46.4	43.5
00:00:00	46.3	43.0

DATE 07-09-97

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.9	41.1
21:00:00	46.3	43.0
20:00:00	46.3	43.0
19:00:00	45.9	41.1
18:00:00	46.2	42.6
17:00:00	46.0	41.6
16:00:00	46.0	41.6
15:00:00	46.1	42.1
14:00:00	46.0	41.6
13:00:00	46.0	41.6
12:00:00	46.1	42.1
11:00:00	46.2	42.6
10:00:00	46.2	42.6
09:00:00	46.2	42.6
08:00:00	46.0	41.6
07:00:00	46.4	43.5
06:00:00	46.2	42.6
05:00:00	46.1	42.1
04:00:00	46.4	43.5
03:00:00	46.4	43.5
02:00:00	46.4	43.5
01:00:00	46.3	43.0
00:00:00	46.2	42.6

DATE 07-08-97

TIME	LEVEL	FLOW
23:00:00	46.4	43.5
22:00:00	46.2	42.6
21:00:00	45.7	40.2
20:00:00	46.4	43.5
19:00:00	45.8	40.7
18:00:00	46.3	43.0
17:00:00	46.2	42.6
16:00:00	46.3	43.0
15:00:00	46.2	42.6
14:00:00	46.1	42.1
13:00:00	46.1	42.1
12:00:00	46.5	44.0
11:00:00	45.9	41.1
10:00:00	46.1	42.1
09:00:00	46.4	43.5
08:00:00	46.1	42.1
07:00:00	46.2	42.6
06:00:00	46.4	43.5
05:00:00	46.4	43.5
04:00:00	46.4	43.5
03:00:00	46.4	43.5
02:00:00	46.3	43.0
01:00:00	46.1	42.1
00:00:00	46.4	43.5

DATE 07-07-97

TIME	LEVEL	FLOW
23:00:00	46.2	42.6
22:00:00	45.9	41.1
21:00:00	46.2	42.6
20:00:00	46.2	42.6
19:00:00	46.3	43.0
18:00:00	46.5	44.0
17:00:00	46.1	42.1
16:00:00	46.1	42.1
15:00:00	46.1	42.1
14:00:00	46.1	42.1
13:00:00	46.1	42.1
12:00:00	46.1	42.1
11:00:00	45.9	41.1
10:00:00	46.0	41.6
09:00:00	46.2	42.6
08:00:00	46.4	43.5
07:00:00	46.5	44.0
06:00:00	45.9	41.1
05:00:00	46.4	43.5
04:00:00	45.9	41.1
03:00:00	46.5	44.0
02:00:00	46.3	43.0
01:00:00	46.2	42.6
00:00:00	46.0	41.6

DATE 07-06-97

TIME	LEVEL	FLOW
23:00:00	46.4	43.5
22:00:00	46.0	41.6
21:00:00	46.0	41.6
20:00:00	46.1	42.1
19:00:00	46.0	41.6
18:00:00	46.0	41.6
17:00:00	46.3	43.0
16:00:00	46.4	43.5
15:00:00	46.3	43.0
14:00:00	46.3	43.0
13:00:00	46.1	42.1
12:00:00	45.8	40.7
11:00:00	46.3	43.0
10:00:00	46.4	43.5
09:00:00	46.2	42.6
08:00:00	46.1	42.1
07:00:00	46.5	44.0
06:00:00	46.4	43.5
05:00:00	46.0	41.6
04:00:00	46.5	44.0
03:00:00	46.2	42.6
02:00:00	46.5	44.0
01:00:00	46.4	43.5
00:00:00	46.3	43.0

DATE 07-05-97

TIME	LEVEL	FLOW
23:00:00	46.2	42.6
22:00:00	45.9	41.1
21:00:00	46.0	41.6
20:00:00	46.0	41.6
19:00:00	46.0	41.6
18:00:00	45.9	41.1
17:00:00	46.0	41.6
16:00:00	46.0	41.6
15:00:00	46.0	41.6
14:00:00	46.0	41.6
13:00:00	46.2	42.6
12:00:00	46.1	42.1
11:00:00	45.9	41.1
10:00:00	46.5	44.0
09:00:00	46.3	43.0
08:00:00	46.1	42.1
07:00:00	46.0	41.6
06:00:00	46.1	42.1
05:00:00	46.0	41.6
04:00:00	46.0	41.6
03:00:00	46.0	41.6
02:00:00	46.0	41.6
01:00:00	46.1	42.1
00:00:00	46.1	42.1

DATE 07-04-97

TIME	LEVEL	FLOW
23:00:00	46.1	42.1
22:00:00	46.1	42.1
21:00:00	45.9	41.1
20:00:00	46.0	41.6
19:00:00	46.0	41.6
18:00:00	46.0	41.6
17:00:00	46.0	41.6
16:00:00	46.1	42.1
15:00:00	46.0	41.6
14:00:00	46.0	41.6
13:00:00	46.1	42.1
12:00:00	46.1	42.1
11:00:00	46.1	42.1
10:00:00	46.1	42.1
09:00:00	46.1	42.1
08:00:00	46.2	42.6
07:00:00	46.5	44.0
06:00:00	46.4	43.5
05:00:00	46.3	43.0
04:00:00	46.2	42.6
03:00:00	46.2	42.6
02:00:00	46.0	41.6
01:00:00	46.2	42.6
00:00:00	46.3	43.0

DATE 07-03-97

TIME	LEVEL	FLOW
23:00:00	46.0	41.6
22:00:00	46.2	42.6
21:00:00	45.8	40.7
20:00:00	46.5	44.0
19:00:00	45.8	40.7
18:00:00	46.1	42.1
17:00:00	46.1	42.1
16:00:00	46.0	41.6
15:00:00	45.9	41.1
14:00:00	46.3	43.0
13:00:00	46.2	42.6
12:00:00	46.4	43.5
11:00:00	46.2	42.6
10:00:00	46.0	41.6
09:00:00	46.0	41.6
08:00:00	46.3	43.0
07:00:00	46.1	42.1
06:00:00	46.3	43.0
05:00:00	46.4	43.5
04:00:00	46.3	43.0
03:00:00	46.3	43.0
02:00:00	46.3	43.0
01:00:00	46.3	43.0
00:00:00	46.3	43.0

DATE 07-02-97

TIME	LEVEL	FLOW
23:00:00	46.2	42.6
22:00:00	46.0	41.6
21:00:00	45.9	41.1
20:00:00	46.4	43.5
19:00:00	46.1	42.1
18:00:00	45.7	40.2
17:00:00	46.1	42.1
16:00:00	46.1	42.1
15:00:00	46.0	41.6
14:00:00	46.1	42.1
13:00:00	46.2	42.6
12:00:00	46.3	43.0
11:00:00	46.3	43.0
10:00:00	46.0	41.6
09:00:00	46.4	43.5
08:00:00	45.9	41.1
07:00:00	46.1	42.1
06:00:00	46.2	42.6
05:00:00	46.4	43.5
04:00:00	46.2	42.6
03:00:00	45.8	40.7
02:00:00	46.5	44.0
01:00:00	45.9	41.1
00:00:00	46.0	41.6

DATE 07-01-97

TIME	LEVEL	FLOW
23:00:00	46.2	42.6
22:00:00	46.2	42.6
21:00:00	46.2	42.6
20:00:00	46.2	42.6
19:00:00	46.0	41.6
18:00:00	46.0	41.6
17:00:00	46.2	42.6
16:00:00	46.1	42.1
15:00:00	45.9	41.1
14:00:00	46.3	43.0
13:00:00	46.3	43.0
12:00:00	45.7	40.2
11:00:00	45.8	40.7
10:00:00	45.8	40.7
09:00:00	46.1	42.1
08:00:00	46.2	42.6
07:00:00	46.3	43.0
06:00:00	46.4	43.5
05:00:00	46.4	43.5
04:00:00	46.4	43.5
03:00:00	46.2	42.6
02:00:00	46.1	42.1
01:00:00	46.0	41.6
00:00:00	46.0	41.6

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July 28, 1997
Ref: CEM/1095

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Department of Water Resources

Mr. L. GLEN SAXTON
Chief, Water Allocation Bureau
State of Idaho, Department of Water Resources
1301 North Orchard Street
Statehouse Mail
Boise, ID 83720-9000

Subject: Portneuf River Hydroelectric Project
Lava Hot Springs, Idaho
FERC Project No. 7447-002
Permit No. 29-7699

Dear Mr. Saxton:

Attached please find copies of the bypass channel flow records for the period from April 1 to June 30, 1997.

Sincerely,

Maher F. Wissa
President

Attachments: 46 sheets

DATE 06-30-97

TIME	LEVEL	FLOW
23:00:00	46.1	42.1
22:00:00	46.2	42.6
21:00:00	46.2	42.6
20:00:00	45.9	41.1
19:00:00	46.2	42.6
18:00:00	46.0	41.6
17:00:00	46.1	42.1
16:00:00	46.3	43.0
15:00:00	46.1	42.1
14:00:00	46.1	42.1
13:00:00	46.0	41.6
12:00:00	46.1	42.1
11:00:00	46.2	42.6
10:00:00	46.5	44.0
09:00:00	46.1	42.1
08:00:00	46.3	43.0
07:00:00	46.4	43.5
06:00:00	46.3	43.0
05:00:00	46.2	42.6
04:00:00	46.1	42.1
03:00:00	46.0	41.6
02:00:00	46.1	42.1
01:00:00	46.1	42.1
00:00:00	46.3	43.0

DATE 06-29-97

TIME	LEVEL	FLOW
23:00:00	46.3	43.0
22:00:00	46.4	43.5
21:00:00	46.2	42.6
20:00:00	46.2	42.6
19:00:00	46.3	43.0
18:00:00	46.3	43.0
17:00:00	46.1	42.1
16:00:00	45.9	41.1
15:00:00	46.1	42.1
14:00:00	46.3	43.0
13:00:00	46.3	43.0
12:00:00	46.3	43.0
11:00:00	46.1	42.1
10:00:00	46.1	42.1
09:00:00	45.9	41.1
08:00:00	46.0	41.6
07:00:00	46.0	41.6
06:00:00	46.0	41.6
05:00:00	45.9	41.1
04:00:00	46.1	42.1
03:00:00	46.2	42.6
02:00:00	46.3	43.0
01:00:00	46.4	43.5
00:00:00	46.3	43.0

DATE 06-28-97

TIME	LEVEL	FLOW
23:00:00	46.3	43.0
22:00:00	46.2	42.6
21:00:00	46.2	42.6
20:00:00	46.0	41.6
19:00:00	46.1	42.1
18:00:00	45.9	41.1
17:00:00	46.0	41.6
16:00:00	46.0	41.6
15:00:00	46.0	41.6
14:00:00	46.2	42.6
13:00:00	46.1	42.1
12:00:00	45.9	41.1
11:00:00	46.2	42.6
10:00:00	46.4	43.5
09:00:00	46.4	43.5
08:00:00	46.4	43.5
07:00:00	46.4	43.5
06:00:00	46.4	43.5
05:00:00	46.3	43.0
04:00:00	46.2	42.6
03:00:00	46.1	42.1
02:00:00	46.1	42.1
01:00:00	46.0	41.6
00:00:00	46.1	42.1

DATE 06-27-97

TIME	LEVEL	FLOW
23:00:00	46.1	42.1
22:00:00	46.1	42.1
21:00:00	46.1	42.1
20:00:00	46.1	42.1
19:00:00	46.1	42.1
18:00:00	46.4	43.5
17:00:00	46.2	42.6
16:00:00	46.3	43.0
15:00:00	46.1	42.1
14:00:00	45.7	40.2
13:00:00	46.3	43.0
12:00:00	46.0	41.6
11:00:00	46.3	43.0
10:00:00	46.3	43.0
09:00:00	46.3	43.0
08:00:00	46.3	43.0
07:00:00	46.3	43.0
06:00:00	46.3	43.0
05:00:00	46.5	44.0
04:00:00	46.4	43.5
03:00:00	46.2	42.6
02:00:00	46.2	42.6
01:00:00	46.1	42.1
00:00:00	46.0	41.6

DATE 06-26-97

TIME	LEVEL	FLOW
23:00:00	46.1	42.1
22:00:00	46.0	41.6
21:00:00	46.0	41.6
20:00:00	46.1	42.1
19:00:00	46.1	42.1
18:00:00	46.2	42.6
17:00:00	46.0	41.6
16:00:00	46.0	41.6
15:00:00	46.0	41.6
14:00:00	46.1	42.1
13:00:00	46.1	42.1
12:00:00	45.8	40.7
11:00:00	46.3	43.0
10:00:00	46.2	42.6
09:00:00	46.0	41.6
08:00:00	46.0	41.6
07:00:00	46.1	42.1
06:00:00	46.2	42.6
05:00:00	46.3	43.0
04:00:00	46.5	44.0
03:00:00	46.3	43.0
02:00:00	46.7	45.0
01:00:00	46.0	41.6
00:00:00	45.8	40.7

DATE 06-25-97

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	45.9	41.1
21:00:00	46.1	42.1
20:00:00	46.2	42.6
19:00:00	46.2	42.6
18:00:00	46.3	43.0
17:00:00	45.9	41.1
16:00:00	45.8	40.7
15:00:00	45.9	41.1
14:00:00	46.0	41.6
13:00:00	46.1	42.1
12:00:00	46.3	43.0
11:00:00	46.2	42.6
10:00:00	46.3	43.0
09:00:00	46.4	43.5
08:00:00	46.2	42.6
07:00:00	46.3	43.0
06:00:00	46.3	43.0
05:00:00	46.5	44.0
04:00:00	46.2	42.6
03:00:00	46.2	42.6
02:00:00	46.1	42.1
01:00:00	46.0	41.6
00:00:00	46.0	41.6

DATE 06-24-97

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	46.0	41.6
21:00:00	46.1	42.1
20:00:00	46.1	42.1
19:00:00	46.0	41.6
18:00:00	46.1	42.1
17:00:00	46.0	41.6
16:00:00	46.2	42.6
15:00:00	46.2	42.6
14:00:00	46.3	43.0
13:00:00	45.9	41.1
12:00:00	46.3	43.0
11:00:00	48.7	56.8
10:00:00	48.3	53.6
09:00:00	46.0	41.6
08:00:00	45.8	40.7
07:00:00	46.0	41.6
06:00:00	46.3	43.0
05:00:00	46.4	43.5
04:00:00	46.3	43.0
03:00:00	46.1	42.1
02:00:00	46.0	41.6
01:00:00	45.9	41.1
00:00:00	45.8	40.7

DATE 06-23-97

TIME	LEVEL	FLOW
23:00:00	46.2	42.6
22:00:00	46.5	44.0
21:00:00	47.0	46.5
20:00:00	46.7	45.0
19:00:00	46.9	46.0
18:00:00	46.9	46.0
17:00:00	46.1	42.1
16:00:00	45.8	40.7
15:00:00	46.0	41.6
14:00:00	46.0	41.6
13:00:00	46.2	42.6
12:00:00	46.4	43.5
11:00:00	46.4	43.5
10:00:00	46.4	43.5
09:00:00	46.2	42.6
08:00:00	46.3	43.0
07:00:00	46.3	43.0
06:00:00	46.4	43.5
05:00:00	46.4	43.5
04:00:00	46.4	43.5
03:00:00	46.2	42.6
02:00:00	46.1	42.1
01:00:00	46.1	42.1
00:00:00	46.0	41.6

DATE 06-22-97

TIME	LEVEL	FLOW
23:00:00	46.0	41.6
22:00:00	45.9	41.1
21:00:00	46.0	41.6
20:00:00	45.8	40.7
19:00:00	46.0	41.6
18:00:00	46.2	42.6
17:00:00	46.5	44.0
16:00:00	46.7	45.0
15:00:00	46.3	43.0
14:00:00	46.4	43.5
13:00:00	46.4	43.5
12:00:00	46.3	43.0
11:00:00	46.3	43.0
10:00:00	46.2	42.6
09:00:00	46.2	42.6
08:00:00	46.3	43.0
07:00:00	46.4	43.5
06:00:00	46.4	43.5
05:00:00	46.5	44.0
04:00:00	46.3	43.0
03:00:00	46.4	43.5
02:00:00	46.2	42.6
01:00:00	46.0	41.6
00:00:00	45.8	40.7

DATE 06-21-97

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	46.4	43.5
21:00:00	46.2	42.6
20:00:00	45.8	40.7
19:00:00	46.0	41.6
18:00:00	46.0	41.6
17:00:00	46.3	43.0
16:00:00	46.4	43.5
15:00:00	46.8	45.5
14:00:00	47.1	47.0
13:00:00	47.3	48.0
12:00:00	47.7	50.0
11:00:00	47.9	51.0
10:00:00	48.1	52.1
09:00:00	48.4	54.3
08:00:00	48.7	56.8
07:00:00	48.7	56.8
06:00:00	48.9	58.6
05:00:00	48.8	57.7
04:00:00	48.7	56.8
03:00:00	48.7	56.8
02:00:00	48.6	55.9
01:00:00	48.6	55.9
00:00:00	48.6	55.9

DATE 06-20-97

TIME	LEVEL	FLOW
23:00:00	48.6	55.9
22:00:00	48.7	56.8
21:00:00	48.9	58.6
20:00:00	48.9	58.6
19:00:00	49.1	60.5
18:00:00	49.2	61.4
17:00:00	49.2	61.4
16:00:00	49.5	64.5
15:00:00	49.6	65.5
14:00:00	50.2	72.2
13:00:00	49.8	67.7
12:00:00	49.9	68.8
11:00:00	50.0	69.9
10:00:00	51.0	82.0
09:00:00	49.9	68.8
08:00:00	49.9	68.8
07:00:00	50.1	71.1
06:00:00	49.9	68.8
05:00:00	49.9	68.8
04:00:00	49.8	67.7
03:00:00	49.8	67.7
02:00:00	49.7	66.6
01:00:00	49.6	65.5
00:00:00	49.7	66.6

DATE 06-19-97

TIME	LEVEL	FLOW
23:00:00	49.8	67.7
22:00:00	50.0	69.9
21:00:00	48.8	69.2
20:00:00	48.3	65.0
19:00:00	48.4	65.8
18:00:00	48.7	68.3
17:00:00	49.0	71.1
16:00:00	49.5	76.1
15:00:00	49.8	79.4
14:00:00	50.0	81.6
13:00:00	49.9	80.5
12:00:00	49.9	80.5
11:00:00	50.2	83.9
10:00:00	50.4	86.3
09:00:00	50.8	91.2
08:00:00	50.2	83.9
07:00:00	50.2	83.9
06:00:00	50.4	86.3
05:00:00	50.3	85.1
04:00:00	50.1	82.8
03:00:00	50.1	82.8
02:00:00	50.1	82.8
01:00:00	50.0	81.6
00:00:00	50.0	81.6

DATE 06-18-97

TIME	LEVEL	FLOW
23:00:00	49.9	80.5
22:00:00	49.9	80.5
21:00:00	50.0	81.6
20:00:00	50.2	83.9
19:00:00	50.1	82.8
18:00:00	50.2	83.9
17:00:00	50.5	87.5
16:00:00	50.5	87.5
15:00:00	50.7	90.0
14:00:00	51.0	93.8
13:00:00	51.6	101.7
12:00:00	51.9	105.9
11:00:00	52.2	110.1
10:00:00	52.4	113.0
09:00:00	50.5	87.5
08:00:00	49.1	86.5
07:00:00	45.9	85.9
06:00:00	45.8	85.4
05:00:00	45.9	85.9
04:00:00	45.0	81.3
03:00:00	45.7	84.9
02:00:00	45.6	84.4
01:00:00	46.1	87.0
00:00:00	47.3	93.5

DATE 06-17-97

TIME	LEVEL	FLOW
23:00:00	49.4	109.9
22:00:00	49.4	109.9
21:00:00	49.5	111.0
20:00:00	49.6	112.1
19:00:00	49.7	113.2
18:00:00	49.8	114.4
17:00:00	50.0	116.7
16:00:00	50.0	116.7
15:00:00	50.0	116.7
14:00:00	49.7	113.2
13:00:00	49.9	115.5
12:00:00	49.9	115.5
11:00:00	49.8	114.4
10:00:00	49.8	114.4
09:00:00	45.6	112.3
08:00:00	45.5	111.8
07:00:00	40.0	111.7
06:00:00	40.0	111.7
05:00:00	40.0	111.7
04:00:00	40.0	111.7
03:00:00	39.8	110.8
02:00:00	39.8	110.8
01:00:00	39.9	111.3
00:00:00	39.9	111.3

DATE 06-16-97

TIME	LEVEL	FLOW
23:00:00	40.0	111.7
22:00:00	40.0	111.7
21:00:00	43.1	126.5
20:00:00	43.0	126.0
19:00:00	44.4	133.5
18:00:00	45.0	136.8
17:00:00	45.4	139.1
16:00:00	47.0	148.5
15:00:00	48.0	154.7
14:00:00	48.7	160.7
13:00:00	48.9	162.7
12:00:00	46.4	161.9
11:00:00	46.0	160.3
10:00:00	42.0	159.5
09:00:00	41.9	159.3
08:00:00	42.0	159.5
07:00:00	36.4	159.0
06:00:00	36.9	160.1
05:00:00	37.0	160.3
04:00:00	37.6	161.6
03:00:00	38.4	163.3
02:00:00	40.2	167.0
01:00:00	42.4	171.5
00:00:00	44.7	176.1

DATE 06-15-97

TIME	LEVEL	FLOW
23:00:00	45.1	176.8
22:00:00	46.1	178.8
21:00:00	46.7	179.9
20:00:00	47.4	181.3
19:00:00	47.0	180.5
18:00:00	47.3	181.1
17:00:00	48.0	182.4
16:00:00	48.8	185.8
15:00:00	48.9	186.4
14:00:00	49.0	187.0
13:00:00	49.0	187.0
12:00:00	49.3	188.8
11:00:00	49.1	187.6
10:00:00	49.5	190.2
09:00:00	49.4	189.5
08:00:00	43.0	189.0
07:00:00	43.7	190.5
06:00:00	44.6	192.4
05:00:00	44.6	192.4
04:00:00	45.2	193.7
03:00:00	45.4	194.1
02:00:00	45.7	194.8
01:00:00	46.4	196.3
00:00:00	46.3	196.0

DATE 06-14-97

TIME	LEVEL	FLOW
23:00:00	47.4	198.3
22:00:00	47.7	199.0
21:00:00	47.5	198.5
20:00:00	42.3	198.2
19:00:00	43.0	199.8
18:00:00	44.3	202.8
17:00:00	45.0	204.4
16:00:00	45.8	206.2
15:00:00	46.2	207.1
14:00:00	46.5	207.7
13:00:00	47.0	208.8
12:00:00	47.5	209.9
11:00:00	42.5	209.4
10:00:00	43.0	210.7
09:00:00	37.9	210.6
08:00:00	38.9	213.3
07:00:00	40.1	216.6
06:00:00	41.2	219.5
05:00:00	42.1	221.9
04:00:00	43.2	224.7
03:00:00	44.4	227.8
02:00:00	45.3	230.1
01:00:00	46.0	231.9
00:00:00	47.2	234.8

DATE 06-13-97

TIME	LEVEL	FLOW
23:00:00	48.2	237.5
22:00:00	48.5	239.0
21:00:00	42.1	239.2
20:00:00	41.7	238.0
19:00:00	35.8	237.3
18:00:00	36.2	238.6
17:00:00	36.5	239.6
16:00:00	36.6	239.9
15:00:00	36.5	239.6
14:00:00	36.6	239.9
13:00:00	37.8	243.8
12:00:00	39.0	247.6
11:00:00	40.1	251.1
10:00:00	41.2	254.5
09:00:00	34.9	254.3
08:00:00	36.8	261.1
07:00:00	37.9	264.9
06:00:00	39.9	271.8
05:00:00	41.0	275.5
04:00:00	42.0	278.8
03:00:00	43.0	282.1
02:00:00	44.1	285.7
01:00:00	44.3	286.3
00:00:00	45.3	289.5

DATE 06-12-97

TIME	LEVEL	FLOW
23:00:00	46.5	293.3
22:00:00	47.0	294.9
21:00:00	47.7	297.0
20:00:00	47.9	297.7
19:00:00	49.0	303.7
18:00:00	50.4	315.3
17:00:00	52.2	333.9
16:00:00	52.8	340.8
15:00:00	52.5	337.3
14:00:00	52.6	338.4
13:00:00	52.7	339.6
12:00:00	52.3	335.0
11:00:00	45.3	333.0
10:00:00	46.0	338.8
09:00:00	46.6	343.9
08:00:00	46.5	343.0
07:00:00	46.5	343.0
06:00:00	46.6	343.9
05:00:00	46.9	346.4
04:00:00	47.0	347.3
03:00:00	47.3	349.8
02:00:00	47.8	354.0
01:00:00	48.2	357.7
00:00:00	48.8	364.5

DATE 06-11-97

TIME	LEVEL	FLOW
23:00:00	48.6	362.1
22:00:00	48.7	363.3
21:00:00	48.7	363.3
20:00:00	48.8	364.5
19:00:00	49.2	369.5
18:00:00	49.7	376.3
17:00:00	50.1	381.9
16:00:00	49.9	379.1
15:00:00	49.5	373.5
14:00:00	49.7	376.3
13:00:00	49.3	370.8
12:00:00	49.5	373.5
11:00:00	49.6	374.9
10:00:00	49.8	377.7
09:00:00	49.8	377.7
08:00:00	49.8	377.7
07:00:00	49.9	379.1
06:00:00	49.8	377.7
05:00:00	50.0	380.5
04:00:00	49.8	377.7
03:00:00	49.9	379.1
02:00:00	49.9	379.1
01:00:00	50.1	381.9
00:00:00	50.2	383.4

DATE 06-10-97

TIME	LEVEL	FLOW
23:00:00	50.3	384.9
22:00:00	50.4	386.4
21:00:00	50.2	383.4
20:00:00	50.3	384.9
19:00:00	50.4	386.4
18:00:00	50.1	381.9
17:00:00	49.7	376.3
16:00:00	49.4	372.2
15:00:00	49.1	368.2
14:00:00	49.0	367.0
13:00:00	48.6	362.1
12:00:00	48.6	362.1
11:00:00	48.4	359.8
10:00:00	48.4	359.8
09:00:00	48.2	357.7
08:00:00	48.0	355.7
07:00:00	48.2	357.7
06:00:00	47.8	354.0
05:00:00	47.9	354.9
04:00:00	48.1	356.7
03:00:00	47.9	354.9
02:00:00	47.9	354.9
01:00:00	47.9	354.9
00:00:00	47.6	352.3

DATE 06-09-97

TIME	LEVEL	FLOW
23:00:00	47.5	351.5
22:00:00	47.8	354.0
21:00:00	47.7	353.2
20:00:00	47.2	349.0
19:00:00	47.2	349.0
18:00:00	47.4	350.6
17:00:00	47.3	349.8
16:00:00	47.6	352.3
15:00:00	47.7	353.2
14:00:00	47.8	354.0
13:00:00	48.9	365.7
12:00:00	48.9	365.7
11:00:00	48.9	365.7
10:00:00	48.9	365.7
09:00:00	48.8	364.5
08:00:00	48.9	365.7
07:00:00	49.0	367.0
06:00:00	49.0	367.0
05:00:00	49.0	367.0
04:00:00	49.2	369.5
03:00:00	49.2	369.5
02:00:00	49.1	368.2
01:00:00	49.1	368.2
00:00:00	49.5	373.5

DATE 06-08-97

TIME	LEVEL	FLOW
23:00:00	49.7	376.3
22:00:00	49.7	376.3
21:00:00	49.9	379.1
20:00:00	48.8	364.5
19:00:00	49.0	367.0
18:00:00	49.0	367.0
17:00:00	48.9	365.7
16:00:00	49.1	368.2
15:00:00	49.1	368.2
14:00:00	49.3	370.8
13:00:00	49.4	372.2
12:00:00	49.5	373.5
11:00:00	49.6	374.9
10:00:00	49.4	372.2
09:00:00	49.4	372.2
08:00:00	49.3	370.8
07:00:00	49.2	369.5
06:00:00	49.2	369.5
05:00:00	49.1	368.2
04:00:00	49.0	367.0
03:00:00	49.0	367.0
02:00:00	49.3	370.8
01:00:00	50.0	380.5
00:00:00	49.9	379.1

DATE 06-07-97

TIME	LEVEL	FLOW
23:00:00	50.0	380.5
22:00:00	49.6	374.9
21:00:00	50.2	383.4
20:00:00	49.9	379.1
19:00:00	50.1	381.9
18:00:00	50.5	387.9
17:00:00	50.4	386.4
16:00:00	50.2	383.4
15:00:00	50.6	389.4
14:00:00	50.9	394.0
13:00:00	50.7	390.9
12:00:00	51.5	403.5
11:00:00	51.6	405.2
10:00:00	45.6	403.0
09:00:00	46.7	413.0
08:00:00	46.9	414.9
07:00:00	47.6	421.3
06:00:00	47.9	424.1
05:00:00	48.2	427.1
04:00:00	48.8	434.3
03:00:00	48.7	433.0
02:00:00	49.0	436.9
01:00:00	49.1	438.3
00:00:00	49.6	445.3

DATE 06-06-97

TIME	LEVEL	FLOW
23:00:00	49.8	448.2
22:00:00	50.0	451.2
21:00:00	50.5	458.9
20:00:00	50.7	462.0
19:00:00	51.0	466.9
18:00:00	50.5	458.9
17:00:00	50.5	458.9
16:00:00	50.2	454.2
15:00:00	50.5	458.9
14:00:00	50.6	460.4
13:00:00	50.9	465.3
12:00:00	51.2	470.2
11:00:00	51.1	468.6
10:00:00	51.6	477.0
09:00:00	51.6	477.0
08:00:00	51.3	471.9
07:00:00	51.4	473.6
06:00:00	51.5	475.3
05:00:00	51.5	475.3
04:00:00	51.5	475.3
03:00:00	51.0	466.9
02:00:00	51.6	477.0
01:00:00	51.1	468.6
00:00:00	51.8	480.4

DATE 06-05-97

TIME	LEVEL	FLOW
23:00:00	51.5	475.3
22:00:00	51.4	473.6
21:00:00	51.1	468.6
20:00:00	51.1	468.6
19:00:00	51.1	468.6
18:00:00	51.2	470.2
17:00:00	51.1	468.6
16:00:00	51.2	470.2
15:00:00	51.5	475.3
14:00:00	51.5	475.3
13:00:00	51.8	480.4
12:00:00	52.5	492.8
11:00:00	52.1	485.6
10:00:00	51.7	478.7
09:00:00	51.6	477.0
08:00:00	51.8	480.4
07:00:00	51.9	482.1
06:00:00	51.4	473.6
05:00:00	51.3	471.9
04:00:00	51.6	477.0
03:00:00	51.7	478.7
02:00:00	51.6	477.0
01:00:00	52.1	485.6
00:00:00	52.1	485.6

DATE 06-04-97

TIME	LEVEL	FLOW
23:00:00	52.2	487.4
22:00:00	52.5	492.8
21:00:00	52.6	494.6
20:00:00	52.3	489.2
19:00:00	52.2	487.4
18:00:00	52.1	485.6
17:00:00	52.3	489.2
16:00:00	51.9	482.1
15:00:00	52.0	483.9
14:00:00	52.2	487.4
13:00:00	52.1	485.6
12:00:00	52.0	483.9
11:00:00	51.8	480.4
10:00:00	51.6	477.0
09:00:00	51.2	470.2
08:00:00	51.7	478.7
07:00:00	50.5	458.9
06:00:00	50.6	460.4
05:00:00	50.7	462.0
04:00:00	50.4	457.3
03:00:00	50.7	462.0
02:00:00	51.5	475.3
01:00:00	51.3	471.9
00:00:00	52.4	491.0

DATE 06-03-97

TIME	LEVEL	FLOW
23:00:00	53.3	507.5
22:00:00	53.3	507.5
21:00:00	53.6	513.2
20:00:00	49.5	509.8
19:00:00	49.5	509.8
18:00:00	47.2	471.1
17:00:00	47.3	472.5
16:00:00	47.4	474.0
15:00:00	47.2	471.1
14:00:00	48.3	487.6
13:00:00	48.9	498.3
12:00:00	46.7	486.4
11:00:00	48.0	505.7
10:00:00	48.3	510.6
09:00:00	49.3	529.1
08:00:00	49.3	529.1
07:00:00	49.0	523.3
06:00:00	49.1	525.2
05:00:00	49.2	527.2
04:00:00	49.4	531.1
03:00:00	49.3	529.1
02:00:00	49.0	523.3
01:00:00	49.6	535.1
00:00:00	49.7	537.2

DATE 06-02-97

TIME	LEVEL	FLOW
23:00:00	50.4	551.8
22:00:00	51.1	567.2
21:00:00	50.5	554.0
20:00:00	50.1	545.4
19:00:00	50.2	547.6
18:00:00	50.5	554.0
17:00:00	51.1	567.2
16:00:00	50.9	562.7
15:00:00	50.9	562.7
14:00:00	51.3	571.7
13:00:00	51.5	576.3
12:00:00	52.0	587.9
11:00:00	51.1	567.2
10:00:00	51.4	574.0
09:00:00	51.8	583.2
08:00:00	51.8	583.2
07:00:00	51.6	578.6
06:00:00	51.6	578.6
05:00:00	51.5	576.3
04:00:00	52.3	595.0
03:00:00	51.7	580.9
02:00:00	52.1	590.3
01:00:00	52.2	592.6
00:00:00	52.2	592.6

DATE 06-01-97

TIME	LEVEL	FLOW
23:00:00	50.3	549.7
22:00:00	50.7	558.3
21:00:00	50.2	547.6
20:00:00	50.3	549.7
19:00:00	50.4	551.8
18:00:00	50.8	560.5
17:00:00	51.0	565.0
16:00:00	51.4	574.0
15:00:00	51.3	571.7
14:00:00	51.0	565.0
13:00:00	51.2	569.5
12:00:00	51.2	569.5
11:00:00	51.1	567.2
10:00:00	50.8	560.5
09:00:00	51.2	569.5
08:00:00	51.3	571.7
07:00:00	51.3	571.7
06:00:00	51.1	567.2
05:00:00	50.9	562.7
04:00:00	50.6	556.2
03:00:00	50.6	556.2
02:00:00	50.4	551.8
01:00:00	53.2	689.3
00:00:00	53.2	689.3

DATE 05-31-97

TIME	LEVEL	FLOW
23:00:00	53.6	699.6
22:00:00	53.5	697.0
21:00:00	53.5	697.0
20:00:00	50.2	617.9
19:00:00	48.2	577.8
18:00:00	48.9	590.8
17:00:00	49.9	611.4
16:00:00	49.9	611.4
15:00:00	49.5	602.9
14:00:00	50.2	617.9
13:00:00	50.1	615.7
12:00:00	50.5	624.5
11:00:00	50.2	617.9
10:00:00	48.9	590.8
09:00:00	49.1	594.8
08:00:00	49.2	596.8
07:00:00	50.2	617.9
06:00:00	50.7	629.0
05:00:00	50.3	620.1
04:00:00	50.5	624.5
03:00:00	50.8	631.3
02:00:00	50.2	617.9
01:00:00	50.4	622.3
00:00:00	50.4	622.3

DATE 05-30-97

TIME	LEVEL	FLOW
23:00:00	50.8	631.3
22:00:00	50.4	622.3
21:00:00	50.7	629.0
20:00:00	51.4	645.1
19:00:00	50.7	629.0
18:00:00	50.7	629.0
17:00:00	50.9	633.5
16:00:00	51.0	635.8
15:00:00	51.4	645.1
14:00:00	51.3	642.8
13:00:00	51.8	654.6
12:00:00	51.5	647.5
11:00:00	49.5	602.9
10:00:00	49.6	605.0
09:00:00	49.2	596.8
08:00:00	49.3	598.8
07:00:00	49.7	607.1
06:00:00	49.4	600.8
05:00:00	49.6	605.0
04:00:00	48.9	590.8
03:00:00	49.6	605.0
02:00:00	49.5	602.9
01:00:00	49.3	598.8
00:00:00	48.7	586.9

DATE 05-29-97

TIME	LEVEL	FLOW
23:00:00	49.3	598.8
22:00:00	49.2	596.8
21:00:00	49.7	607.1
20:00:00	49.8	609.2
19:00:00	49.9	611.4
18:00:00	49.7	607.1
17:00:00	49.5	602.9
16:00:00	50.0	613.5
15:00:00	50.0	613.5
14:00:00	50.1	615.7
13:00:00	50.8	631.3
12:00:00	50.3	620.1
11:00:00	49.6	605.0
10:00:00	49.2	596.8
09:00:00	49.6	605.0
08:00:00	49.1	594.8
07:00:00	49.5	602.9
06:00:00	49.8	609.2
05:00:00	49.1	594.8
04:00:00	48.7	586.9
03:00:00	48.4	581.3
02:00:00	47.5	566.6
01:00:00	47.2	562.0
00:00:00	46.7	554.2

DATE 05-28-97

TIME	LEVEL	FLOW
23:00:00	46.8	555.8
22:00:00	47.9	572.8
21:00:00	47.9	572.8
20:00:00	48.0	574.4
19:00:00	48.4	581.3
18:00:00	48.0	574.4
17:00:00	49.5	602.9
16:00:00	49.8	609.2
15:00:00	50.1	615.7
14:00:00	50.3	620.1
13:00:00	49.3	598.8
12:00:00	49.6	605.0
11:00:00	49.7	607.1
10:00:00	50.2	617.9
09:00:00	49.7	607.1
08:00:00	49.4	600.8
07:00:00	49.1	594.8
06:00:00	49.0	592.8
05:00:00	49.9	611.4
04:00:00	48.1	576.1
03:00:00	49.1	594.8
02:00:00	48.5	583.2
01:00:00	48.8	588.9
00:00:00	48.8	588.9

DATE 05-27-97

TIME	LEVEL	FLOW
23:00:00	48.8	588.9
22:00:00	49.0	592.8
21:00:00	50.0	613.5
20:00:00	50.0	613.5
19:00:00	50.4	622.3
18:00:00	50.8	631.3
17:00:00	51.0	635.8
16:00:00	52.0	659.5
15:00:00	52.1	661.9
14:00:00	52.7	676.7
13:00:00	52.5	671.7
12:00:00	52.8	679.2
11:00:00	52.6	674.2
10:00:00	52.8	679.2
09:00:00	53.1	686.8
08:00:00	53.8	704.8
07:00:00	53.1	686.8
06:00:00	52.0	659.5
05:00:00	52.6	674.2
04:00:00	53.2	689.3
03:00:00	53.8	704.8
02:00:00	53.3	691.9
01:00:00	54.2	715.3
00:00:00	52.8	679.2

DATE 05-26-97

TIME	LEVEL	FLOW
23:00:00	53.7	702.2
22:00:00	54.1	712.7
21:00:00	54.0	710.1
20:00:00	54.0	710.1
19:00:00	58.0	822.4
18:00:00	53.6	699.6
17:00:00	53.9	707.4
16:00:00	53.8	704.8
15:00:00	53.1	686.8
14:00:00	53.9	707.4
13:00:00	54.7	728.7
12:00:00	54.8	731.4
11:00:00	54.3	718.0
10:00:00	54.6	726.0
09:00:00	54.5	723.3
08:00:00	53.4	694.4
07:00:00	53.5	697.0
06:00:00	53.3	691.9
05:00:00	53.6	699.6
04:00:00	53.1	686.8
03:00:00	53.2	689.3
02:00:00	53.3	691.9
01:00:00	52.9	681.7
00:00:00	52.9	681.7

DATE 05-25-97

TIME	LEVEL	FLOW
23:00:00	52.8	679.2
22:00:00	53.1	686.8
21:00:00	53.2	689.3
20:00:00	53.7	702.2
19:00:00	54.1	712.7
18:00:00	54.2	715.3
17:00:00	53.8	704.8
16:00:00	55.2	742.3
15:00:00	55.2	742.3
14:00:00	55.8	758.9
13:00:00	55.9	761.7
12:00:00	55.6	753.3
11:00:00	55.6	753.3
10:00:00	55.7	756.1
09:00:00	56.3	773.0
08:00:00	56.0	764.5
07:00:00	55.8	758.9
06:00:00	55.7	756.1
05:00:00	55.9	761.7
04:00:00	55.1	739.6
03:00:00	55.6	753.3
02:00:00	55.5	750.6
01:00:00	55.0	736.8
00:00:00	54.0	710.1

**DATE 05-24-97*

TIME	LEVEL	FLOW
23:00:00	54.5	723.3
22:00:00	54.1	712.7
21:00:00	54.0	710.1
20:00:00	53.5	697.0
19:00:00	54.2	715.3
18:00:00	58.1	825.3
17:00:00	58.7	843.3
16:00:00	57.8	816.4
15:00:00	57.8	816.4
14:00:00	58.2	828.3
13:00:00	58.5	837.3
12:00:00	58.3	831.3
11:00:00	57.9	819.4
10:00:00	54.6	726.0
09:00:00	54.9	734.1
08:00:00	54.9	734.1
07:00:00	54.7	728.7
06:00:00	54.0	710.1
05:00:00	53.8	704.8
04:00:00	53.9	707.4
03:00:00	53.4	694.4
02:00:00	53.6	699.6
01:00:00	53.5	697.0
00:00:00	54.3	718.0

DATE 05-23-97

TIME	LEVEL	FLOW
23:00:00	53.9	707.4
22:00:00	53.5	697.0
21:00:00	53.0	684.2
20:00:00	53.2	689.3
19:00:00	53.3	691.9
18:00:00	53.6	699.6
17:00:00	53.6	699.6
16:00:00	54.5	723.3
15:00:00	54.6	726.0
14:00:00	54.8	731.4
13:00:00	54.9	734.1
12:00:00	54.8	731.4
11:00:00	54.0	710.1
10:00:00	53.8	704.8
09:00:00	53.8	704.8
08:00:00	53.9	707.4
07:00:00	53.4	694.4
06:00:00	53.8	704.8
05:00:00	53.9	707.4
04:00:00	53.8	704.8
03:00:00	54.0	710.1
02:00:00	54.0	710.1
01:00:00	53.6	699.6
00:00:00	53.4	694.4

DATE 05-22-97

TIME	LEVEL	FLOW
23:00:00	53.2	689.3
22:00:00	54.1	712.7
21:00:00	53.7	702.2
20:00:00	54.6	726.0
19:00:00	54.1	712.7
18:00:00	54.2	715.3
17:00:00	53.4	694.4
16:00:00	53.4	694.4
15:00:00	54.1	712.7
14:00:00	53.2	689.3
13:00:00	51.4	645.1
12:00:00	52.3	666.8
11:00:00	53.2	689.3
10:00:00	54.3	718.0
09:00:00	55.1	739.6
08:00:00	53.8	704.8
07:00:00	53.7	702.2
06:00:00	53.9	707.4
05:00:00	53.0	684.2
04:00:00	54.0	710.1
03:00:00	53.6	699.6
02:00:00	52.9	681.7
01:00:00	52.5	671.7
00:00:00	53.0	684.2

DATE 05-21-97

TIME	LEVEL	FLOW
23:00:00	53.4	694.4
22:00:00	53.9	707.4
21:00:00	53.5	697.0
20:00:00	53.8	704.8
19:00:00	54.3	718.0
18:00:00	54.0	710.1
17:00:00	54.3	718.0
16:00:00	54.7	728.7
15:00:00	54.3	718.0
14:00:00	54.0	710.1
13:00:00	54.4	720.7
12:00:00	54.6	726.0
11:00:00	54.1	712.7
10:00:00	53.8	704.8
09:00:00	54.3	718.0
08:00:00	53.9	707.4
07:00:00	53.1	686.8
06:00:00	53.3	691.9
05:00:00	53.2	689.3
04:00:00	53.6	699.6
03:00:00	53.3	691.9
02:00:00	53.7	702.2
01:00:00	52.9	681.7
00:00:00	53.3	691.9

DATE 05-20-97

TIME	LEVEL	FLOW
23:00:00	52.9	681.7
22:00:00	52.7	676.7
21:00:00	53.1	686.8
20:00:00	53.4	694.4
19:00:00	52.9	681.7
18:00:00	52.9	681.7
17:00:00	53.7	702.2
16:00:00	53.7	702.2
15:00:00	54.0	710.1
14:00:00	53.7	702.2
13:00:00	53.4	694.4
12:00:00	53.2	689.3
11:00:00	53.0	684.2
10:00:00	53.5	697.0
09:00:00	53.8	704.8
08:00:00	54.2	715.3
07:00:00	53.1	686.8
06:00:00	52.9	681.7
05:00:00	53.7	702.2
04:00:00	53.4	694.4
03:00:00	53.4	694.4
02:00:00	53.3	691.9
01:00:00	52.4	669.2
00:00:00	52.0	659.5

DATE 05-19-97

TIME	LEVEL	FLOW
23:00:00	52.4	669.2
22:00:00	52.7	676.7
21:00:00	52.3	666.8
20:00:00	53.7	702.2
19:00:00	53.1	686.8
18:00:00	53.0	684.2
17:00:00	53.7	702.2
16:00:00	53.3	691.9
15:00:00	54.3	718.0
14:00:00	54.0	710.1
13:00:00	54.1	712.7
12:00:00	55.2	742.3
11:00:00	56.1	767.3
10:00:00	56.4	775.8
09:00:00	55.0	736.8
08:00:00	54.9	734.1
07:00:00	55.6	753.3
06:00:00	55.1	739.6
05:00:00	55.6	753.3
04:00:00	54.7	728.7
03:00:00	54.5	723.3
02:00:00	54.3	718.0
01:00:00	53.4	694.4
00:00:00	53.7	702.2

DATE 05-18-97

TIME		FLOW
23:00:00	53.3	691.9
22:00:00	54.0	710.1
21:00:00	53.1	686.8
20:00:00	53.0	684.2
19:00:00	53.8	704.8
18:00:00	54.1	712.7
17:00:00	54.6	726.0
16:00:00	54.8	731.4
15:00:00	54.2	715.3
14:00:00	54.9	734.1
13:00:00	55.6	753.3
12:00:00	54.9	734.1
11:00:00	55.7	756.1
10:00:00	55.7	756.1
09:00:00	55.4	747.8
08:00:00	54.9	734.1
07:00:00	54.4	720.7
06:00:00	54.3	718.0
05:00:00	54.3	718.0
04:00:00	54.6	726.0
03:00:00	54.4	720.7
02:00:00	54.8	731.4
01:00:00	54.4	720.7
00:00:00	54.1	712.7

DATE 05-17-97

TIME	LEVEL	FLOW
23:00:00	54.1	712.7
22:00:00	54.5	723.3
21:00:00	54.5	723.3
20:00:00	54.6	726.0
19:00:00	54.1	712.7
18:00:00	53.9	707.4
17:00:00	53.8	704.8
16:00:00	53.3	691.9
15:00:00	53.9	707.4
14:00:00	53.0	684.2
13:00:00	53.0	684.2
12:00:00	53.8	704.8
11:00:00	53.9	707.4
10:00:00	54.3	718.0
09:00:00	54.6	726.0
08:00:00	53.0	684.2
07:00:00	54.0	710.1
06:00:00	54.0	710.1
05:00:00	53.9	707.4
04:00:00	54.7	728.7
03:00:00	53.9	707.4
02:00:00	53.6	699.6
01:00:00	53.8	704.8
00:00:00	53.9	707.4

DATE 05-16-97

TIME	LEVEL	FLOW
23:00:00	54.6	726.0
22:00:00	54.1	712.7
21:00:00	54.7	728.7
20:00:00	53.6	699.6
19:00:00	54.3	718.0
18:00:00	54.4	720.7
17:00:00	54.6	726.0
16:00:00	53.4	694.4
15:00:00	54.1	712.7
14:00:00	53.8	704.8
13:00:00	54.4	720.7
12:00:00	54.8	731.4
11:00:00	55.0	736.8
10:00:00	55.2	742.3
09:00:00	55.1	739.6
08:00:00	55.0	736.8
07:00:00	55.5	750.6
06:00:00	55.4	747.8
05:00:00	54.9	734.1
04:00:00	54.8	731.4
03:00:00	53.8	704.8
02:00:00	54.8	731.4
01:00:00	54.9	734.1
00:00:00	54.7	728.7

DATE 05-15-97

TIME	LEVEL	FLOW
23:00:00	54.2	715.3
22:00:00	53.4	694.4
21:00:00	53.2	689.3
20:00:00	52.8	679.2
19:00:00	52.9	681.7
18:00:00	53.3	691.9
17:00:00	53.2	689.3
16:00:00	53.4	694.4
15:00:00	52.9	681.7
14:00:00	53.0	684.2
13:00:00	52.8	679.2
12:00:00	52.6	674.2
11:00:00	52.9	681.7
10:00:00	52.7	676.7
09:00:00	53.5	697.0
08:00:00	53.6	699.6
07:00:00	53.5	697.0
06:00:00	52.6	674.2
05:00:00	53.2	689.3
04:00:00	51.4	645.1
03:00:00	51.5	647.5
02:00:00	52.0	659.5
01:00:00	51.9	657.0
00:00:00	51.6	649.9

DATE 05-14-97

TIME	LEVEL	FLOW
23:00:00	51.6	649.9
22:00:00	51.9	657.0
21:00:00	51.9	657.0
20:00:00	52.0	659.5
19:00:00	52.6	674.2
18:00:00	53.0	684.2
17:00:00	54.5	723.3
16:00:00	54.6	726.0
15:00:00	53.2	689.3
14:00:00	53.1	686.8
13:00:00	53.1	686.8
12:00:00	53.2	689.3
11:00:00	53.4	694.4
10:00:00	53.4	694.4
09:00:00	53.4	694.4
08:00:00	52.7	676.7
07:00:00	51.8	654.6
06:00:00	51.7	652.2
05:00:00	51.1	638.1
04:00:00	51.7	652.2
03:00:00	51.9	657.0
02:00:00	52.2	664.3
01:00:00	52.3	666.8
00:00:00	52.0	659.5

DATE 05-13-97

TIME	LEVEL	FLOW
23:00:00	52.2	664.3
22:00:00	52.6	674.2
21:00:00	52.7	676.7
20:00:00	52.7	676.7
19:00:00	52.8	679.2
18:00:00	52.9	681.7
17:00:00	52.9	681.7
16:00:00	53.3	691.9
15:00:00	52.8	679.2
14:00:00	53.5	697.0
13:00:00	53.8	704.8
12:00:00	53.8	704.8
11:00:00	53.2	689.3
10:00:00	53.2	689.3
09:00:00	53.4	694.4
08:00:00	55.4	747.8
07:00:00	55.5	750.6
06:00:00	55.4	747.8
05:00:00	55.7	756.1
04:00:00	55.4	747.8
03:00:00	54.5	723.3
02:00:00	55.8	758.9
01:00:00	54.1	712.7
00:00:00	53.8	704.8

DATE 05-12-97

TIME	LEVEL	FLOW
23:00:00	50.8	631.3
22:00:00	52.0	587.9
21:00:00	52.4	597.4
20:00:00	55.3	671.3
19:00:00	55.7	682.1
18:00:00	51.9	585.6
17:00:00	51.1	567.2
16:00:00	51.5	576.3
15:00:00	51.1	567.2
14:00:00	51.9	585.6
13:00:00	52.7	604.7
12:00:00	52.9	609.6
11:00:00	52.3	595.0
10:00:00	52.9	609.6
09:00:00	52.8	607.1
08:00:00	52.4	597.4
07:00:00	53.0	612.0
06:00:00	53.1	614.5
05:00:00	52.6	602.2
04:00:00	51.4	574.0
03:00:00	52.9	609.6
02:00:00	51.6	578.6
01:00:00	51.6	578.6
00:00:00	51.5	576.3

DATE 05-11-97

TIME	LEVEL	FLOW
23:00:00	51.8	583.2
22:00:00	51.8	583.2
21:00:00	52.0	587.9
20:00:00	52.4	597.4
19:00:00	50.4	551.8
18:00:00	50.6	556.2
17:00:00	51.3	571.7
16:00:00	52.5	599.8
15:00:00	53.6	627.0
14:00:00	53.3	619.4
13:00:00	53.6	627.0
12:00:00	53.4	621.9
11:00:00	53.6	627.0
10:00:00	53.4	621.9
09:00:00	53.9	634.6
08:00:00	53.1	614.5
07:00:00	52.6	602.2
06:00:00	53.0	612.0
05:00:00	53.2	617.0
04:00:00	53.7	629.5
03:00:00	52.9	609.6
02:00:00	53.0	612.0
01:00:00	52.3	595.0
00:00:00	52.3	595.0

DATE 05-10-97

TIME	LEVEL	FLOW
23:00:00	52.1	590.3
22:00:00	52.5	599.8
21:00:00	52.4	597.4
20:00:00	52.3	595.0
19:00:00	52.1	590.3
18:00:00	52.3	595.0
17:00:00	52.0	587.9
16:00:00	52.7	604.7
15:00:00	53.3	619.4
14:00:00	53.4	621.9
13:00:00	52.9	609.6
12:00:00	52.9	609.6
11:00:00	51.7	580.9
10:00:00	52.2	592.6
09:00:00	52.3	595.0
08:00:00	51.9	585.6
07:00:00	51.8	583.2
06:00:00	51.5	576.3
05:00:00	51.3	571.7
04:00:00	50.3	549.7
03:00:00	51.3	571.7
02:00:00	51.2	569.5
01:00:00	52.1	590.3
00:00:00	52.5	599.8

DATE 05-09-97

TIME	LEVEL	FLOW
23:00:00	51.7	580.9
22:00:00	50.1	545.4
21:00:00	50.2	547.6
20:00:00	50.3	549.7
19:00:00	50.7	558.3
18:00:00	50.7	558.3
17:00:00	51.4	574.0
16:00:00	50.2	547.6
15:00:00	50.2	547.6
14:00:00	50.1	545.4
13:00:00	52.6	602.2
12:00:00	52.0	587.9
11:00:00	50.8	560.5
10:00:00	50.6	556.2
09:00:00	50.1	545.4
08:00:00	50.1	545.4
07:00:00	51.4	574.0
06:00:00	51.2	569.5
05:00:00	51.4	574.0
04:00:00	50.7	558.3
03:00:00	50.9	562.7
02:00:00	51.0	565.0
01:00:00	50.4	551.8
00:00:00	49.1	525.2

DATE 05-08-97

TIME	LEVEL	FLOW
23:00:00	49.3	529.1
22:00:00	48.7	517.7
21:00:00	49.2	527.2
20:00:00	49.5	533.1
19:00:00	49.8	539.2
18:00:00	49.1	525.2
17:00:00	49.2	527.2
16:00:00	49.3	529.1
15:00:00	49.7	537.2
14:00:00	50.2	547.6
13:00:00	50.2	547.6
12:00:00	50.3	549.7
11:00:00	50.8	560.5
10:00:00	51.0	565.0
09:00:00	50.4	551.8
08:00:00	50.9	562.7
07:00:00	51.1	567.2
06:00:00	52.4	597.4
05:00:00	53.4	621.9
04:00:00	53.8	632.0
03:00:00	53.8	632.0
02:00:00	53.6	627.0
01:00:00	53.0	612.0
00:00:00	52.9	609.6

DATE 05-07-97

TIME	LEVEL	FLOW
23:00:00	52.9	609.6
22:00:00	57.9	743.9
21:00:00	55.5	676.7
20:00:00	49.6	535.1
19:00:00	49.1	525.2
18:00:00	49.1	525.2
17:00:00	49.1	525.2
16:00:00	49.8	539.2
15:00:00	49.0	523.3
14:00:00	48.5	514.1
13:00:00	48.8	519.6
12:00:00	49.3	529.1
11:00:00	49.6	535.1
10:00:00	55.3	671.3
09:00:00	49.8	539.2
08:00:00	49.7	537.2
07:00:00	49.8	539.2
06:00:00	49.9	541.3
05:00:00	49.8	539.2
04:00:00	49.5	533.1
03:00:00	49.6	535.1
02:00:00	49.8	539.2
01:00:00	49.8	539.2
00:00:00	49.7	537.2

DATE 05-06-97

TIME	LEVEL	FLOW
23:00:00	49.6	535.1
22:00:00	49.7	537.2
21:00:00	49.6	535.1
20:00:00	49.1	525.2
19:00:00	49.6	535.1
18:00:00	49.7	537.2
17:00:00	49.8	539.2
16:00:00	49.8	539.2
15:00:00	49.9	541.3
14:00:00	49.9	541.3
13:00:00	49.8	539.2
12:00:00	48.6	533.2
11:00:00	48.9	538.8
10:00:00	49.4	548.5
09:00:00	49.3	546.6
08:00:00	49.3	546.6
07:00:00	49.5	550.6
06:00:00	49.4	548.5
05:00:00	49.8	556.7
04:00:00	49.1	542.6
03:00:00	49.2	544.6
02:00:00	49.0	540.7
01:00:00	49.2	544.6
00:00:00	49.0	540.7

DATE 05-05-97

TIME	LEVEL	FLOW
23:00:00	49.4	496.2
22:00:00	49.0	488.6
21:00:00	48.9	486.7
20:00:00	49.3	494.3
19:00:00	54.2	605.8
18:00:00	54.3	608.3
17:00:00	54.4	610.9
16:00:00	54.6	616.0
15:00:00	54.0	600.7
14:00:00	53.6	590.7
13:00:00	52.9	573.5
12:00:00	49.9	506.2
11:00:00	49.0	488.6
10:00:00	49.6	500.2
09:00:00	49.5	498.2
08:00:00	49.5	550.6
07:00:00	50.2	512.4
06:00:00	50.5	518.7
05:00:00	49.8	504.2
04:00:00	49.4	496.2
03:00:00	48.8	484.9
02:00:00	49.1	490.5
01:00:00	49.1	490.5
00:00:00	49.2	492.4

DATE 05-04-97

TIME	LEVEL	FLOW
23:00:00	48.4	477.8
22:00:00	48.6	481.3
21:00:00	48.1	472.8
20:00:00	48.0	471.3
19:00:00	48.3	476.1
18:00:00	48.6	481.3
17:00:00	48.5	479.5
16:00:00	48.8	484.9
15:00:00	48.2	474.4
14:00:00	47.6	465.5
13:00:00	48.1	472.8
12:00:00	48.0	471.3
11:00:00	47.8	468.4
10:00:00	47.4	462.6
09:00:00	47.4	462.6
08:00:00	48.2	474.4
07:00:00	48.0	471.3
06:00:00	48.1	472.8
05:00:00	48.1	472.8
04:00:00	48.2	474.4
03:00:00	48.1	472.8
02:00:00	48.2	474.4
01:00:00	48.7	483.1
00:00:00	49.1	490.5

DATE 05-03-97

TIME	LEVEL	FLOW
23:00:00	48.6	481.3
22:00:00	48.8	484.9
21:00:00	48.3	476.1
20:00:00	48.7	483.1
19:00:00	48.7	483.1
18:00:00	48.7	483.1
17:00:00	48.8	484.9
16:00:00	49.3	494.3
15:00:00	49.4	496.2
14:00:00	49.3	494.3
13:00:00	49.2	492.4
12:00:00	46.8	487.9
11:00:00	46.8	487.9
10:00:00	46.6	485.0
09:00:00	46.4	482.0
08:00:00	45.9	474.7
07:00:00	45.1	463.1
06:00:00	45.2	464.6
05:00:00	45.6	470.4
04:00:00	45.7	471.8
03:00:00	45.8	473.3
02:00:00	46.0	476.2
01:00:00	46.3	480.6
00:00:00	46.6	485.0

DATE 05-02-97

TIME	LEVEL	FLOW
23:00:00	46.0	476.2
22:00:00	46.5	483.5
21:00:00	46.9	489.4
20:00:00	46.9	489.4
19:00:00	47.0	490.9
18:00:00	47.3	495.3
17:00:00	47.3	495.3
16:00:00	47.2	493.8
15:00:00	47.6	499.7
14:00:00	48.5	514.1
13:00:00	47.7	501.2
12:00:00	47.8	502.7
11:00:00	48.3	510.6
10:00:00	48.7	517.7
09:00:00	48.9	521.4
08:00:00	49.0	523.3
07:00:00	48.9	521.4
06:00:00	48.4	512.3
05:00:00	48.3	510.6
04:00:00	47.9	504.2
03:00:00	48.7	517.7
02:00:00	48.3	510.6
01:00:00	48.6	515.9
00:00:00	48.2	508.9

DATE 05-01-97

TIME	LEVEL	FLOW
23:00:00	48.7	517.7
22:00:00	48.3	510.6
21:00:00	48.6	515.9
20:00:00	48.4	512.3
19:00:00	48.2	508.9
18:00:00	48.5	514.1
17:00:00	48.3	510.6
16:00:00	47.9	504.2
15:00:00	47.5	498.2
14:00:00	47.6	499.7
13:00:00	50.8	560.5
12:00:00	46.9	489.4
11:00:00	48.5	479.5
10:00:00	48.6	481.3
09:00:00	48.8	484.9
08:00:00	48.0	471.3
07:00:00	47.8	468.4
06:00:00	48.8	484.9
05:00:00	47.9	469.8
04:00:00	47.4	462.6
03:00:00	47.5	464.1
02:00:00	47.9	469.8
01:00:00	47.0	456.8
00:00:00	47.1	458.3

DATE 04-30-97

TIME	LEVEL	FLOW
23:00:00	46.8	454.0
22:00:00	46.9	455.4
21:00:00	47.0	456.8
20:00:00	47.0	456.8
19:00:00	47.3	461.2
18:00:00	47.0	456.8
17:00:00	46.0	442.5
16:00:00	46.3	446.8
15:00:00	46.8	454.0
14:00:00	47.8	468.4
13:00:00	46.1	444.0
12:00:00	46.6	451.1
11:00:00	47.2	459.7
10:00:00	47.6	465.5
09:00:00	48.2	474.2
08:00:00	48.0	471.3
07:00:00	48.9	484.4
06:00:00	49.1	487.4
05:00:00	49.3	490.3
04:00:00	50.5	508.1
03:00:00	50.1	502.1
02:00:00	48.1	472.8
01:00:00	47.0	456.8
00:00:00	46.0	442.5

DATE 04-29-97

TIME	LEVEL	FLOW
23:00:00	45.1	429.8
22:00:00	44.9	427.0
21:00:00	44.9	427.0
20:00:00	44.9	427.0
19:00:00	44.5	421.4
18:00:00	44.1	415.8
17:00:00	44.4	420.0
16:00:00	44.9	427.0
15:00:00	44.3	418.6
14:00:00	44.0	414.4
13:00:00	43.9	413.0
12:00:00	44.0	414.4
11:00:00	43.7	410.2
10:00:00	43.8	411.6
09:00:00	44.0	414.4
08:00:00	44.6	422.8
07:00:00	44.2	417.2
06:00:00	44.1	415.8
05:00:00	43.6	408.9
04:00:00	43.8	411.6
03:00:00	43.8	411.6
02:00:00	43.9	413.0
01:00:00	43.2	403.3
00:00:00	42.0	386.9

DATE 04-28-97

TIME	LEVEL	FLOW
23:00:00	41.2	376.1
22:00:00	41.3	377.4
21:00:00	40.9	372.0
20:00:00	41.4	378.8
19:00:00	41.2	376.1
18:00:00	41.4	378.8
17:00:00	41.5	380.1
16:00:00	41.2	376.1
15:00:00	42.0	386.9
14:00:00	42.7	396.5
13:00:00	42.4	392.3
12:00:00	42.6	395.1
11:00:00	43.9	413.0
10:00:00	43.3	404.7
09:00:00	43.4	406.1
08:00:00	43.3	404.7
07:00:00	43.0	400.6
06:00:00	43.0	400.6
05:00:00	43.0	400.6
04:00:00	43.1	401.9
03:00:00	43.0	400.6
02:00:00	43.0	400.6
01:00:00	42.9	399.2
00:00:00	42.9	399.2

DATE 04-27-97

TIME	LEVEL	FLOW
23:00:00	42.7	396.5
22:00:00	42.4	392.3
21:00:00	42.3	391.0
20:00:00	41.9	385.5
19:00:00	41.6	381.5
18:00:00	41.7	382.8
17:00:00	42.0	386.9
16:00:00	41.7	382.8
15:00:00	41.5	380.1
14:00:00	41.8	384.2
13:00:00	40.5	366.7
12:00:00	41.1	374.7
11:00:00	41.5	380.1
10:00:00	41.1	374.7
09:00:00	41.9	385.5
08:00:00	41.5	380.1
07:00:00	40.7	369.4
06:00:00	40.7	369.4
05:00:00	40.3	364.0
04:00:00	40.3	364.0
03:00:00	39.8	357.4
02:00:00	40.0	360.0
01:00:00	40.2	362.7
00:00:00	40.7	369.4

DATE 04-26-97

TIME	LEVEL	FLOW
23:00:00	40.4	365.3
22:00:00	40.3	364.0
21:00:00	39.8	357.4
20:00:00	39.4	352.1
19:00:00	40.1	361.3
18:00:00	39.3	350.8
17:00:00	40.1	361.3
16:00:00	39.4	352.1
15:00:00	40.0	360.0
14:00:00	39.3	350.8
13:00:00	39.5	353.4
12:00:00	39.6	354.7
11:00:00	40.0	360.0
10:00:00	39.3	350.8
09:00:00	39.4	352.1
08:00:00	39.5	353.4
07:00:00	39.7	356.0
06:00:00	39.6	354.7
05:00:00	39.8	357.4
04:00:00	39.9	358.7
03:00:00	40.1	361.3
02:00:00	40.1	361.3
01:00:00	39.3	350.8
00:00:00	39.4	352.1

DATE 04-25-97

TIME	LEVEL	FLOW
23:00:00	39.4	352.1
22:00:00	39.3	350.8
21:00:00	39.6	354.7
20:00:00	39.3	350.8
19:00:00	39.3	350.8
18:00:00	39.4	352.1
17:00:00	39.3	350.8
16:00:00	40.0	360.0
15:00:00	39.8	357.4
14:00:00	39.7	356.0
13:00:00	39.8	357.4
12:00:00	39.3	350.8
11:00:00	39.9	358.7
10:00:00	40.1	361.3
09:00:00	39.7	356.0
08:00:00	39.6	354.7
07:00:00	39.3	350.8
06:00:00	39.9	358.7
05:00:00	39.3	350.8
04:00:00	39.7	356.0
03:00:00	39.9	358.7
02:00:00	40.4	365.3
01:00:00	40.4	365.3
00:00:00	40.9	372.0

DATE 04-24-97

TIME	LEVEL	FLOW
23:00:00	41.0	373.4
22:00:00	40.7	369.4
21:00:00	40.6	368.0
20:00:00	40.7	369.4
19:00:00	40.0	360.0
18:00:00	40.1	361.3
17:00:00	40.4	365.3
16:00:00	40.5	366.7
15:00:00	40.9	372.0
14:00:00	41.1	374.7
13:00:00	40.7	369.4
12:00:00	41.2	376.1
11:00:00	41.3	377.4
10:00:00	40.7	369.4
09:00:00	40.8	370.7
08:00:00	40.1	361.3
07:00:00	40.7	369.4
06:00:00	40.3	364.0
05:00:00	40.6	368.0
04:00:00	40.8	370.7
03:00:00	40.9	372.0
02:00:00	41.0	373.4
01:00:00	40.7	369.4
00:00:00	40.0	360.0

DATE 04-23-97

TIME	LEVEL	FLOW
23:00:00	39.9	358.7
22:00:00	39.3	350.8
21:00:00	39.4	352.1
20:00:00	39.4	352.1
19:00:00	39.4	352.1
18:00:00	39.2	349.5
17:00:00	39.6	354.7
16:00:00	39.4	352.1
15:00:00	39.3	350.8
14:00:00	39.5	353.4
13:00:00	41.2	376.1
12:00:00	43.2	403.3
11:00:00	40.4	365.3
10:00:00	40.8	370.7
09:00:00	41.2	376.1
08:00:00	40.5	366.7
07:00:00	40.4	365.3
06:00:00	40.7	369.4
05:00:00	40.8	370.7
04:00:00	41.2	376.1
03:00:00	40.9	372.0
02:00:00	40.8	370.7
01:00:00	40.1	361.3
00:00:00	40.2	362.7

DATE 04-22-97

TIME	LEVEL	FLOW
23:00:00	40.8	370.7
22:00:00	40.5	366.7
21:00:00	40.4	365.3
20:00:00	40.2	362.7
19:00:00	40.4	365.3
18:00:00	40.4	365.3
17:00:00	40.3	364.0
16:00:00	39.8	357.4
15:00:00	39.8	357.4
14:00:00	39.6	354.7
13:00:00	39.4	352.1
12:00:00	39.5	353.4
11:00:00	39.9	358.7
10:00:00	40.5	366.7
09:00:00	50.2	363.7
08:00:00	50.1	362.3
07:00:00	49.8	358.0
06:00:00	49.1	348.8
05:00:00	49.5	354.0
04:00:00	49.9	359.4
03:00:00	50.2	363.7
02:00:00	49.7	356.7
01:00:00	49.2	350.0
00:00:00	48.3	339.4

DATE 04-21-97

TIME	LEVEL	FLOW
23:00:00	47.5	332.3
22:00:00	47.1	329.0
21:00:00	47.4	331.5
20:00:00	47.1	329.0
19:00:00	47.6	333.2
18:00:00	47.5	332.3
17:00:00	47.9	335.6
16:00:00	47.5	332.3
15:00:00	47.4	331.5
14:00:00	47.4	331.5
13:00:00	47.6	333.2
12:00:00	47.4	331.5
11:00:00	47.8	334.8
10:00:00	47.6	333.2
09:00:00	47.5	332.3
08:00:00	52.1	325.6
07:00:00	52.4	331.3
06:00:00	52.2	327.5
05:00:00	52.1	325.6
04:00:00	52.1	325.6
03:00:00	51.9	321.9
02:00:00	51.8	320.1
01:00:00	49.8	285.9
00:00:00	48.3	264.8

DATE 04-20-97

TIME	LEVEL	FLOW
23:00:00	47.0	251.7
22:00:00	45.4	236.4
21:00:00	44.6	229.0
20:00:00	43.4	218.1
19:00:00	52.4	208.8
18:00:00	51.4	193.9
17:00:00	50.5	181.5
16:00:00	50.3	178.9
15:00:00	50.3	178.9
14:00:00	50.3	178.9
13:00:00	50.0	175.2
12:00:00	50.0	175.2
11:00:00	49.9	173.9
10:00:00	49.8	172.7
09:00:00	48.4	157.9
08:00:00	47.9	154.0
07:00:00	47.9	154.0
06:00:00	48.0	154.7
05:00:00	48.3	157.0
04:00:00	48.4	157.9
03:00:00	48.8	161.6
02:00:00	48.8	161.6
01:00:00	47.9	154.0
00:00:00	47.8	153.4

DATE 04-19-97

TIME	LEVEL	FLOW
23:00:00	46.7	146.7
22:00:00	46.5	145.5
21:00:00	46.5	145.5
20:00:00	46.3	144.3
19:00:00	46.5	145.5
18:00:00	46.3	144.3
17:00:00	46.2	143.7
16:00:00	45.8	141.4
15:00:00	45.8	141.4
14:00:00	50.1	141.3
13:00:00	49.7	136.6
12:00:00	48.2	121.7
11:00:00	47.2	115.6
10:00:00	46.9	113.9
09:00:00	46.5	111.7
08:00:00	50.1	106.2
07:00:00	50.0	105.0
06:00:00	49.0	94.2
05:00:00	49.1	95.2
04:00:00	49.1	95.2
03:00:00	48.9	93.3
02:00:00	48.3	88.0
01:00:00	47.8	84.8
00:00:00	47.1	81.0

DATE 04-18-97

TIME	LEVEL	FLOW
23:00:00	46.4	77.3
22:00:00	46.5	77.8
21:00:00	46.4	77.3
20:00:00	46.4	77.3
19:00:00	45.7	73.7
18:00:00	45.5	72.7
17:00:00	50.4	74.6
16:00:00	48.4	54.3
15:00:00	47.9	51.0
14:00:00	46.8	45.5
13:00:00	46.2	42.6
12:00:00	46.1	42.1
11:00:00	45.9	41.1
10:00:00	46.1	42.1
09:00:00	46.2	42.6
08:00:00	46.1	42.1
07:00:00	46.1	42.1
06:00:00	46.3	43.0
05:00:00	46.4	43.5
04:00:00	46.3	43.0
03:00:00	46.2	42.6
02:00:00	46.3	43.0
01:00:00	46.2	42.6
00:00:00	46.3	43.0

DATE 04-17-97

TIME	LEVEL	FLOW
23:00:00	46.5	44.0
22:00:00	46.1	42.1
21:00:00	46.4	43.5
20:00:00	46.3	43.0
19:00:00	45.8	40.7
18:00:00	46.2	42.6
17:00:00	46.4	43.5
16:00:00	46.2	42.6
15:00:00	46.1	42.1
14:00:00	46.1	42.1
13:00:00	46.1	42.1
12:00:00	46.1	42.1
11:00:00	46.2	42.6
10:00:00	46.2	42.6
09:00:00	46.2	42.6
08:00:00	46.1	42.1
07:00:00	46.1	42.1
06:00:00	46.1	42.1
05:00:00	46.0	41.6
04:00:00	46.0	41.6
03:00:00	46.1	42.1
02:00:00	46.2	42.6
01:00:00	46.3	43.0
00:00:00	46.3	43.0

DATE 04-16-97

TIME	LEVEL	FLOW
23:00:00	46.4	43.5
22:00:00	46.3	43.0
21:00:00	46.0	41.6
20:00:00	46.3	43.0
19:00:00	46.0	41.6
18:00:00	46.3	43.0
17:00:00	46.3	43.0
16:00:00	46.2	42.6
15:00:00	46.1	42.1
14:00:00	46.1	42.1
13:00:00	46.1	42.1
12:00:00	46.1	42.1
11:00:00	46.1	42.1
10:00:00	46.0	41.6
09:00:00	46.1	42.1
08:00:00	46.2	42.6
07:00:00	46.3	43.0
06:00:00	46.1	42.1
05:00:00	46.1	42.1
04:00:00	46.0	41.6
03:00:00	46.0	41.6
02:00:00	46.2	42.6
01:00:00	46.3	43.0
00:00:00	46.5	44.0

DATE 04-15-97

TIME	LEVEL	FLOW
23:00:00	46.4	43.5
22:00:00	46.3	43.0
21:00:00	46.4	43.5
20:00:00	46.2	42.6
19:00:00	46.2	42.6
18:00:00	45.9	41.1
17:00:00	46.2	42.6
16:00:00	46.3	43.0
15:00:00	46.1	42.1
14:00:00	46.0	41.6
13:00:00	46.1	42.1
12:00:00	45.9	41.1
11:00:00	46.1	42.1
10:00:00	46.1	42.1
09:00:00	46.0	41.6
08:00:00	46.4	43.5
07:00:00	46.2	42.6
06:00:00	46.1	42.1
05:00:00	46.2	42.6
04:00:00	46.2	42.6
03:00:00	46.3	43.0
02:00:00	46.4	43.5
01:00:00	46.3	43.0
00:00:00	46.4	43.5

DATE 04-14-97

TIME	LEVEL	FLOW
23:00:00	46.4	43.5
22:00:00	46.3	43.0
21:00:00	46.1	42.1
20:00:00	45.9	41.1
19:00:00	45.9	41.1
18:00:00	46.1	42.1
17:00:00	46.4	43.5
16:00:00	46.4	43.5
15:00:00	46.1	42.1
14:00:00	45.9	41.1
13:00:00	47.1	47.0
12:00:00	46.0	41.6
11:00:00	46.2	42.6
10:00:00	46.4	43.5
09:00:00	46.3	43.0
08:00:00	45.9	41.1
07:00:00	46.0	41.6
06:00:00	46.2	42.6
05:00:00	46.4	43.5
04:00:00	46.4	43.5
03:00:00	46.3	43.0
02:00:00	46.4	43.5
01:00:00	46.1	42.1
00:00:00	46.1	42.1

DATE 04-13-97

TIME	LEVEL	FLOW
23:00:00	46.2	42.6
22:00:00	45.7	40.2
21:00:00	46.2	42.6
20:00:00	46.1	42.1
19:00:00	45.9	41.1
18:00:00	46.3	43.0
17:00:00	46.4	43.5
16:00:00	46.4	43.5
15:00:00	46.3	43.0
14:00:00	46.3	43.0
13:00:00	46.2	42.6
12:00:00	45.9	41.1
11:00:00	45.8	40.7
10:00:00	45.8	40.7
09:00:00	46.5	44.0
08:00:00	45.9	41.1
07:00:00	46.0	41.6
06:00:00	46.1	42.1
05:00:00	46.3	43.0
04:00:00	46.2	42.6
03:00:00	45.9	41.1
02:00:00	46.2	42.6
01:00:00	46.2	42.6
00:00:00	45.9	41.1

DATE 04-12-97

TIME	LEVEL	FLOW
23:00:00	46.3	43.0
22:00:00	46.2	42.6
21:00:00	46.3	43.0
20:00:00	45.9	41.1
19:00:00	46.1	42.1
18:00:00	45.7	40.2
17:00:00	46.0	41.6
16:00:00	46.4	43.5
15:00:00	46.3	43.0
14:00:00	46.1	42.1
13:00:00	46.2	42.6
12:00:00	45.9	41.1
11:00:00	46.1	42.1
10:00:00	46.2	42.6
09:00:00	45.9	41.1
08:00:00	46.3	43.0
07:00:00	46.1	42.1
06:00:00	46.1	42.1
05:00:00	46.0	41.6
04:00:00	46.0	41.6
03:00:00	46.1	42.1
02:00:00	46.2	42.6
01:00:00	46.3	43.0
00:00:00	46.2	42.6

DATE 04-11-97

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	46.3	43.0
21:00:00	46.3	43.0
20:00:00	45.9	41.1
19:00:00	46.6	44.5
18:00:00	46.2	42.6
17:00:00	46.0	41.6
16:00:00	46.3	43.0
15:00:00	46.4	43.5
14:00:00	46.3	43.0
13:00:00	46.3	43.0
12:00:00	46.2	42.6
11:00:00	45.9	41.1
10:00:00	46.4	43.5
09:00:00	45.8	40.7
08:00:00	46.3	43.0
07:00:00	46.1	42.1
06:00:00	46.1	42.1
05:00:00	46.2	42.6
04:00:00	46.3	43.0
03:00:00	46.3	43.0
02:00:00	46.1	42.1
01:00:00	46.0	41.6
00:00:00	46.4	43.5

DATE 04-10-97

TIME	LEVEL	FLOW
23:00:00	46.2	42.6
22:00:00	46.0	41.6
21:00:00	46.2	42.6
20:00:00	46.4	43.5
19:00:00	46.2	42.6
18:00:00	46.0	41.6
17:00:00	46.1	42.1
16:00:00	46.2	42.6
15:00:00	46.2	42.6
14:00:00	46.1	42.1
13:00:00	46.0	41.6
12:00:00	46.1	42.1
11:00:00	46.1	42.1
10:00:00	46.1	42.1
09:00:00	46.1	42.1
08:00:00	46.0	41.6
07:00:00	46.1	42.1
06:00:00	46.3	43.0
05:00:00	46.2	42.6
04:00:00	46.0	41.6
03:00:00	46.1	42.1
02:00:00	46.2	42.6
01:00:00	46.1	42.1
00:00:00	46.0	41.6

DATE 04-09-97

TIME	LEVEL	FLOW
23:00:00	46.3	43.0
22:00:00	46.0	41.6
21:00:00	46.3	43.0
20:00:00	46.2	42.6
19:00:00	45.7	40.2
18:00:00	46.2	42.6
17:00:00	46.2	42.6
16:00:00	46.2	42.6
15:00:00	46.2	42.6
14:00:00	46.3	43.0
13:00:00	46.3	43.0
12:00:00	46.2	42.6
11:00:00	45.9	41.1
10:00:00	46.3	43.0
09:00:00	46.2	42.6
08:00:00	46.0	41.6
07:00:00	46.2	42.6
06:00:00	46.2	42.6
05:00:00	46.4	43.5
04:00:00	46.3	43.0
03:00:00	46.2	42.6
02:00:00	46.2	42.6
01:00:00	46.2	42.6
00:00:00	46.3	43.0

DATE 04-08-97

TIME	LEVEL	FLOW
23:00:00	46.3	43.0
22:00:00	46.3	43.0
21:00:00	46.2	42.6
20:00:00	46.2	42.6
19:00:00	46.2	42.6
18:00:00	46.2	42.6
17:00:00	46.1	42.1
16:00:00	46.4	43.5
15:00:00	46.3	43.0
14:00:00	46.0	41.6
13:00:00	46.0	41.6
12:00:00	46.0	41.6
11:00:00	46.0	41.6
10:00:00	46.1	42.1
09:00:00	46.0	41.6
08:00:00	46.0	41.6
07:00:00	46.3	43.0
06:00:00	46.4	43.5
05:00:00	46.3	43.0
04:00:00	46.1	42.1
03:00:00	46.1	42.1
02:00:00	46.1	42.1
01:00:00	46.1	42.1
00:00:00	46.1	42.1

DATE 04-07-97

TIME	LEVEL	FLOW
23:00:00	46.2	42.6
22:00:00	45.9	41.1
21:00:00	46.4	43.5
20:00:00	45.9	41.1
19:00:00	46.4	43.5
18:00:00	46.1	42.1
17:00:00	46.0	41.6
16:00:00	46.0	41.6
15:00:00	46.0	41.6
14:00:00	46.1	42.1
13:00:00	46.1	42.1
12:00:00	46.1	42.1
11:00:00	46.0	41.6
10:00:00	46.1	42.1
09:00:00	46.0	41.6
08:00:00	45.9	41.1
07:00:00	46.1	42.1
06:00:00	46.2	42.6
05:00:00	46.1	42.1
04:00:00	46.0	41.6
03:00:00	46.0	41.6
02:00:00	46.0	41.6
01:00:00	46.1	42.1
00:00:00	46.2	42.6

DATE 04-06-97

TIME	LEVEL	FLOW
23:00:00	46.2	42.6
22:00:00	46.2	42.6
21:00:00	45.9	41.1
20:00:00	46.2	42.6
19:00:00	46.4	43.5
18:00:00	46.3	43.0
17:00:00	46.2	42.6
16:00:00	46.1	42.1
15:00:00	46.0	41.6
14:00:00	46.0	41.6
13:00:00	45.9	41.1
12:00:00	46.0	41.6
11:00:00	46.0	41.6
10:00:00	46.1	42.1
09:00:00	46.0	41.6
08:00:00	46.1	42.1
07:00:00	46.2	42.6
06:00:00	46.0	41.6
05:00:00	46.0	41.6
04:00:00	46.0	41.6
03:00:00	46.0	41.6
02:00:00	45.9	41.1
01:00:00	46.0	41.6
00:00:00	46.0	41.6

DATE 04-05-97

TIME	LEVEL	FLOW
23:00:00	46.0	41.6
22:00:00	46.1	42.1
21:00:00	46.1	42.1
20:00:00	46.0	41.6
19:00:00	46.3	43.0
18:00:00	46.1	42.1
17:00:00	46.1	42.1
16:00:00	45.9	41.1
15:00:00	45.9	41.1
14:00:00	45.9	41.1
13:00:00	45.9	41.1
12:00:00	46.0	41.6
11:00:00	46.0	41.6
10:00:00	46.0	41.6
09:00:00	46.2	42.6
08:00:00	45.9	41.1
07:00:00	46.3	43.0
06:00:00	46.3	43.0
05:00:00	46.2	42.6
04:00:00	46.1	42.1
03:00:00	46.0	41.6
02:00:00	46.0	41.6
01:00:00	46.1	42.1
00:00:00	46.1	42.1

DATE 04-04-97

TIME	LEVEL	FLOW
23:00:00	46.0	41.6
22:00:00	45.9	41.1
21:00:00	45.8	40.7
20:00:00	46.0	41.6
19:00:00	45.8	40.7
18:00:00	46.1	42.1
17:00:00	46.1	42.1
16:00:00	46.1	42.1
15:00:00	45.9	41.1
14:00:00	46.1	42.1
13:00:00	45.7	40.2
12:00:00	46.0	41.6
11:00:00	46.0	41.6
10:00:00	46.1	42.1
09:00:00	46.2	42.6
08:00:00	46.1	42.1
07:00:00	46.0	41.6
06:00:00	46.1	42.1
05:00:00	46.4	43.5
04:00:00	46.3	43.0
03:00:00	46.4	43.5
02:00:00	46.5	44.0
01:00:00	46.3	43.0
00:00:00	46.0	41.6

DATE 04-03-97

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.9	41.1
21:00:00	45.8	40.7
20:00:00	46.0	41.6
19:00:00	46.0	41.6
18:00:00	46.0	41.6
17:00:00	46.0	41.6
16:00:00	46.1	42.1
15:00:00	46.1	42.1
14:00:00	46.1	42.1
13:00:00	46.0	41.6
12:00:00	45.9	41.1
11:00:00	46.0	41.6
10:00:00	46.4	43.5
09:00:00	45.9	41.1
08:00:00	46.1	42.1
07:00:00	46.0	41.6
06:00:00	46.3	43.0
05:00:00	46.1	42.1
04:00:00	46.0	41.6
03:00:00	46.0	41.6
02:00:00	46.0	41.6
01:00:00	46.1	42.1
00:00:00	45.9	41.1

DATE 04-02-97

TIME	LEVEL	FLOW
23:00:00	46.0	41.6
22:00:00	46.0	41.6
21:00:00	46.1	42.1
20:00:00	46.4	43.5
19:00:00	45.9	41.1
18:00:00	46.0	41.6
17:00:00	46.1	42.1
16:00:00	45.9	41.1
15:00:00	45.9	41.1
14:00:00	45.9	41.1
13:00:00	46.0	41.6
12:00:00	45.9	41.1
11:00:00	46.0	41.6
10:00:00	45.9	41.1
09:00:00	46.1	42.1
08:00:00	45.9	41.1
07:00:00	46.0	41.6
06:00:00	46.1	42.1
05:00:00	46.3	43.0
04:00:00	46.3	43.0
03:00:00	45.9	41.1
02:00:00	46.1	42.1
01:00:00	46.2	42.6
00:00:00	45.9	41.1

DATE 04-01-97

TIME	LEVEL	FLOW
23:00:00	46.0	41.6
22:00:00	46.2	42.6
21:00:00	46.1	42.1
20:00:00	46.0	41.6
19:00:00	46.3	43.0
18:00:00	46.0	41.6
17:00:00	46.0	41.6
16:00:00	46.1	42.1
15:00:00	46.2	42.6
14:00:00	46.2	42.6
13:00:00	46.1	42.1
12:00:00	46.1	42.1
11:00:00	45.9	41.1
10:00:00	45.9	41.1
09:00:00	46.2	42.6
08:00:00	46.2	42.6
07:00:00	46.1	42.1
06:00:00	46.0	41.6
05:00:00	45.9	41.1
04:00:00	45.9	41.1
03:00:00	45.8	40.7
02:00:00	45.8	40.7
01:00:00	45.8	40.7
00:00:00	45.9	41.1

CEM COMMERCIAL ENERGY MGMT, INC.
P.O. Box 4518 • Pocatello, Idaho 83205 • Telephone (208) 237-3563 • Fax (208) 237-3563

vault File

April 21, 1997
Ref: CEM/1088

RECEIVED
APR 25 1997
Department of Water Resources

Mr. L. GLEN SAXTON
Chief, Water Allocation Bureau
State of Idaho, Department of Water Resources
1301 North Orchard Street
Statehouse Mail
Boise, ID 83720-9000

Subject: Portneuf River Hydroelectric Project
Lava Hot Springs, Idaho
FERC Project No. 7447-002
Permit No. 29-7699

Dear Mr. Saxton:

Attached please find copies of the bypass channel flow records for the period from January 1 to March 31, 1997.

Sincerely,

Maher F. Wissa
President

Attachments: 46 sheets

DATE 03-31-97

TIME	LEVEL	FLOW
23:00:00	46.0	41.6
22:00:00	46.0	41.6
21:00:00	46.0	41.6
20:00:00	46.2	42.6
19:00:00	46.2	42.6
18:00:00	46.0	41.6
17:00:00	46.0	41.6
16:00:00	46.2	42.6
15:00:00	46.3	43.0
14:00:00	46.3	43.0
13:00:00	46.0	41.6
12:00:00	46.1	42.1
11:00:00	46.1	42.1
10:00:00	46.4	43.5
09:00:00	46.2	42.6
08:00:00	46.1	42.1
07:00:00	46.2	42.6
06:00:00	46.5	44.0
05:00:00	46.5	44.0
04:00:00	46.6	44.5
03:00:00	46.5	44.0
02:00:00	46.5	44.0
01:00:00	46.2	42.6
00:00:00	46.1	42.1

DATE 03-30-97

TIME	LEVEL	FLOW
23:00:00	46.3	43.0
22:00:00	46.1	42.1
21:00:00	46.0	41.6
20:00:00	46.0	41.6
19:00:00	46.1	42.1
18:00:00	46.1	42.1
17:00:00	46.0	41.6
16:00:00	46.0	41.6
15:00:00	46.2	42.6
14:00:00	46.4	43.5
13:00:00	46.0	41.6
12:00:00	46.2	42.6
11:00:00	46.3	43.0
10:00:00	46.2	42.6
09:00:00	46.1	42.1
08:00:00	46.2	42.6
07:00:00	46.1	42.1
06:00:00	46.3	43.0
05:00:00	46.7	45.0
04:00:00	46.6	44.5
03:00:00	46.0	41.6
02:00:00	46.0	41.6
01:00:00	46.0	41.6
00:00:00	46.2	42.6

DATE 03-29-97

TIME	LEVEL	FLOW
23:00:00	46.3	43.0
22:00:00	46.1	42.1
21:00:00	45.9	41.1
20:00:00	46.1	42.1
19:00:00	46.3	43.0
18:00:00	46.3	43.0
17:00:00	46.0	41.6
16:00:00	49.9	214.5
15:00:00	49.1	202.7
14:00:00	49.1	202.7
13:00:00	49.7	211.5
12:00:00	49.3	205.5
11:00:00	48.2	191.2
10:00:00	46.7	45.0
09:00:00	46.3	43.0
08:00:00	46.2	42.6
07:00:00	46.5	44.0
06:00:00	46.4	43.5
05:00:00	46.2	42.6
04:00:00	46.0	41.6
03:00:00	46.1	42.1
02:00:00	46.2	42.6
01:00:00	46.0	41.6
00:00:00	46.1	42.1

DATE 03-28-97

TIME	LEVEL	FLOW
23:00:00	46.8	45.5
22:00:00	47.3	48.0
21:00:00	47.4	48.5
20:00:00	47.1	47.0
19:00:00	46.5	44.0
18:00:00	46.5	44.0
17:00:00	46.5	44.0
16:00:00	46.5	44.0
15:00:00	46.5	44.0
14:00:00	46.6	44.5
13:00:00	47.6	49.5
12:00:00	48.3	53.6
11:00:00	48.0	51.5
10:00:00	48.1	52.1
09:00:00	48.7	56.8
08:00:00	49.0	59.5
07:00:00	49 1	60.5
06:00:00	49.1	60.5
05:00:00	49.2	61.4
04:00:00	48.9	58.6
03:00:00	48.9	58.6
02:00:00	48.4	54.3
01:00:00	48.1	52.1
00:00:00	47.9	51.0

DATE 03-27-97

TIME	LEVEL	FLOW
23:00:00	47.8	50.5
22:00:00	47.8	50.5
21:00:00	47.7	50.0
20:00:00	47.8	50.5
19:00:00	48.0	51.5
18:00:00	48.1	52.1
17:00:00	48.5	55.1
16:00:00	48.0	51.5
15:00:00	47.3	48.0
14:00:00	47.5	49.0
13:00:00	48.0	51.5
12:00:00	48.4	54.3
11:00:00	48.9	58.6
10:00:00	49.5	64.5
09:00:00	50.1	71.1
08:00:00	50.4	74.6
07:00:00	50.5	75.8
06:00:00	51.6	89.9
05:00:00	51.4	87.2
04:00:00	50.8	79.4
03:00:00	49.8	67.7
02:00:00	48.6	55.9
01:00:00	47.0	46.5
00:00:00	47.0	46.5

DATE 03-26-97

TIME	LEVEL	FLOW
23:00:00	47.1	47.0
22:00:00	47.1	47.0
21:00:00	46.6	44.5
20:00:00	47.9	51.0
19:00:00	47.0	46.5
18:00:00	46.1	42.1
17:00:00	46.3	43.0
16:00:00	46.1	42.1
15:00:00	46.0	41.6
14:00:00	46.0	41.6
13:00:00	46.2	42.6
12:00:00	46.4	43.5
11:00:00	46.1	42.1
10:00:00	46.0	41.6
09:00:00	45.9	41.1
08:00:00	46.0	41.6
07:00:00	46.5	44.0
06:00:00	48.5	55.1
05:00:00	48.1	52.1
04:00:00	47.4	48.5
03:00:00	47.0	46.5
02:00:00	46.9	46.0
01:00:00	47.1	47.0
00:00:00	46.7	45.0

DATE 03-25-97

TIME	LEVEL	FLOW
23:00:00	46.2	42.6
22:00:00	46.5	44.0
21:00:00	46.5	44.0
20:00:00	46.6	44.5
19:00:00	46.9	46.0
18:00:00	46.7	45.0
17:00:00	46.5	44.0
16:00:00	47.0	46.5
15:00:00	46.8	45.5
14:00:00	46.6	44.5
13:00:00	46.7	45.0
12:00:00	46.5	44.0
11:00:00	46.8	45.5
10:00:00	47.7	50.0
09:00:00	47.7	50.0
08:00:00	48.1	52.1
07:00:00	48.3	53.6
06:00:00	48.3	53.6
05:00:00	48.3	53.6
04:00:00	48.2	52.8
03:00:00	48.0	51.5
02:00:00	47.9	51.0
01:00:00	47.8	50.5
00:00:00	47.7	50.0

DATE 03-24-97

TIME	LEVEL	FLOW
23:00:00	47.1	47.0
22:00:00	47.2	47.5
21:00:00	47.1	47.0
20:00:00	46.7	45.0
19:00:00	46.1	42.1
18:00:00	46.0	41.6
17:00:00	46.8	45.5
16:00:00	48.0	51.5
15:00:00	48.8	57.7
14:00:00	49.2	61.4
13:00:00	49.1	60.5
12:00:00	49.6	65.5
11:00:00	49.9	68.8
10:00:00	50.4	74.6
09:00:00	49.9	68.8
08:00:00	50.1	71.1
07:00:00	50.1	71.1
06:00:00	49.7	66.6
05:00:00	49.5	64.5
04:00:00	49.1	60.5
03:00:00	48.8	57.7
02:00:00	48.3	53.6
01:00:00	48.5	55.1
00:00:00	48.8	57.7

DATE 03-23-97

TIME	LEVEL	FLOW
23:00:00	48.9	58.6
22:00:00	49.1	60.5
21:00:00	49.1	60.5
20:00:00	48.9	58.6
19:00:00	48.7	56.8
18:00:00	48.2	52.8
17:00:00	47.7	50.0
16:00:00	46.4	43.5
15:00:00	46.8	45.5
14:00:00	47.2	47.5
13:00:00	47.9	51.0
12:00:00	48.5	55.1
11:00:00	49.1	60.5
10:00:00	49.4	63.5
09:00:00	49.2	61.4
08:00:00	49.6	65.5
07:00:00	49.8	67.7
06:00:00	49.9	68.8
05:00:00	49.6	65.5
04:00:00	49.6	65.5
03:00:00	49.5	64.5
02:00:00	49.4	63.5
01:00:00	49.4	63.5
00:00:00	49.3	62.4

DATE 03-22-97

TIME	LEVEL	FLOW
23:00:00	49.4	63.5
22:00:00	49.6	65.5
21:00:00	49.4	63.5
20:00:00	49.2	61.4
19:00:00	48.7	56.8
18:00:00	48.4	54.3
17:00:00	48.3	53.6
16:00:00	48.3	53.6
15:00:00	48.5	55.1
14:00:00	49.0	59.5
13:00:00	49.2	61.4
12:00:00	50.0	69.9
11:00:00	58.0	197.6
10:00:00	50.8	79.4
09:00:00	51.3	85.9
08:00:00	51.5	88.5
07:00:00	51.3	85.9
06:00:00	51.6	89.9
05:00:00	51.5	88.5
04:00:00	51.5	88.5
03:00:00	51.1	83.2
02:00:00	50.6	77.0
01:00:00	49.8	67.7
00:00:00	49.3	62.4

DATE 03-21-97

TIME	LEVEL	FLOW
23:00:00	48.9	58.6
22:00:00	48.7	56.8
21:00:00	48.7	56.8
20:00:00	48.8	57.7
19:00:00	48.8	57.7
18:00:00	48.5	55.1
17:00:00	48.1	52.1
16:00:00	48.4	54.3
15:00:00	46.9	46.0
14:00:00	46.5	44.0
13:00:00	46.5	44.0
12:00:00	46.7	45.0
11:00:00	47.0	46.5
10:00:00	47.2	47.5
09:00:00	47.3	48.0
08:00:00	47.4	48.5
07:00:00	47.7	50.0
06:00:00	47.8	50.5
05:00:00	48.0	51.5
04:00:00	48.7	56.8
03:00:00	48.8	57.7
02:00:00	49.3	62.4
01:00:00	49.7	66.6
00:00:00	50.3	73.4

DATE 03-20-97

TIME	LEVEL	FLOW
23:00:00	51.0	82.0
22:00:00	51.5	88.5
21:00:00	51.5	88.5
20:00:00	51.4	87.2
19:00:00	51.1	83.2
18:00:00	50.4	74.6
17:00:00	50.1	71.1
16:00:00	49.7	66.6
15:00:00	49.2	61.4
14:00:00	49.1	60.5
13:00:00	49.3	62.4
12:00:00	49.6	65.5
11:00:00	49.6	65.5
10:00:00	50.1	71.1
09:00:00	50.5	75.8
08:00:00	51.0	82.0
07:00:00	51.2	84.5
06:00:00	51.5	88.5
05:00:00	51.9	94.0
04:00:00	52.4	101.1
03:00:00	52.4	101.1
02:00:00	52.7	105.5
01:00:00	52.4	101.1
00:00:00	52.1	96.8

DATE 03-19-97

TIME	LEVEL	FLOW
23:00:00	51.8	92.6
22:00:00	51.0	82.0
21:00:00	50.8	79.4
20:00:00	50.6	77.0
19:00:00	50.2	72.2
18:00:00	49.5	64.5
17:00:00	48.9	58.6
16:00:00	48.4	54.3
15:00:00	48.2	52.8
14:00:00	47.6	49.5
13:00:00	47.8	50.5
12:00:00	48.6	55.9
11:00:00	49.2	61.4
10:00:00	49.6	65.5
09:00:00	49.2	61.4
08:00:00	49.7	66.6
07:00:00	50.2	72.2
06:00:00	50.8	79.4
05:00:00	51.6	89.9
04:00:00	52.1	96.8
03:00:00	52.8	106.9
02:00:00	53.1	111.5
01:00:00	53.4	116.1
00:00:00	53.4	116.1

DATE 03-18-97

TIME	LEVEL	FLOW
23:00:00	53.3	114.5
22:00:00	53.2	113.0
21:00:00	52.8	106.9
20:00:00	51.9	94.0
19:00:00	50.8	79.4
18:00:00	50.0	69.9
17:00:00	49.2	61.4
16:00:00	48.8	57.7
15:00:00	48.6	55.9
14:00:00	48.8	57.7
13:00:00	49.3	62.4
12:00:00	48.3	53.6
11:00:00	49.4	63.5
10:00:00	49.6	65.5
09:00:00	49.4	63.5
08:00:00	50.2	72.2
07:00:00	51.0	82.0
06:00:00	51.8	92.6
05:00:00	52.7	105.5
04:00:00	52.8	106.9
03:00:00	53.1	111.5
02:00:00	53.1	111.5
01:00:00	53.1	111.5
00:00:00	53.2	113.0

DATE 03-17-97

TIME	LEVEL	FLOW
23:00:00	53.8	122.4
22:00:00	54.1	127.2
21:00:00	55.6	152.7
20:00:00	54.7	137.2
19:00:00	53.5	117.7
18:00:00	52.7	105.5
17:00:00	51.9	94.0
16:00:00	51.4	87.2
15:00:00	50.6	77.0
14:00:00	50.1	71.1
13:00:00	49.8	67.7
12:00:00	54.4	132.2
11:00:00	54.0	125.6
10:00:00	53.6	119.2
09:00:00	53.1	111.5
08:00:00	52.4	101.1
07:00:00	52.0	95.4
06:00:00	51.8	92.6
05:00:00	51.9	94.0
04:00:00	51.8	92.6
03:00:00	51.5	88.5
02:00:00	50.9	80.7
01:00:00	49.1	60.5
00:00:00	47.5	49.0

DATE 03-16-97

TIME	LEVEL	FLOW
23:00:00	47.1	47.0
22:00:00	46.7	45.0
21:00:00	46.5	44.0
20:00:00	46.4	43.5
19:00:00	46.4	43.5
18:00:00	46.4	43.5
17:00:00	46.5	44.0
16:00:00	46.3	43.0
15:00:00	46.4	43.5
14:00:00	46.1	42.1
13:00:00	46.0	41.6
12:00:00	46.0	41.6
11:00:00	46.0	41.6
10:00:00	46.2	42.6
09:00:00	46.4	43.5
08:00:00	46.4	43.5
07:00:00	46.2	42.6
06:00:00	46.0	41.6
05:00:00	46.0	41.6
04:00:00	46.2	42.6
03:00:00	46.2	42.6
02:00:00	46.3	43.0
01:00:00	46.2	42.6
00:00:00	46.3	43.0

DATE 03-15-97

TIME	LEVEL	FLOW
23:00:00	46.3	43.0
22:00:00	46.2	42.6
21:00:00	46.0	41.6
20:00:00	45.9	41.1
19:00:00	46.2	42.6
18:00:00	46.3	43.0
17:00:00	46.1	42.1
16:00:00	46.0	41.6
15:00:00	46.1	42.1
14:00:00	46.3	43.0
13:00:00	46.3	43.0
12:00:00	46.2	42.6
11:00:00	46.0	41.6
10:00:00	46.1	42.1
09:00:00	46.1	42.1
08:00:00	46.1	42.1
07:00:00	46.0	41.6
06:00:00	46.0	41.6
05:00:00	45.9	41.1
04:00:00	46.0	41.6
03:00:00	46.1	42.1
02:00:00	45.9	41.1
01:00:00	46.1	42.1
00:00:00	46.2	42.6

DATE 03-14-97

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	46.0	41.6
21:00:00	46.0	41.6
20:00:00	46.3	43.0
19:00:00	46.4	43.5
18:00:00	46.4	43.5
17:00:00	46.4	43.5
16:00:00	46.3	43.0
15:00:00	46.3	43.0
14:00:00	46.2	42.6
13:00:00	45.9	41.1
12:00:00	46.2	42.6
11:00:00	46.3	43.0
10:00:00	45.9	41.1
09:00:00	46.0	41.6
08:00:00	46.0	41.6
07:00:00	46.6	44.5
06:00:00	46.2	42.6
05:00:00	46.4	43.5
04:00:00	46.9	46.0
03:00:00	47.6	49.5
02:00:00	49.1	60.5
01:00:00	50.6	77.0
00:00:00	52.1	96.8

DATE 03-13-97

TIME	LEVEL	FLOW
23:00:00	52.4	101.1
22:00:00	53.2	113.0
21:00:00	54.1	127.2
20:00:00	53.2	113.0
19:00:00	49.1	60.5
18:00:00	47.4	48.5
17:00:00	46.1	42.1
16:00:00	46.5	44.0
15:00:00	46.1	42.1
14:00:00	46.0	41.6
13:00:00	46.2	42.6
12:00:00	46.2	42.6
11:00:00	46.6	44.5
10:00:00	46.7	45.0
09:00:00	46.5	44.0
08:00:00	46.6	44.5
07:00:00	46.2	42.6
06:00:00	46.5	44.0
05:00:00	46.6	44.5
04:00:00	46.4	43.5
03:00:00	46.2	42.6
02:00:00	47.7	50.0
01:00:00	48.9	58.6
00:00:00	49.4	63.5

DATE 03-12-97

TIME	LEVEL	FLOW
23:00:00	49.4	63.5
22:00:00	50.5	75.8
21:00:00	49.3	62.4
20:00:00	47.8	50.5
19:00:00	46.6	44.5
18:00:00	46.4	43.5
17:00:00	46.6	44.5
16:00:00	46.1	42.1
15:00:00	46.0	41.6
14:00:00	46.0	41.6
13:00:00	45.9	41.1
12:00:00	46.0	41.6
11:00:00	45.9	41.1
10:00:00	45.8	40.7
09:00:00	45.8	40.7
08:00:00	45.8	40.7
07:00:00	46.0	41.6
06:00:00	46.1	42.1
05:00:00	46.0	41.6
04:00:00	45.9	41.1
03:00:00	46.1	42.1
02:00:00	46.2	42.6
01:00:00	46.3	43.0
00:00:00	46.4	43.5

DATE 03-11-97

TIME	LEVEL	FLOW
23:00:00	46.4	43.5
22:00:00	46.4	43.5
21:00:00	46.5	44.0
20:00:00	46.5	44.0
19:00:00	46.5	44.0
18:00:00	46.4	43.5
17:00:00	46.4	43.5
16:00:00	46.4	43.5
15:00:00	46.3	43.0
14:00:00	45.9	41.1
13:00:00	46.0	41.6
12:00:00	46.0	41.6
11:00:00	45.9	41.1
10:00:00	46.0	41.6
09:00:00	46.2	42.6
08:00:00	46.4	43.5
07:00:00	46.4	43.5
06:00:00	46.4	43.5
05:00:00	46.4	43.5
04:00:00	46.4	43.5
03:00:00	46.1	42.1
02:00:00	45.9	41.1
01:00:00	46.1	42.1
00:00:00	46.4	43.5

DATE 03-10-97

TIME	LEVEL	FLOW
23:00:00	46.4	43.5
22:00:00	46.4	43.5
21:00:00	46.4	43.5
20:00:00	46.4	43.5
19:00:00	46.4	43.5
18:00:00	46.3	43.0
17:00:00	46.3	43.0
16:00:00	46.3	43.0
15:00:00	46.2	42.6
14:00:00	46.1	42.1
13:00:00	46.0	41.6
12:00:00	46.1	42.1
11:00:00	46.1	42.1
10:00:00	46.2	42.6
09:00:00	46.1	42.1
08:00:00	46.1	42.1
07:00:00	46.0	41.6
06:00:00	46.0	41.6
05:00:00	46.0	41.6
04:00:00	46.0	41.6
03:00:00	46.0	41.6
02:00:00	46.0	41.6
01:00:00	46.1	42.1
00:00:00	46.1	42.1

DATE 03-09-97

TIME	LEVEL	FLOW
23:00:00	46.2	42.6
22:00:00	46.3	43.0
21:00:00	46.4	43.5
20:00:00	46.5	44.0
19:00:00	46.3	43.0
18:00:00	46.2	42.6
17:00:00	46.1	42.1
16:00:00	46.1	42.1
15:00:00	46.1	42.1
14:00:00	46.0	41.6
13:00:00	46.0	41.6
12:00:00	46.1	42.1
11:00:00	46.1	42.1
10:00:00	46.1	42.1
09:00:00	45.9	41.1
08:00:00	46.1	42.1
07:00:00	46.3	43.0
06:00:00	46.4	43.5
05:00:00	46.4	43.5
04:00:00	46.2	42.6
03:00:00	46.0	41.6
02:00:00	46.0	41.6
01:00:00	46.0	41.6
00:00:00	45.9	41.1

DATE 03-08-97

TIME	LEVEL	FLOW
23:00:00	46.0	41.6
22:00:00	46.0	41.6
21:00:00	46.1	42.1
20:00:00	46.2	42.6
19:00:00	46.3	43.0
18:00:00	46.1	42.1
17:00:00	46.1	42.1
16:00:00	46.2	42.6
15:00:00	46.3	43.0
14:00:00	46.2	42.6
13:00:00	46.2	42.6
12:00:00	46.2	42.6
11:00:00	46.3	43.0
10:00:00	46.2	42.6
09:00:00	46.2	42.6
08:00:00	46.2	42.6
07:00:00	46.2	42.6
06:00:00	46.3	43.0
05:00:00	46.3	43.0
04:00:00	46.3	43.0
03:00:00	46.4	43.5
02:00:00	46.4	43.5
01:00:00	46.4	43.5
00:00:00	46.4	43.5

DATE 03-07-97

TIME	LEVEL	FLOW
23:00:00	46.4	43.5
22:00:00	46.4	43.5
21:00:00	46.3	43.0
20:00:00	46.4	43.5
19:00:00	46.3	43.0
18:00:00	46.3	43.0
17:00:00	46.2	42.6
16:00:00	46.2	42.6
15:00:00	46.3	43.0
14:00:00	46.2	42.6
13:00:00	46.3	43.0
12:00:00	46.3	43.0
11:00:00	46.3	43.0
10:00:00	46.3	43.0
09:00:00	46.2	42.6
08:00:00	46.0	41.6
07:00:00	46.0	41.6
06:00:00	46.1	42.1
05:00:00	46.0	41.6
04:00:00	46.0	41.6
03:00:00	46.0	41.6
02:00:00	46.0	41.6
01:00:00	46.1	42.1
00:00:00	46.1	42.1

DATE 03-06-97

TIME	LEVEL	FLOW
23:00:00	46.2	42.6
22:00:00	46.2	42.6
21:00:00	46.3	43.0
20:00:00	46.3	43.0
19:00:00	46.4	43.5
18:00:00	45.9	41.1
17:00:00	46.1	42.1
16:00:00	46.4	43.5
15:00:00	46.4	43.5
14:00:00	46.3	43.0
13:00:00	46.2	42.6
12:00:00	46.1	42.1
11:00:00	46.0	41.6
10:00:00	46.0	41.6
09:00:00	46.0	41.6
08:00:00	46.0	41.6
07:00:00	46.0	41.6
06:00:00	46.0	41.6
05:00:00	46.1	42.1
04:00:00	46.3	43.0
03:00:00	46.4	43.5
02:00:00	46.4	43.5
01:00:00	46.4	43.5
00:00:00	46.4	43.5

DATE 03-05-97

TIME	LEVEL	FLOW
23:00:00	46.2	42.6
22:00:00	46.4	43.5
21:00:00	45.9	41.1
20:00:00	46.4	43.5
19:00:00	46.4	43.5
18:00:00	46.4	43.5
17:00:00	46.3	43.0
16:00:00	46.3	43.0
15:00:00	46.2	42.6
14:00:00	46.0	41.6
13:00:00	46.0	41.6
12:00:00	46.3	43.0
11:00:00	46.3	43.0
10:00:00	45.7	40.2
09:00:00	46.2	42.6
08:00:00	46.3	43.0
07:00:00	46.0	41.6
06:00:00	46.1	42.1
05:00:00	46.1	42.1
04:00:00	46.3	43.0
03:00:00	46.3	43.0
02:00:00	46.2	42.6
01:00:00	46.2	42.6
00:00:00	46.3	43.0

DATE 03-04-97

TIME	LEVEL	FLOW
23:00:00	46.3	43.0
22:00:00	46.4	43.5
21:00:00	46.4	43.5
20:00:00	46.2	42.6
19:00:00	46.0	41.6
18:00:00	46.0	41.6
17:00:00	46.0	41.6
16:00:00	46.0	41.6
15:00:00	46.1	42.1
14:00:00	46.0	41.6
13:00:00	46.0	41.6
12:00:00	46.0	41.6
11:00:00	46.0	41.6
10:00:00	46.0	41.6
09:00:00	46.0	41.6
08:00:00	46.0	41.6
07:00:00	46.1	42.1
06:00:00	46.1	42.1
05:00:00	46.1	42.1
04:00:00	46.2	42.6
03:00:00	46.1	42.1
02:00:00	45.9	41.1
01:00:00	46.1	42.1
00:00:00	46.3	43.0

DATE 03-03-97

TIME	LEVEL	FLOW
23:00:00	46.3	43.0
22:00:00	46.4	43.5
21:00:00	46.4	43.5
20:00:00	46.4	43.5
19:00:00	46.2	42.6
18:00:00	46.0	41.6
17:00:00	46.0	41.6
16:00:00	46.0	41.6
15:00:00	46.1	42.1
14:00:00	46.2	42.6
13:00:00	46.2	42.6
12:00:00	46.2	42.6
11:00:00	46.1	42.1
10:00:00	46.2	42.6
09:00:00	46.0	41.6
08:00:00	46.0	41.6
07:00:00	46.2	42.6
06:00:00	46.3	43.0
05:00:00	46.3	43.0
04:00:00	46.0	41.6
03:00:00	46.0	41.6
02:00:00	46.3	43.0
01:00:00	46.4	43.5
00:00:00	46.3	43.0

DATE 03-02-97

TIME	LEVEL	FLOW
23:00:00	46.2	42.6
22:00:00	46.2	42.6
21:00:00	46.0	41.6
20:00:00	46.0	41.6
19:00:00	46.0	41.6
18:00:00	46.0	41.6
17:00:00	46.0	41.6
16:00:00	46.1	42.1
15:00:00	46.1	42.1
14:00:00	46.2	42.6
13:00:00	45.8	40.7
12:00:00	46.4	43.5
11:00:00	46.3	43.0
10:00:00	46.1	42.1
09:00:00	45.9	41.1
08:00:00	46.2	42.6
07:00:00	46.3	43.0
06:00:00	46.4	43.5
05:00:00	46.4	43.5
04:00:00	46.2	42.6
03:00:00	46.2	42.6
02:00:00	46.2	42.6
01:00:00	46.2	42.6
00:00:00	46.2	42.6

DATE 03-01-97

TIME	LEVEL	FLOW
23:00:00	46.0	41.6
22:00:00	46.0	41.6
21:00:00	46.0	41.6
20:00:00	46.0	41.6
19:00:00	45.9	41.1
18:00:00	46.4	43.5
17:00:00	46.4	43.5
16:00:00	46.3	43.0
15:00:00	46.4	43.5
14:00:00	46.4	43.5
13:00:00	46.2	42.6
12:00:00	46.0	41.6
11:00:00	46.0	41.6
10:00:00	46.1	42.1
09:00:00	46.0	41.6
08:00:00	46.0	41.6
07:00:00	46.0	41.6
06:00:00	46.0	41.6
05:00:00	46.0	41.6
04:00:00	46.0	41.6
03:00:00	46.0	41.6
02:00:00	46.0	41.6
01:00:00	46.0	41.6
00:00:00	46.1	42.1

DATE 02-28-97

TIME	LEVEL	FLOW
23:00:00	46.2	42.6
22:00:00	46.4	43.5
21:00:00	45.9	41.1
20:00:00	46.2	42.6
19:00:00	46.4	43.5
18:00:00	46.4	43.5
17:00:00	46.3	43.0
16:00:00	45.9	41.1
15:00:00	46.0	41.6
14:00:00	45.9	41.1
13:00:00	46.1	42.1
12:00:00	46.1	42.1
11:00:00	46.2	42.6
10:00:00	46.2	42.6
09:00:00	46.3	43.0
08:00:00	46.2	42.6
07:00:00	46.2	42.6
06:00:00	46.1	42.1
05:00:00	46.1	42.1
04:00:00	46.0	41.6
03:00:00	46.0	41.6
02:00:00	46.0	41.6
01:00:00	46.0	41.6
00:00:00	46.1	42.1

DATE 02-27-97

TIME	LEVEL	FLOW
23:00:00	46.1	42.1
22:00:00	46.2	42.6
21:00:00	46.2	42.6
20:00:00	46.3	43.0
19:00:00	46.4	43.5
18:00:00	46.4	43.5
17:00:00	46.4	43.5
16:00:00	46.2	42.6
15:00:00	46.3	43.0
14:00:00	46.3	43.0
13:00:00	46.3	43.0
12:00:00	46.3	43.0
11:00:00	46.0	41.6
10:00:00	46.0	41.6
09:00:00	46.1	42.1
08:00:00	45.9	41.1
07:00:00	46.0	41.6
06:00:00	46.2	42.6
05:00:00	46.4	43.5
04:00:00	46.4	43.5
03:00:00	46.4	43.5
02:00:00	46.4	43.5
01:00:00	46.1	42.1
00:00:00	46.0	41.6

DATE 02-26-97

TIME	LEVEL	FLOW
23:00:00	46.4	43.5
22:00:00	46.4	43.5
21:00:00	45.9	41.1
20:00:00	46.1	42.1
19:00:00	46.4	43.5
18:00:00	46.3	43.0
17:00:00	46.3	43.0
16:00:00	46.3	43.0
15:00:00	46.3	43.0
14:00:00	46.3	43.0
13:00:00	46.3	43.0
12:00:00	46.2	42.6
11:00:00	46.1	42.1
10:00:00	46.0	41.6
09:00:00	46.0	41.6
08:00:00	46.0	41.6
07:00:00	46.0	41.6
06:00:00	46.0	41.6
05:00:00	46.0	41.6
04:00:00	46.0	41.6
03:00:00	46.1	42.1
02:00:00	46.2	42.6
01:00:00	46.3	43.0
00:00:00	46.3	43.0

DATE 02-25-97

TIME	LEVEL	FLOW
23:00:00	46.3	43.0
22:00:00	46.2	42.6
21:00:00	46.2	42.6
20:00:00	45.9	41.1
19:00:00	46.0	41.6
18:00:00	46.4	43.5
17:00:00	46.4	43.5
16:00:00	46.3	43.0
15:00:00	46.4	43.5
14:00:00	46.0	41.6
13:00:00	46.1	42.1
12:00:00	46.2	42.6
11:00:00	45.9	41.1
10:00:00	45.9	41.1
09:00:00	46.4	43.5
08:00:00	46.2	42.6
07:00:00	46.0	41.6
06:00:00	46.0	41.6
05:00:00	46.1	42.1
04:00:00	46.2	42.6
03:00:00	46.1	42.1
02:00:00	46.0	41.6
01:00:00	46.2	42.6
00:00:00	46.3	43.0

DATE 02-24-97

TIME	LEVEL	FLOW
23:00:00	46.3	43.0
22:00:00	46.3	43.0
21:00:00	46.1	42.1
20:00:00	46.0	41.6
19:00:00	45.9	41.1
18:00:00	46.4	43.5
17:00:00	46.4	43.5
16:00:00	46.4	43.5
15:00:00	46.4	43.5
14:00:00	46.3	43.0
13:00:00	46.0	41.6
12:00:00	46.0	41.6
11:00:00	46.0	41.6
10:00:00	45.9	41.1
09:00:00	45.9	41.1
08:00:00	46.0	41.6
07:00:00	46.0	41.6
06:00:00	46.1	42.1
05:00:00	46.2	42.6
04:00:00	46.2	42.6
03:00:00	46.2	42.6
02:00:00	46.0	41.6
01:00:00	46.1	42.1
00:00:00	46.3	43.0

DATE 02-23-97

TIME	LEVEL	FLOW
23:00:00	46.4	43.5
22:00:00	46.3	43.0
21:00:00	46.2	42.6
20:00:00	46.4	43.5
19:00:00	46.3	43.0
18:00:00	46.3	43.0
17:00:00	46.2	42.6
16:00:00	46.1	42.1
15:00:00	46.0	41.6
14:00:00	45.9	41.1
13:00:00	46.2	42.6
12:00:00	46.1	42.1
11:00:00	46.2	42.6
10:00:00	46.3	43.0
09:00:00	46.2	42.6
08:00:00	46.1	42.1
07:00:00	46.1	42.1
06:00:00	46.0	41.6
05:00:00	46.1	42.1
04:00:00	46.2	42.6
03:00:00	46.1	42.1
02:00:00	46.0	41.6
01:00:00	46.3	43.0
00:00:00	46.4	43.5

DATE 02-22-97

TIME	LEVEL	FLOW
23:00:00	46.4	43.5
22:00:00	46.4	43.5
21:00:00	46.1	42.1
20:00:00	46.0	41.6
19:00:00	46.4	43.5
18:00:00	46.3	43.0
17:00:00	46.4	43.5
16:00:00	46.5	44.0
15:00:00	46.1	42.1
14:00:00	46.0	41.6
13:00:00	46.0	41.6
12:00:00	46.0	41.6
11:00:00	46.0	41.6
10:00:00	46.1	42.1
09:00:00	46.2	42.6
08:00:00	46.1	42.1
07:00:00	46.0	41.6
06:00:00	46.0	41.6
05:00:00	46.0	41.6
04:00:00	46.0	41.6
03:00:00	46.0	41.6
02:00:00	45.9	41.1
01:00:00	46.1	42.1
00:00:00	46.3	43.0

DATE 02-21-97

TIME	LEVEL	FLOW
23:00:00	46.4	43.5
22:00:00	46.4	43.5
21:00:00	46.2	42.6
20:00:00	46.2	42.6
19:00:00	46.5	44.0
18:00:00	46.3	43.0
17:00:00	46.4	43.5
16:00:00	46.0	41.6
15:00:00	46.0	41.6
14:00:00	46.2	42.6
13:00:00	46.1	42.1
12:00:00	46.2	42.6
11:00:00	46.3	43.0
10:00:00	46.4	43.5
09:00:00	46.3	43.0
08:00:00	46.1	42.1
07:00:00	46.0	41.6
06:00:00	46.2	42.6
05:00:00	46.3	43.0
04:00:00	46.4	43.5
03:00:00	46.4	43.5
02:00:00	46.3	43.0
01:00:00	46.2	42.6
00:00:00	45.9	41.1

DATE 02-20-97

TIME	LEVEL	FLOW
23:00:00	46.2	42.6
22:00:00	46.4	43.5
21:00:00	45.7	40.2
20:00:00	46.5	44.0
19:00:00	46.3	43.0
18:00:00	46.3	43.0
17:00:00	46.3	43.0
16:00:00	46.2	42.6
15:00:00	46.0	41.6
14:00:00	46.0	41.6
13:00:00	46.0	41.6
12:00:00	46.1	42.1
11:00:00	45.9	41.1
10:00:00	46.1	42.1
09:00:00	46.2	42.6
08:00:00	46.5	44.0
07:00:00	46.2	42.6
06:00:00	46.2	42.6
05:00:00	46.4	43.5
04:00:00	46.3	43.0
03:00:00	46.2	42.6
02:00:00	45.9	41.1
01:00:00	46.2	42.6
00:00:00	46.4	43.5

DATE 02-19-97

TIME	LEVEL	FLOW
23:00:00	46.3	43.0
22:00:00	46.1	42.1
21:00:00	46.1	42.1
20:00:00	46.3	43.0
19:00:00	46.4	43.5
18:00:00	46.3	43.0
17:00:00	46.2	42.6
16:00:00	46.2	42.6
15:00:00	46.2	42.6
14:00:00	46.3	43.0
13:00:00	46.4	43.5
12:00:00	46.3	43.0
11:00:00	46.0	41.6
10:00:00	46.0	41.6
09:00:00	45.9	41.1
08:00:00	46.0	41.6
07:00:00	46.0	41.6
06:00:00	46.2	42.6
05:00:00	46.3	43.0
04:00:00	46.3	43.0
03:00:00	46.0	41.6
02:00:00	45.9	41.1
01:00:00	46.4	43.5
00:00:00	46.4	43.5

DATE 02-18-97

TIME	LEVEL	FLOW
23:00:00	46.4	43.5
22:00:00	46.4	43.5
21:00:00	46.3	43.0
20:00:00	46.4	43.5
19:00:00	46.4	43.5
18:00:00	46.4	43.5
17:00:00	46.4	43.5
16:00:00	46.2	42.6
15:00:00	46.0	41.6
14:00:00	46.0	41.6
13:00:00	46.0	41.6
12:00:00	46.0	41.6
11:00:00	46.0	41.6
10:00:00	46.0	41.6
09:00:00	46.0	41.6
08:00:00	46.1	42.1
07:00:00	46.1	42.1
06:00:00	46.0	41.6
05:00:00	46.0	41.6
04:00:00	46.2	42.6
03:00:00	46.2	42.6
02:00:00	46.2	42.6
01:00:00	46.3	43.0
00:00:00	46.3	43.0

DATE 02-17-97

TIME	LEVEL	FLOW
23:00:00	46.2	42.6
22:00:00	46.2	42.6
21:00:00	46.1	42.1
20:00:00	46.0	41.6
19:00:00	45.9	41.1
18:00:00	46.2	42.6
17:00:00	46.4	43.5
16:00:00	46.3	43.0
15:00:00	46.1	42.1
14:00:00	46.0	41.6
13:00:00	46.2	42.6
12:00:00	46.4	43.5
11:00:00	46.2	42.6
10:00:00	46.0	41.6
09:00:00	46.1	42.1
08:00:00	46.1	42.1
07:00:00	46.0	41.6
06:00:00	46.1	42.1
05:00:00	46.0	41.6
04:00:00	46.1	42.1
03:00:00	46.1	42.1
02:00:00	46.1	42.1
01:00:00	46.1	42.1
00:00:00	46.1	42.1

DATE 02-16-97

TIME	LEVEL	FLOW
23:00:00	46.3	43.0
22:00:00	46.4	43.5
21:00:00	46.3	43.0
20:00:00	46.2	42.6
19:00:00	46.2	42.6
18:00:00	46.1	42.1
17:00:00	46.0	41.6
16:00:00	46.0	41.6
15:00:00	46.0	41.6
14:00:00	46.2	42.6
13:00:00	46.4	43.5
12:00:00	46.3	43.0
11:00:00	46.0	41.6
10:00:00	46.1	42.1
09:00:00	46.3	43.0
08:00:00	46.3	43.0
07:00:00	46.1	42.1
06:00:00	46.0	41.6
05:00:00	46.1	42.1
04:00:00	46.2	42.6
03:00:00	46.3	43.0
02:00:00	46.3	43.0
01:00:00	46.3	43.0
00:00:00	46.2	42.6

DATE 02-15-97

TIME	LEVEL	FLOW
23:00:00	46.2	42.6
22:00:00	46.2	42.6
21:00:00	46.1	42.1
20:00:00	46.1	42.1
19:00:00	46.1	42.1
18:00:00	46.0	41.6
17:00:00	46.2	42.6
16:00:00	46.3	43.0
15:00:00	46.1	42.1
14:00:00	46.1	42.1
13:00:00	46.0	41.6
12:00:00	46.1	42.1
11:00:00	46.1	42.1
10:00:00	46.1	42.1
09:00:00	46.1	42.1
08:00:00	46.0	41.6
07:00:00	46.4	43.5
06:00:00	46.4	43.5
05:00:00	46.4	43.5
04:00:00	46.3	43.0
03:00:00	46.2	42.6
02:00:00	46.4	43.5
01:00:00	46.2	42.6
00:00:00	46.5	44.0

DATE 02-14-97

TIME	LEVEL	FLOW
23:00:00	46.2	42.6
22:00:00	46.2	42.6
21:00:00	46.4	43.5
20:00:00	46.4	43.5
19:00:00	46.3	43.0
18:00:00	46.2	42.6
17:00:00	46.3	43.0
16:00:00	46.4	43.5
15:00:00	46.3	43.0
14:00:00	46.3	43.0
13:00:00	46.3	43.0
12:00:00	46.2	42.6
11:00:00	46.2	42.6
10:00:00	46.3	43.0
09:00:00	46.3	43.0
08:00:00	46.2	42.6
07:00:00	46.3	43.0
06:00:00	46.4	43.5
05:00:00	46.4	43.5
04:00:00	46.4	43.5
03:00:00	46.4	43.5
02:00:00	46.4	43.5
01:00:00	46.3	43.0
00:00:00	46.3	43.0

DATE 02-13-97

TIME	LEVEL	FLOW
23:00:00	46.4	43.5
22:00:00	46.4	43.5
21:00:00	46.4	43.5
20:00:00	46.3	43.0
19:00:00	46.3	43.0
18:00:00	46.2	42.6
17:00:00	46.1	42.1
16:00:00	46.0	41.6
15:00:00	45.9	41.1
14:00:00	46.1	42.1
13:00:00	46.2	42.6
12:00:00	46.3	43.0
11:00:00	46.5	44.0
10:00:00	46.2	42.6
09:00:00	46.0	41.6
08:00:00	46.0	41.6
07:00:00	46.0	41.6
06:00:00	46.0	41.6
05:00:00	46.0	41.6
04:00:00	46.2	42.6
03:00:00	46.3	43.0
02:00:00	45.9	41.1
01:00:00	46.1	42.1
00:00:00	46.8	45.5

DATE 02-12-97

TIME	LEVEL	FLOW
23:00:00	46.7	45.0
22:00:00	46.1	42.1
21:00:00	46.5	44.0
20:00:00	46.2	42.6
19:00:00	46.2	42.6
18:00:00	46.1	42.1
17:00:00	45.9	41.1
16:00:00	46.1	42.1
15:00:00	46.0	41.6
14:00:00	46.2	42.6
13:00:00	46.4	43.5
12:00:00	45.8	40.7
11:00:00	46.3	43.0
10:00:00	46.4	43.5
09:00:00	46.1	42.1
08:00:00	46.0	41.6
07:00:00	46.0	41.6
06:00:00	46.2	42.6
05:00:00	46.5	44.0
04:00:00	46.4	43.5
03:00:00	46.4	43.5
02:00:00	46.4	43.5
01:00:00	46.4	43.5
00:00:00	46.3	43.0

DATE 02-11-97

TIME	LEVEL	FLOW
23:00:00	46.2	42.6
22:00:00	46.1	42.1
21:00:00	46.0	41.6
20:00:00	46.0	41.6
19:00:00	46.0	41.6
18:00:00	46.1	42.1
17:00:00	46.0	41.6
16:00:00	46.0	41.6
15:00:00	46.0	41.6
14:00:00	46.0	41.6
13:00:00	46.1	42.1
12:00:00	46.2	42.6
11:00:00	46.4	43.5
10:00:00	46.0	41.6
09:00:00	45.9	41.1
08:00:00	45.9	41.1
07:00:00	49.3	62.4
06:00:00	52.5	102.5
05:00:00	52.5	102.5
04:00:00	52.5	102.5
03:00:00	52.5	102.5
02:00:00	52.5	102.5
01:00:00	52.4	101.1
00:00:00	52.4	101.1

DATE 02-10-97

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	46.2	42.6
21:00:00	46.0	41.6
20:00:00	46.2	42.6
19:00:00	46.2	42.6
18:00:00	46.1	42.1
17:00:00	46.4	43.5
16:00:00	46.5	44.0
15:00:00	46.4	43.5
14:00:00	46.2	42.6
13:00:00	46.0	41.6
12:00:00	46.0	41.6
11:00:00	48.1	52.1
10:00:00	49.9	68.8
09:00:00	51.6	89.9
08:00:00	52.0	95.4
07:00:00	52.5	102.5
06:00:00	52.8	106.9
05:00:00	52.7	105.5
04:00:00	52.7	105.5
03:00:00	52.7	105.5
02:00:00	52.7	105.5
01:00:00	52.7	105.5
00:00:00	52.4	101.1

DATE 02-09-97

TIME	LEVEL	FLOW
23:00:00	50.1	71.1
22:00:00	45.8	40.7
21:00:00	46.0	41.6
20:00:00	46.3	43.0
19:00:00	46.1	42.1
18:00:00	45.7	40.2
17:00:00	46.0	41.6
16:00:00	46.1	42.1
15:00:00	46.5	44.0
14:00:00	46.3	43.0
13:00:00	46.7	45.0
12:00:00	47.4	48.5
11:00:00	49.7	66.6
10:00:00	50.3	73.4
09:00:00	50.3	73.4
08:00:00	50.9	80.7
07:00:00	51.1	83.2
06:00:00	52.2	98.2
05:00:00	52.3	99.6
04:00:00	52.7	105.5
03:00:00	52.8	106.9
02:00:00	51.2	84.5
01:00:00	47.1	47.0
00:00:00	47.3	48.0

DATE 02-08-97

TIME	LEVEL	FLOW
23:00:00	47.5	49.0
22:00:00	47.6	49.5
21:00:00	47.6	49.5
20:00:00	47.0	46.5
19:00:00	46.7	45.0
18:00:00	46.7	45.0
17:00:00	46.4	43.5
16:00:00	46.4	43.5
15:00:00	46.7	45.0
14:00:00	46.8	45.5
13:00:00	46.4	43.5
12:00:00	50.7	78.2
11:00:00	51.0	82.0
10:00:00	53.8	122.4
09:00:00	53.4	116.1
08:00:00	49.4	63.5
07:00:00	49.4	63.5
06:00:00	49.9	68.8
05:00:00	49.4	63.5
04:00:00	52.7	105.5
03:00:00	53.0	110.0
02:00:00	49.1	60.5
01:00:00	45.8	40.7
00:00:00	45.9	41.1

DATE 02-07-97

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	45.9	41.1
21:00:00	45.9	41.1
20:00:00	45.8	40.7
19:00:00	45.9	41.1
18:00:00	46.3	43.0
17:00:00	45.8	40.7
16:00:00	46.3	43.0
15:00:00	46.1	42.1
14:00:00	46.1	42.1
13:00:00	46.2	42.6
12:00:00	46.0	41.6
11:00:00	45.8	40.7
10:00:00	45.8	40.7
09:00:00	45.8	40.7
08:00:00	45.9	41.1
07:00:00	45.9	41.1
06:00:00	45.9	41.1
05:00:00	45.8	40.7
04:00:00	45.8	40.7
03:00:00	45.9	41.1
02:00:00	45.9	41.1
01:00:00	45.9	41.1
00:00:00	45.9	41.1

DATE 02-06-97

TIME	LEVEL	FLOW
23:00:00	46.0	41.6
22:00:00	45.9	41.1
21:00:00	45.7	40.2
20:00:00	46.4	43.5
19:00:00	45.9	41.1
18:00:00	46.2	42.6
17:00:00	46.2	42.6
16:00:00	46.0	41.6
15:00:00	46.2	42.6
14:00:00	46.0	41.6
13:00:00	46.0	41.6
12:00:00	46.2	42.6
11:00:00	46.0	41.6
10:00:00	45.8	40.7
09:00:00	45.7	40.2
08:00:00	45.7	40.2
07:00:00	45.8	40.7
06:00:00	45.9	41.1
05:00:00	45.9	41.1
04:00:00	45.8	40.7
03:00:00	45.8	40.7
02:00:00	45.9	41.1
01:00:00	45.9	41.1
00:00:00	45.9	41.1

DATE 02-05-97

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	46.0	41.6
21:00:00	45.9	41.1
20:00:00	45.8	40.7
19:00:00	45.8	40.7
18:00:00	45.8	40.7
17:00:00	45.8	40.7
16:00:00	45.8	40.7
15:00:00	45.7	40.2
14:00:00	45.9	41.1
13:00:00	46.0	41.6
12:00:00	45.9	41.1
11:00:00	45.9	41.1
10:00:00	45.9	41.1
09:00:00	45.8	40.7
08:00:00	45.8	40.7
07:00:00	45.8	40.7
06:00:00	45.9	41.1
05:00:00	45.9	41.1
04:00:00	45.9	41.1
03:00:00	45.9	41.1
02:00:00	45.9	41.1
01:00:00	45.8	40.7
00:00:00	45.8	40.7

DATE 02-04-97

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.9	41.1
21:00:00	46.2	42.6
20:00:00	46.1	42.1
19:00:00	46.0	41.6
18:00:00	46.1	42.1
17:00:00	46.1	42.1
16:00:00	46.0	41.6
15:00:00	46.0	41.6
14:00:00	46.1	42.1
13:00:00	45.9	41.1
12:00:00	45.7	40.2
11:00:00	45.9	41.1
10:00:00	46.2	42.6
09:00:00	45.8	40.7
08:00:00	45.8	40.7
07:00:00	45.9	41.1
06:00:00	45.9	41.1
05:00:00	45.9	41.1
04:00:00	45.8	40.7
03:00:00	45.9	41.1
02:00:00	45.9	41.1
01:00:00	45.9	41.1
00:00:00	46.0	41.6

DATE 02-03-97

TIME	LEVEL	FLOW
23:00:00	46.1	42.1
22:00:00	46.3	43.0
21:00:00	46.1	42.1
20:00:00	45.9	41.1
19:00:00	45.8	40.7
18:00:00	45.8	40.7
17:00:00	45.8	40.7
16:00:00	45.9	41.1
15:00:00	45.9	41.1
14:00:00	45.8	40.7
13:00:00	45.8	40.7
12:00:00	45.8	40.7
11:00:00	46.0	41.6
10:00:00	46.2	42.6
09:00:00	46.2	42.6
08:00:00	46.1	42.1
07:00:00	46.0	41.6
06:00:00	45.9	41.1
05:00:00	45.9	41.1
04:00:00	46.0	41.6
03:00:00	45.9	41.1
02:00:00	46.0	41.6
01:00:00	46.0	41.6
00:00:00	46.0	41.6

DATE 02-02-97

TIME	LEVEL	FLOW
23:00:00	46.0	41.6
22:00:00	46.2	42.6
21:00:00	46.1	42.1
20:00:00	45.9	41.1
19:00:00	46.1	42.1
18:00:00	45.9	41.1
17:00:00	45.9	41.1
16:00:00	45.9	41.1
15:00:00	46.0	41.6
14:00:00	46.0	41.6
13:00:00	46.0	41.6
12:00:00	46.1	42.1
11:00:00	45.9	41.1
10:00:00	45.7	40.2
09:00:00	45.9	41.1
08:00:00	45.9	41.1
07:00:00	45.8	40.7
06:00:00	45.9	41.1
05:00:00	46.1	42.1
04:00:00	46.1	42.1
03:00:00	46.1	42.1
02:00:00	45.7	40.2
01:00:00	45.8	40.7
00:00:00	46.0	41.6

DATE 02-01-97

TIME	LEVEL	FLOW
23:00:00	46.2	42.6
22:00:00	46.0	41.6
21:00:00	45.8	40.7
20:00:00	46.0	41.6
19:00:00	46.2	42.6
18:00:00	45.8	40.7
17:00:00	46.0	41.6
16:00:00	46.1	42.1
15:00:00	46.2	42.6
14:00:00	46.2	42.6
13:00:00	46.1	42.1
12:00:00	45.8	40.7
11:00:00	45.9	41.1
10:00:00	46.1	42.1
09:00:00	46.1	42.1
08:00:00	46.2	42.6
07:00:00	45.8	40.7
06:00:00	46.0	41.6
05:00:00	46.2	42.6
04:00:00	46.2	42.6
03:00:00	46.2	42.6
02:00:00	46.1	42.1
01:00:00	46.0	41.6
00:00:00	46.0	41.6

DATE 01-31-97

TIME	LEVEL	FLOW
23:00:00	46.2	42.6
22:00:00	46.1	42.1
21:00:00	46.2	42.6
20:00:00	46.2	42.6
19:00:00	46.1	42.1
18:00:00	45.8	40.7
17:00:00	46.1	42.1
16:00:00	45.7	40.2
15:00:00	46.1	42.1
14:00:00	46.1	42.1
13:00:00	46.1	42.1
12:00:00	46.0	41.6
11:00:00	46.0	41.6
10:00:00	46.2	42.6
09:00:00	46.1	42.1
08:00:00	46.2	42.6
07:00:00	46.2	42.6
06:00:00	46.2	42.6
05:00:00	46.2	42.6
04:00:00	46.2	42.6
03:00:00	46.2	42.6
02:00:00	46.1	42.1
01:00:00	46.5	44.0
00:00:00	46.1	42.1

DATE 01-30-97

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.9	41.1
21:00:00	46.0	41.6
20:00:00	45.7	40.2
19:00:00	46.2	42.6
18:00:00	46.1	42.1
17:00:00	45.9	41.1
16:00:00	45.9	41.1
15:00:00	45.8	40.7
14:00:00	45.8	40.7
13:00:00	45.8	40.7
12:00:00	45.8	40.7
11:00:00	45.9	41.1
10:00:00	45.9	41.1
09:00:00	45.9	41.1
08:00:00	45.9	41.1
07:00:00	45.9	41.1
06:00:00	45.9	41.1
05:00:00	46.0	41.6
04:00:00	46.0	41.6
03:00:00	46.0	41.6
02:00:00	45.9	41.1
01:00:00	45.8	40.7
00:00:00	45.8	40.7

DATE 01-29-97

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	45.9	41.1
21:00:00	45.9	41.1
20:00:00	45.8	40.7
19:00:00	45.8	40.7
18:00:00	45.8	40.7
17:00:00	45.9	41.1
16:00:00	46.0	41.6
15:00:00	46.0	41.6
14:00:00	46.0	41.6
13:00:00	46.1	42.1
12:00:00	46.0	41.6
11:00:00	45.9	41.1
10:00:00	45.8	40.7
09:00:00	45.8	40.7
08:00:00	45.9	41.1
07:00:00	45.8	40.7
06:00:00	45.9	41.1
05:00:00	46.0	41.6
04:00:00	46.0	41.6
03:00:00	45.9	41.1
02:00:00	45.8	40.7
01:00:00	45.8	40.7
00:00:00	45.9	41.1

DATE 01-28-97

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	45.9	41.1
21:00:00	45.7	40.2
20:00:00	45.9	41.1
19:00:00	46.0	41.6
18:00:00	46.2	42.6
17:00:00	46.0	41.6
16:00:00	45.7	40.2
15:00:00	46.2	42.6
14:00:00	46.1	42.1
13:00:00	46.1	42.1
12:00:00	45.9	41.1
11:00:00	45.8	40.7
10:00:00	45.8	40.7
09:00:00	46.0	41.6
08:00:00	46.1	42.1
07:00:00	46.0	41.6
06:00:00	45.7	40.2
05:00:00	45.7	40.2
04:00:00	45.8	40.7
03:00:00	45.8	40.7
02:00:00	45.8	40.7
01:00:00	45.9	41.1
00:00:00	46.0	41.6

DATE 01-27-97

TIME	LEVEL	FLOW
23:00:00	46.1	42.1
22:00:00	46.2	42.6
21:00:00	45.9	41.1
20:00:00	46.2	42.6
19:00:00	46.2	42.6
18:00:00	46.0	41.6
17:00:00	46.2	42.6
16:00:00	45.8	40.7
15:00:00	46.2	42.6
14:00:00	46.0	41.6
13:00:00	46.1	42.1
12:00:00	45.8	40.7
11:00:00	45.8	40.7
10:00:00	45.8	40.7
09:00:00	45.7	40.2
08:00:00	45.7	40.2
07:00:00	45.8	40.7
06:00:00	45.7	40.2
05:00:00	45.7	40.2
04:00:00	45.8	40.7
03:00:00	45.8	40.7
02:00:00	46.0	41.6
01:00:00	46.0	41.6
00:00:00	45.8	40.7

DATE 01-26-97

TIME	LEVEL	FLOW
23:00:00	46.1	42.1
22:00:00	46.2	42.6
21:00:00	45.9	41.1
20:00:00	46.2	42.6
19:00:00	46.2	42.6
18:00:00	46.0	41.6
17:00:00	46.2	42.6
16:00:00	45.8	40.7
15:00:00	46.2	42.6
14:00:00	46.0	41.6
13:00:00	46.1	42.1
12:00:00	45.8	40.7
11:00:00	45.8	40.7
10:00:00	45.8	40.7
09:00:00	45.7	40.2
08:00:00	45.7	40.2
07:00:00	45.8	40.7
06:00:00	45.7	40.2
05:00:00	45.7	40.2
04:00:00	45.8	40.7
03:00:00	45.8	40.7
02:00:00	46.0	41.6
01:00:00	46.0	41.6
00:00:00	45.8	40.7

DATE 01-25-97

TIME	LEVEL	FLOW
23:00:00	46.0	41.6
22:00:00	46.1	42.1
21:00:00	46.2	42.6
20:00:00	45.9	41.1
19:00:00	46.2	42.6
18:00:00	46.2	42.6
17:00:00	46.0	41.6
16:00:00	46.2	42.6
15:00:00	45.8	40.7
14:00:00	46.2	42.6
13:00:00	46.0	41.6
12:00:00	46.1	42.1
11:00:00	45.8	40.7
10:00:00	45.8	40.7
09:00:00	45.7	40.2
08:00:00	45.7	40.2
07:00:00	45.8	40.7
06:00:00	45.7	40.2
05:00:00	45.7	40.2
04:00:00	45.8	40.7
03:00:00	45.8	40.7
02:00:00	46.0	41.6
01:00:00	46.0	41.6
00:00:00	45.8	40.7

DATE 01-24-97

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	46.1	42.1
21:00:00	46.0	41.6
20:00:00	46.1	42.1
19:00:00	45.8	40.7
18:00:00	45.7	40.2
17:00:00	46.2	42.6
16:00:00	46.1	42.1
15:00:00	45.9	41.1
14:00:00	46.0	41.6
13:00:00	46.2	42.6
12:00:00	45.8	40.7
11:00:00	45.7	40.2
10:00:00	45.7	40.2
09:00:00	45.8	40.7
08:00:00	45.8	40.7
07:00:00	45.7	40.2
06:00:00	45.7	40.2
05:00:00	45.8	40.7
04:00:00	45.8	40.7
03:00:00	46.1	42.1
02:00:00	46.0	41.6
01:00:00	45.7	40.2
00:00:00	46.0	41.6

DATE 01-23-97

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.8	40.7
21:00:00	46.0	41.6
20:00:00	45.8	40.7
19:00:00	45.9	41.1
18:00:00	46.1	42.1
17:00:00	45.8	40.7
16:00:00	45.7	40.2
15:00:00	45.7	40.2
14:00:00	45.8	40.7
13:00:00	45.7	40.2
12:00:00	45.7	40.2
11:00:00	45.8	40.7
10:00:00	45.8	40.7
09:00:00	45.7	40.2
08:00:00	45.7	40.2
07:00:00	45.8	40.7
06:00:00	45.8	40.7
05:00:00	45.8	40.7
04:00:00	45.8	40.7
03:00:00	45.9	41.1
02:00:00	45.9	41.1
01:00:00	45.9	41.1
00:00:00	46.1	42.1

DATE 01-22-97

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.7	40.2
21:00:00	46.0	41.6
20:00:00	46.1	42.1
19:00:00	45.9	41.1
18:00:00	45.9	41.1
17:00:00	46.1	42.1
16:00:00	46.0	41.6
15:00:00	46.0	41.6
14:00:00	46.1	42.1
13:00:00	45.7	40.2
12:00:00	45.7	40.2
11:00:00	45.9	41.1
10:00:00	46.0	41.6
09:00:00	46.1	42.1
08:00:00	46.1	42.1
07:00:00	46.1	42.1
06:00:00	46.1	42.1
05:00:00	46.1	42.1
04:00:00	46.0	41.6
03:00:00	46.0	41.6
02:00:00	46.0	41.6
01:00:00	45.9	41.1
00:00:00	45.9	41.1

DATE 01-21-97

TIME	LEVEL	FLOW
23:00:00	46.0	41.6
22:00:00	45.8	40.7
21:00:00	45.7	40.2
20:00:00	45.7	40.2
19:00:00	45.8	40.7
18:00:00	45.9	41.1
17:00:00	45.9	41.1
16:00:00	46.0	41.6
15:00:00	45.7	40.2
14:00:00	45.7	40.2
13:00:00	46.1	42.1
12:00:00	46.0	41.6
11:00:00	45.9	41.1
10:00:00	45.8	40.7
09:00:00	45.7	40.2
08:00:00	45.8	40.7
07:00:00	45.9	41.1
06:00:00	46.0	41.6
05:00:00	46.1	42.1
04:00:00	46.0	41.6
03:00:00	45.9	41.1
02:00:00	45.9	41.1
01:00:00	46.0	41.6
00:00:00	46.1	42.1

DATE 01-20-97

TIME	LEVEL	FLOW
23:00:00	46.1	42.1
22:00:00	46.1	42.1
21:00:00	46.0	41.6
20:00:00	45.9	41.1
19:00:00	45.8	40.7
18:00:00	45.7	40.2
17:00:00	45.8	40.7
16:00:00	45.8	40.7
15:00:00	45.9	41.1
14:00:00	45.7	40.2
13:00:00	45.7	40.2
12:00:00	45.7	40.2
11:00:00	45.8	40.7
10:00:00	45.8	40.7
09:00:00	45.8	40.7
08:00:00	45.7	40.2
07:00:00	45.7	40.2
06:00:00	45.9	41.1
05:00:00	46.1	42.1
04:00:00	45.8	40.7
03:00:00	45.9	41.1
02:00:00	46.1	42.1
01:00:00	46.1	42.1
00:00:00	46.0	41.6

DATE 01-19-97

TIME	LEVEL	FLOW
23:00:00	46.0	41.6
22:00:00	46.1	42.1
21:00:00	46.0	41.6
20:00:00	45.7	40.2
19:00:00	46.0	41.6
18:00:00	45.8	40.7
17:00:00	46.0	41.6
16:00:00	45.7	40.2
15:00:00	45.7	40.2
14:00:00	45.8	40.7
13:00:00	45.8	40.7
12:00:00	45.7	40.2
11:00:00	45.7	40.2
10:00:00	45.7	40.2
09:00:00	45.7	40.2
08:00:00	45.8	40.7
07:00:00	45.9	41.1
06:00:00	46.0	41.6
05:00:00	46.1	42.1
04:00:00	46.0	41.6
03:00:00	46.0	41.6
02:00:00	45.9	41.1
01:00:00	45.8	40.7
00:00:00	45.8	40.7

DATE 01-18-97

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.9	41.1
21:00:00	46.1	42.1
20:00:00	46.0	41.6
19:00:00	45.9	41.1
18:00:00	45.8	40.7
17:00:00	45.7	40.2
16:00:00	45.8	40.7
15:00:00	45.8	40.7
14:00:00	45.9	41.1
13:00:00	46.1	42.1
12:00:00	46.0	41.6
11:00:00	46.0	41.6
10:00:00	45.8	40.7
09:00:00	45.9	41.1
08:00:00	45.8	40.7
07:00:00	45.8	40.7
06:00:00	45.8	40.7
05:00:00	45.8	40.7
04:00:00	45.8	40.7
03:00:00	45.9	41.1
02:00:00	45.8	40.7
01:00:00	45.8	40.7
00:00:00	45.8	40.7

DATE 01-17-97

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	46.0	41.6
21:00:00	46.1	42.1
20:00:00	46.0	41.6
19:00:00	45.8	40.7
18:00:00	46.0	41.6
17:00:00	45.7	40.2
16:00:00	45.7	40.2
15:00:00	45.7	40.2
14:00:00	45.8	40.7
13:00:00	45.7	40.2
12:00:00	45.8	40.7
11:00:00	45.7	40.2
10:00:00	45.7	40.2
09:00:00	45.8	40.7
08:00:00	46.1	42.1
07:00:00	45.9	41.1
06:00:00	45.7	40.2
05:00:00	45.8	40.7
04:00:00	45.8	40.7
03:00:00	45.8	40.7
02:00:00	45.7	40.2
01:00:00	45.7	40.2
00:00:00	45.8	40.7

DATE 01-16-97

TIME	LEVEL	FLOW
23:00:00	46.0	41.6
22:00:00	46.3	43.0
21:00:00	46.3	43.0
20:00:00	46.2	42.6
19:00:00	46.1	42.1
18:00:00	46.1	42.1
17:00:00	45.8	40.7
16:00:00	45.8	40.7
15:00:00	45.8	40.7
14:00:00	45.8	40.7
13:00:00	45.8	40.7
12:00:00	45.8	40.7
11:00:00	45.8	40.7
10:00:00	46.1	42.1
09:00:00	46.1	42.1
08:00:00	45.8	40.7
07:00:00	45.7	40.2
06:00:00	45.8	40.7
05:00:00	45.8	40.7
04:00:00	45.9	41.1
03:00:00	45.9	41.1
02:00:00	45.8	40.7
01:00:00	45.8	40.7
00:00:00	45.9	41.1

DATE 01-15-97

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.8	40.7
21:00:00	45.8	40.7
20:00:00	45.7	40.2
19:00:00	45.9	41.1
18:00:00	46.0	41.6
17:00:00	46.0	41.6
16:00:00	46.2	42.6
15:00:00	45.9	41.1
14:00:00	45.9	41.1
13:00:00	45.9	41.1
12:00:00	46.0	41.6
11:00:00	46.1	42.1
10:00:00	46.0	41.6
09:00:00	46.3	43.0
08:00:00	46.0	41.6
07:00:00	45.9	41.1
06:00:00	46.0	41.6
05:00:00	46.0	41.6
04:00:00	46.0	41.6
03:00:00	46.0	41.6
02:00:00	46.0	41.6
01:00:00	46.0	41.6
00:00:00	45.9	41.1

DATE 01-14-97

TIME	LEVEL	FLOW
23:00:00	46.4	43.5
22:00:00	46.1	42.1
21:00:00	46.1	42.1
20:00:00	45.9	41.1
19:00:00	46.1	42.1
18:00:00	46.2	42.6
17:00:00	46.2	42.6
16:00:00	46.2	42.6
15:00:00	46.2	42.6
14:00:00	46.1	42.1
13:00:00	46.2	42.6
12:00:00	46.2	42.6
11:00:00	46.0	41.6
10:00:00	46.1	42.1
09:00:00	45.8	40.7
08:00:00	45.8	40.7
07:00:00	45.8	40.7
06:00:00	45.9	41.1
05:00:00	46.2	42.6
04:00:00	46.0	41.6
03:00:00	46.2	42.6
02:00:00	46.1	42.1
01:00:00	46.0	41.6
00:00:00	45.9	41.1

DATE 01-13-97

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	46.0	41.6
21:00:00	45.9	41.1
20:00:00	46.1	42.1
19:00:00	45.8	40.7
18:00:00	45.8	40.7
17:00:00	46.0	41.6
16:00:00	45.9	41.1
15:00:00	46.0	41.6
14:00:00	46.4	43.5
13:00:00	46.4	43.5
12:00:00	46.9	46.0
11:00:00	46.8	45.5
10:00:00	47.0	46.5
09:00:00	46.8	45.5
08:00:00	46.6	44.5
07:00:00	46.6	44.5
06:00:00	46.8	45.5
05:00:00	46.7	45.0
04:00:00	46.8	45.5
03:00:00	46.3	43.0
02:00:00	45.9	41.1
01:00:00	46.0	41.6
00:00:00	46.7	45.0

DATE 01-12-97

TIME	LEVEL	FLOW
23:00:00	47.5	49.0
22:00:00	47.2	47.5
21:00:00	45.8	40.7
20:00:00	45.7	40.2
19:00:00	46.1	42.1
18:00:00	45.7	40.2
17:00:00	45.8	40.7
16:00:00	45.9	41.1
15:00:00	45.7	40.2
14:00:00	46.1	42.1
13:00:00	45.8	40.7
12:00:00	45.7	40.2
11:00:00	45.7	40.2
10:00:00	45.8	40.7
09:00:00	45.9	41.1
08:00:00	45.8	40.7
07:00:00	46.0	41.6
06:00:00	45.8	40.7
05:00:00	45.9	41.1
04:00:00	46.0	41.6
03:00:00	45.9	41.1
02:00:00	45.7	40.2
01:00:00	45.7	40.2
00:00:00	45.8	40.7

DATE 01-11-97

TIME	LEVEL	FLOW
23:00:00	46.0	41.6
22:00:00	46.0	41.6
21:00:00	46.0	41.6
20:00:00	45.8	40.7
19:00:00	45.7	40.2
18:00:00	45.7	40.2
17:00:00	46.1	42.1
16:00:00	45.8	40.7
15:00:00	46.0	41.6
14:00:00	46.0	41.6
13:00:00	46.1	42.1
12:00:00	45.9	41.1
11:00:00	45.8	40.7
10:00:00	45.9	41.1
09:00:00	46.1	42.1
08:00:00	46.6	44.5
07:00:00	47.2	47.5
06:00:00	47.5	49.0
05:00:00	45.8	40.7
04:00:00	45.8	40.7
03:00:00	46.0	41.6
02:00:00	46.2	42.6
01:00:00	46.0	41.6
00:00:00	45.8	40.7

DATE 01-10-97

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.9	41.1
21:00:00	45.8	40.7
20:00:00	45.8	40.7
19:00:00	45.9	41.1
18:00:00	46.0	41.6
17:00:00	46.1	42.1
16:00:00	46.0	41.6
15:00:00	46.0	41.6
14:00:00	46.0	41.6
13:00:00	46.0	41.6
12:00:00	46.0	41.6
11:00:00	46.0	41.6
10:00:00	45.7	40.2
09:00:00	45.8	40.7
08:00:00	45.9	41.1
07:00:00	45.9	41.1
06:00:00	45.8	40.7
05:00:00	45.7	40.2
04:00:00	45.9	41.1
03:00:00	45.9	41.1
02:00:00	45.7	40.2
01:00:00	45.7	40.2
00:00:00	46.1	42.1

DATE 01-09-97

TIME	LEVEL	FLOW
23:00:00	46.1	42.1
22:00:00	46.1	42.1
21:00:00	46.2	42.6
20:00:00	46.0	41.6
19:00:00	45.8	40.7
18:00:00	45.7	40.2
17:00:00	45.7	40.2
16:00:00	45.7	40.2
15:00:00	45.8	40.7
14:00:00	45.9	41.1
13:00:00	45.8	40.7
12:00:00	45.7	40.2
11:00:00	45.7	40.2
10:00:00	45.8	40.7
09:00:00	45.8	40.7
08:00:00	45.9	41.1
07:00:00	45.8	40.7
06:00:00	45.9	41.1
05:00:00	45.9	41.1
04:00:00	45.9	41.1
03:00:00	45.9	41.1
02:00:00	45.8	40.7
01:00:00	45.7	40.2
00:00:00	46.0	41.6

DATE 01-08-97

TIME	LEVEL	FLOW
23:00:00	46.1	42.1
22:00:00	46.1	42.1
21:00:00	45.9	41.1
20:00:00	45.8	40.7
19:00:00	46.0	41.6
18:00:00	46.1	42.1
17:00:00	46.0	41.6
16:00:00	45.9	41.1
15:00:00	45.8	40.7
14:00:00	45.8	40.7
13:00:00	45.7	40.2
12:00:00	45.8	40.7
11:00:00	45.8	40.7
10:00:00	45.8	40.7
09:00:00	45.8	40.7
08:00:00	45.7	40.2
07:00:00	45.7	40.2
06:00:00	45.8	40.7
05:00:00	45.7	40.2
04:00:00	45.7	40.2
03:00:00	45.7	40.2
02:00:00	45.8	40.7
01:00:00	45.8	40.7
00:00:00	45.7	40.2

DATE 01-07-97

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	46.2	42.6
21:00:00	46.0	41.6
20:00:00	45.8	40.7
19:00:00	45.7	40.2
18:00:00	45.9	41.1
17:00:00	45.9	41.1
16:00:00	45.8	40.7
15:00:00	45.8	40.7
14:00:00	46.1	42.1
13:00:00	46.1	42.1
12:00:00	46.1	42.1
11:00:00	45.7	40.2
10:00:00	45.7	40.2
09:00:00	45.7	40.2
08:00:00	45.7	40.2
07:00:00	45.7	40.2
06:00:00	45.8	40.7
05:00:00	45.8	40.7
04:00:00	45.8	40.7
03:00:00	45.9	41.1
02:00:00	46.0	41.6
01:00:00	46.2	42.6
00:00:00	46.0	41.6

DATE 01-06-97

TIME	LEVEL	FLOW
23:00:00	46.0	41.6
22:00:00	46.0	41.6
21:00:00	46.0	41.6
20:00:00	45.9	41.1
19:00:00	46.1	42.1
18:00:00	46.2	42.6
17:00:00	46.0	41.6
16:00:00	45.8	40.7
15:00:00	45.7	40.2
14:00:00	45.8	40.7
13:00:00	45.8	40.7
12:00:00	45.7	40.2
11:00:00	45.7	40.2
10:00:00	45.8	40.7
09:00:00	45.8	40.7
08:00:00	45.8	40.7
07:00:00	45.8	40.7
06:00:00	45.8	40.7
05:00:00	45.8	40.7
04:00:00	45.7	40.2
03:00:00	45.7	40.2
02:00:00	45.7	40.2
01:00:00	45.8	40.7
00:00:00	45.8	40.7

DATE 01-05-97

TIME	LEVEL	FLOW
23:00:00	46.0	41.6
22:00:00	46.0	41.6
21:00:00	46.0	41.6
20:00:00	46.0	41.6
19:00:00	46.1	42.1
18:00:00	46.0	41.6
17:00:00	45.9	41.1
16:00:00	46.0	41.6
15:00:00	46.1	42.1
14:00:00	46.1	42.1
13:00:00	46.2	42.6
12:00:00	46.1	42.1
11:00:00	46.1	42.1
10:00:00	46.2	42.6
09:00:00	45.9	41.1
08:00:00	45.8	40.7
07:00:00	45.9	41.1
06:00:00	46.1	42.1
05:00:00	46.2	42.6
04:00:00	46.1	42.1
03:00:00	46.2	42.6
02:00:00	46.0	41.6
01:00:00	45.8	40.7
00:00:00	46.0	41.6

DATE 01-04-97

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.9	41.1
21:00:00	46.0	41.6
20:00:00	46.2	42.6
19:00:00	46.0	41.6
18:00:00	45.9	41.1
17:00:00	45.8	40.7
16:00:00	45.9	41.1
15:00:00	46.0	41.6
14:00:00	46.0	41.6
13:00:00	46.1	42.1
12:00:00	46.2	42.6
11:00:00	46.2	42.6
10:00:00	46.4	43.5
09:00:00	46.5	44.0
08:00:00	46.2	42.6
07:00:00	46.4	43.5
06:00:00	46.1	42.1
05:00:00	46.1	42.1
04:00:00	46.1	42.1
03:00:00	46.1	42.1
02:00:00	46.0	41.6
01:00:00	46.2	42.6
00:00:00	46.0	41.6

**DATE 01-03-97*

TIME	LEVEL	FLOW
23:00:00	46.5	44.0
22:00:00	47.0	46.5
21:00:00	47.5	49.0
20:00:00	48.2	52.8
19:00:00	48.9	58.6
18:00:00	49.4	63.5
17:00:00	49.9	68.8
16:00:00	50.5	75.8
15:00:00	50.7	78.2
14:00:00	51.1	83.2
13:00:00	51.2	84.5
12:00:00	51.5	88.5
11:00:00	51.1	83.2
10:00:00	49.2	61.4
09:00:00	48.9	58.6
08:00:00	48.5	55.1
07:00:00	48.9	58.6
06:00:00	49.3	62.4
05:00:00	49.5	64.5
04:00:00	49.9	68.8
03:00:00	50.2	72.2
02:00:00	50.7	78.2
01:00:00	51.1	83.2
00:00:00	51.5	88.5

DATE 01-02-97

TIME	LEVEL	FLOW
23:00:00	51.9	94.0
22:00:00	52.3	99.6
21:00:00	52.7	105.5
20:00:00	52.9	108.4
19:00:00	53.3	114.5
18:00:00	52.9	108.4
17:00:00	52.8	106.9
16:00:00	52.7	105.5
15:00:00	52.3	99.6
14:00:00	51.6	89.9
13:00:00	48.1	52.1
12:00:00	47.4	48.5
11:00:00	47.6	49.5
10:00:00	47.4	48.5
09:00:00	46.5	44.0
08:00:00	46.2	42.6
07:00:00	46.4	43.5
06:00:00	46.1	42.1
05:00:00	46.1	42.1
04:00:00	46.1	42.1
03:00:00	46.1	42.1
02:00:00	46.0	41.6
01:00:00	46.2	42.6
00:00:00	45.9	41.1

DATE 01-01-97

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.9	41.1
21:00:00	45.9	41.1
20:00:00	45.8	40.7
19:00:00	46.4	43.5
18:00:00	46.0	41.6
17:00:00	46.0	41.6
16:00:00	46.3	43.0
15:00:00	46.4	43.5
14:00:00	46.0	41.6
13:00:00	46.2	42.6
12:00:00	46.0	41.6
11:00:00	46.1	42.1
10:00:00	46.0	41.6
09:00:00	46.1	42.1
08:00:00	46.1	42.1
07:00:00	46.1	42.1
06:00:00	46.0	41.6
05:00:00	46.0	41.6
04:00:00	46.1	42.1
03:00:00	46.1	42.1
02:00:00	46.1	42.1
01:00:00	46.0	41.6
00:00:00	45.9	41.1

CEM COMMERCIAL ENERGY MGMT, INC.
P.O. Box 4518 • Pocatello, Idaho 83205 • Telephone (208) 237-3563 • Fax (208) 237-3563

January 25, 1997
Ref: CEM/1081

RECEIVED
JAN 30 1997
Department of Water Resources

Mr. L. GLEN SAXTON
Chief, Water Allocation Bureau
State of Idaho, Department of Water Resources
1301 North Orchard Street
Statehouse Mail
Boise, ID 83720-9000

Subject: Portneuf River Hydroelectric Project
Lava Hot Springs, Idaho
FERC Project No. 7447-002
Permit No. 29-7699

Dear Mr. Saxton:

Attached please find copies of the bypass channel flow records for the period from November 1 to December 31, 1996.

Sincerely,

Maher F. Wissa
President

Attachments: 31 sheets

DATE 12-31-96

TIME	LEVEL	FLOW
23:00:00	45.7	40 2
22:00:00	45.7	40.2
21:00:00	45.8	40.7
20:00:00	46.1	42.1
19:00:00	46.2	42.6
18:00:00	46.0	41 6
17:00:00	45.9	41 1
16:00:00	45.8	40.7
15:00:00	45.8	40.7
14:00:00	46.0	41.6
13:00:00	46.0	41.6
12:00:00	45.9	41.1
11:00:00	46.1	42.1
10:00:00	45.9	41.1
09:00:00	45.8	40.7
08:00:00	46.0	41.6
07:00:00	46.1	42.1
06:00:00	45.9	41.1
05:00:00	45.9	41.1
04:00:00	45.8	40.7
03:00:00	45.7	40.2
02:00:00	45.7	40.2
01:00:00	45.8	40.7
00:00:00	45.8	40.7

DATE 12-30-96

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.8	40.7
21:00:00	45.7	40.2
20:00:00	45.7	40.2
19:00:00	45.8	40.7
18:00:00	45.8	40.7
17:00:00	45.9	41.1
16:00:00	46.0	41.6
15:00:00	46.0	41.6
14:00:00	46.0	41.6
13:00:00	45.9	41.1
12:00:00	45.7	40.2
11:00:00	45.9	41.1
10:00:00	46.1	42.1
09:00:00	46.1	42.1
08:00:00	45.8	40.7
07:00:00	45.8	40.7
06:00:00	45.9	41.1
05:00:00	46.0	41.6
04:00:00	46.1	42.1
03:00:00	46.1	42.1
02:00:00	46.2	42.6
01:00:00	46.0	41.6
00:00:00	46.1	42.1

DATE 12-29-96

TIME	LEVEL	FLOW
23:00:00	46.0	41.6
22:00:00	46.2	42.6
21:00:00	45 7	40.2
20:00:00	45.7	40.2
19:00:00	46.2	42.6
18:00:00	46.0	41 6
17:00:00	46.0	41.6
16:00:00	46.1	42.1
15:00:00	46.1	42.1
14:00:00	46.0	41.6
13:00:00	46.0	41.6
12:00:00	45.8	40.7
11:00:00	45.8	40.7
10:00:00	45.8	40.7
09:00:00	45.9	41.1
08:00:00	46.1	42.1
07:00:00	46.1	42.1
06:00:00	45.9	41.1
05:00:00	45.7	40.2
04:00:00	45.8	40.7
03:00:00	45.8	40.7
02:00:00	45.7	40.2
01:00:00	45.8	40.7
00:00:00	45.8	40.7

DATE 12-28-96

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	45.7	40.2
21:00:00	45.8	40.7
20:00:00	45.7	40.2
19:00:00	45.9	41.1
18:00:00	45.8	40.7
17:00:00	45.9	41 1
16:00:00	46.0	41.6
15:00:00	46.1	42.1
14:00:00	46.1	42.1
13:00:00	45.9	41.1
12:00:00	45.8	40.7
11:00:00	45.7	40.2
10:00:00	45.9	41.1
09:00:00	46.0	41.6
08:00:00	46.1	42.1
07:00:00	46.0	41.6
06:00:00	45.9	41.1
05:00:00	45.7	40.2
04:00:00	45.7	40.2
03:00:00	45.8	40.7
02:00:00	45.8	40.7
01:00:00	45.7	40.2
00:00:00	45.7	40.2

DATE 12-27-96

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.8	40.7
21:00:00	45.8	40.7
20:00:00	46.0	41.6
19:00:00	45.8	40.7
18:00:00	45.7	40.2
17:00:00	45.7	40 2
16:00:00	45.8	40.7
15:00:00	45.9	41 1
14:00:00	45.8	40.7
13:00:00	45.9	41.1
12:00:00	45.9	41.1
11:00:00	45.8	40.7
10:00:00	46.2	42.6
09:00:00	45.9	41.1
08:00:00	45.8	40.7
07:00:00	45.8	40.7
06:00:00	45.7	40.2
05:00:00	45.7	40.2
04:00:00	45.7	40.2
03:00:00	45.7	40.2
02:00:00	45.8	40.7
01:00:00	46.0	41.6
00:00:00	46.2	42.6

DATE 12-26-96

TIME	LEVEL	FLOW
23:00:00	46.0	41.6
22:00:00	46.0	41.6
21:00:00	46.1	42.1
20:00:00	46.1	42.1
19:00:00	46.0	41.6
18:00:00	45.9	41.1
17:00:00	46.0	41.6
16:00:00	46.1	42.1
15:00:00	46.1	42.1
14:00:00	46.1	42.1
13:00:00	46.0	41.6
12:00:00	45.9	41.1
11:00:00	45.9	41.1
10:00:00	45.8	40.7
09:00:00	45.8	40.7
08:00:00	45.8	40.7
07:00:00	45.8	40.7
06:00:00	45.8	40.7
05:00:00	45.8	40.7
04:00:00	45.7	40.2
03:00:00	45.8	40.7
02:00:00	45.9	41.1
01:00:00	46.0	41.6
00:00:00	45.9	41.1

DATE 12-25-96

TIME	LEVEL	FLOW
23:00:00	46.0	41.6
22:00:00	46.0	41.6
21:00:00	45.9	41.1
20:00:00	46.1	42.1
19:00:00	45.9	41.1
18:00:00	45.8	40.7
17:00:00	45.8	40.7
16:00:00	46.0	41.6
15:00:00	46.1	42.1
14:00:00	46.1	42.1
13:00:00	46.1	42.1
12:00:00	46.1	42.1
11:00:00	46.0	41.6
10:00:00	46.1	42.1
09:00:00	46.0	41.6
08:00:00	46.0	41.6
07:00:00	45.9	41.1
06:00:00	45.9	41.1
05:00:00	45.9	41.1
04:00:00	45.9	41.1
03:00:00	45.7	40.2
02:00:00	45.8	40.7
01:00:00	45.7	40.2
00:00:00	45.8	40.7

DATE 12-24-96

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	45.8	40.7
21:00:00	45.7	40.2
20:00:00	46.2	42.6
19:00:00	46.0	41.6
18:00:00	45.8	40.7
17:00:00	45.7	40.2
16:00:00	45.7	40.2
15:00:00	45.9	41.1
14:00:00	45.9	41.1
13:00:00	45.7	40.2
12:00:00	45.7	40.2
11:00:00	45.8	40.7
10:00:00	46.2	42.6
09:00:00	45.9	41.1
08:00:00	45.8	40.7
07:00:00	45.9	41.1
06:00:00	45.9	41.1
05:00:00	45.8	40.7
04:00:00	45.8	40.7
03:00:00	45.9	41.1
02:00:00	45.9	41.1
01:00:00	46.2	42.6
00:00:00	46.0	41.6

DATE 12-23-96

TIME	LEVEL	FLOW
23:00:00	46.1	42.1
22:00:00	45.7	40.2
21:00:00	45.7	40.2
20:00:00	45.7	40.2
19:00:00	45.7	40.2
18:00:00	45.9	41.1
17:00:00	45.8	40.7
16:00:00	45.8	40.7
15:00:00	45.7	40.2
14:00:00	45.9	41.1
13:00:00	45.8	40.7
12:00:00	45.9	41.1
11:00:00	45.8	40.7
10:00:00	45.9	41.1
09:00:00	45.8	40.7
08:00:00	46.1	42.1
07:00:00	45.9	41.1
06:00:00	45.9	41.1
05:00:00	46.1	42.1
04:00:00	46.1	42.1
03:00:00	45.9	41.1
02:00:00	45.8	40.7
01:00:00	45.8	40.7
00:00:00	45.8	40.7

DATE 12-22-96

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.7	40.2
21:00:00	45.8	40.7
20:00:00	45.8	40.7
19:00:00	45.8	40.7
18:00:00	45.7	40.2
17:00:00	45.7	40.2
16:00:00	45.8	40.7
15:00:00	45.9	41.1
14:00:00	45.9	41.1
13:00:00	45.9	41.1
12:00:00	45.8	40.7
11:00:00	45.7	40.2
10:00:00	45.8	40.7
09:00:00	45.8	40.7
08:00:00	45.7	40.2
07:00:00	45.7	40.2
06:00:00	45.7	40.2
05:00:00	45.7	40.2
04:00:00	45.7	40.2
03:00:00	45.7	40.2
02:00:00	45.8	40.7
01:00:00	45.9	41.1
00:00:00	45.9	41.1

DATE 12-21-96

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.7	40.2
21:00:00	45.7	40.2
20:00:00	45.8	40.7
19:00:00	45.8	40.7
18:00:00	45.9	41.1
17:00:00	46.0	41.6
16:00:00	46.1	42.1
15:00:00	46.1	42.1
14:00:00	46.0	41.6
13:00:00	46.1	42.1
12:00:00	46.1	42.1
11:00:00	46.1	42.1
10:00:00	46.0	41.6
09:00:00	45.8	40.7
08:00:00	45.8	40.7
07:00:00	45.8	40.7
06:00:00	45.9	41.1
05:00:00	45.9	41.1
04:00:00	45.9	41.1
03:00:00	46.0	41.6
02:00:00	46.0	41.6
01:00:00	46.0	41.6
00:00:00	46.0	41.6

DATE 12-20-96

TIME	LEVEL	FLOW
23:00:00	46.0	41.6
22:00:00	46.1	42.1
21:00:00	46.1	42.1
20:00:00	46.0	41.6
19:00:00	46.0	41.6
18:00:00	46.0	41.6
17:00:00	46.1	42.1
16:00:00	46.0	41.6
15:00:00	45.8	40.7
14:00:00	45.9	41.1
13:00:00	46.1	42.1
12:00:00	45.9	41.1
11:00:00	45.8	40.7
10:00:00	45.7	40.2
09:00:00	45.7	40.2
08:00:00	45.8	40.7
07:00:00	45.8	40.7
06:00:00	45.9	41.1
05:00:00	45.9	41.1
04:00:00	46.0	41.6
03:00:00	46.1	42.1
02:00:00	46.1	42.1
01:00:00	46.0	41.6
00:00:00	46.0	41.6

DATE 12-19-96

TIME	LEVEL	FLOW
23:00:00	46.0	41.6
22:00:00	45.9	41.1
21:00:00	45.9	41.1
20:00:00	45.8	40.7
19:00:00	45.7	40.2
18:00:00	45.7	40.2
17:00:00	45.8	40.7
16:00:00	45.9	41.1
15:00:00	45.9	41.1
14:00:00	45.9	41.1
13:00:00	45.9	41.1
12:00:00	46.0	41.6
11:00:00	46.0	41.6
10:00:00	45.9	41.1
09:00:00	46.0	41.6
08:00:00	46.1	42.1
07:00:00	46.1	42.1
06:00:00	46.0	41.6
05:00:00	46.0	41.6
04:00:00	45.9	41.1
03:00:00	45.8	40.7
02:00:00	45.8	40.7
01:00:00	45.9	41.1
00:00:00	46.0	41.6

DATE 12-18-96

TIME	LEVEL	FLOW
23:00:00	46.0	41.6
22:00:00	45.7	40.2
21:00:00	46.2	42.6
20:00:00	45.9	41.1
19:00:00	46.0	41.6
18:00:00	46.2	42.6
17:00:00	45.9	41.1
16:00:00	45.8	40.7
15:00:00	45.9	41.1
14:00:00	46.0	41.6
13:00:00	45.9	41.1
12:00:00	45.9	41.1
11:00:00	45.8	40.7
10:00:00	45.8	40.7
09:00:00	45.9	41.1
08:00:00	45.9	41.1
07:00:00	46.0	41.6
06:00:00	45.8	40.7
05:00:00	45.8	40.7
04:00:00	45.9	41.1
03:00:00	45.9	41.1
02:00:00	45.9	41.1
01:00:00	45.8	40.7
00:00:00	45.8	40.7

DATE 12-17-96

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.8	40.7
21:00:00	45.9	41.1
20:00:00	45.8	40.7
19:00:00	45.8	40.7
18:00:00	46.0	41.6
17:00:00	46.2	42.6
16:00:00	45.9	41.1
15:00:00	45.8	40.7
14:00:00	45.8	40.7
13:00:00	45.9	41.1
12:00:00	45.9	41.1
11:00:00	45.8	40.7
10:00:00	46.7	45.0
09:00:00	46.6	44.5
08:00:00	46.6	44.5
07:00:00	46.5	44.0
06:00:00	46.5	44.0
05:00:00	46.6	44.5
04:00:00	46.6	44.5
03:00:00	46.2	42.6
02:00:00	45.8	40.7
01:00:00	45.7	40.2
00:00:00	45.8	40.7

DATE 12-16-96

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.9	41.1
21:00:00	45.9	41.1
20:00:00	46.0	41.6
19:00:00	46.0	41.6
18:00:00	46.1	42.1
17:00:00	46.1	42.1
16:00:00	46.0	41.6
15:00:00	45.9	41.1
14:00:00	45.8	40.7
13:00:00	46.1	42.1
12:00:00	46.1	42.1
11:00:00	46.2	42.6
10:00:00	46.0	41.6
09:00:00	45.8	40.7
08:00:00	45.7	40.2
07:00:00	45.9	41.1
06:00:00	46.1	42.1
05:00:00	46.0	41.6
04:00:00	45.9	41.1
03:00:00	46.2	42.6
02:00:00	46.0	41.6
01:00:00	45.9	41.1
00:00:00	46.0	41.6

DATE 12-15-96

TIME	LEVEL	FLOW
23:00:00	46.0	41.6
22:00:00	46.0	41.6
21:00:00	45.8	40.7
20:00:00	45.8	40.7
19:00:00	46.1	42.1
18:00:00	46.0	41.6
17:00:00	45.9	41.1
16:00:00	45.9	41.1
15:00:00	45.8	40.7
14:00:00	45.9	41.1
13:00:00	46.0	41.6
12:00:00	46.0	41.6
11:00:00	46.0	41.6
10:00:00	45.8	40.7
09:00:00	45.7	40.2
08:00:00	45.9	41.1
07:00:00	46.0	41.6
06:00:00	45.8	40.7
05:00:00	45.7	40.2
04:00:00	46.0	41.6
03:00:00	46.0	41.6
02:00:00	45.8	40.7
01:00:00	45.9	41.1
00:00:00	46.1	42.1

DATE 12-14-96

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	45.8	40.7
21:00:00	46.1	42.1
20:00:00	46.0	41.6
19:00:00	46.1	42.1
18:00:00	46.1	42.1
17:00:00	46.0	41.6
16:00:00	45.9	41.1
15:00:00	45.8	40.7
14:00:00	45.8	40.7
13:00:00	46.0	41.6
12:00:00	46.1	42.1
11:00:00	46.0	41.6
10:00:00	45.9	41.1
09:00:00	45.8	40.7
08:00:00	45.7	40.2
07:00:00	45.8	40.7
06:00:00	45.9	41.1
05:00:00	45.8	40.7
04:00:00	45.9	41.1
03:00:00	45.8	40.7
02:00:00	45.7	40.2
01:00:00	45.7	40.2
00:00:00	46.0	41.6

DATE 12-13-96

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	45.8	40.7
21:00:00	45.7	40.2
20:00:00	45.8	40.7
19:00:00	45.7	40.2
18:00:00	45.7	40.2
17:00:00	45.8	40.7
16:00:00	45.9	41.1
15:00:00	46.1	42.1
14:00:00	46.1	42.1
13:00:00	45.9	41.1
12:00:00	46.0	41.6
11:00:00	46.1	42.1
10:00:00	46.1	42.1
09:00:00	46.0	41.6
08:00:00	45.8	40.7
07:00:00	45.7	40.2
06:00:00	45.8	40.7
05:00:00	46.0	41.6
04:00:00	46.0	41.6
03:00:00	45.8	40.7
02:00:00	45.8	40.7
01:00:00	46.0	41.6
00:00:00	45.9	41.1

DATE 12-12-96

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	46.1	42.1
21:00:00	46.0	41.6
20:00:00	46.1	42.1
19:00:00	45.9	41.1
18:00:00	45.8	40.7
17:00:00	45.8	40.7
16:00:00	46.0	41.6
15:00:00	45.9	41.1
14:00:00	45.8	40.7
13:00:00	46.2	42.6
12:00:00	45.9	41.1
11:00:00	46.0	41.6
10:00:00	45.9	41.1
09:00:00	45.8	40.7
08:00:00	45.8	40.7
07:00:00	45.8	40.7
06:00:00	45.7	40.2
05:00:00	46.0	41.6
04:00:00	46.0	41.6
03:00:00	46.0	41.6
02:00:00	46.1	42.1
01:00:00	45.7	40.2
00:00:00	45.9	41.1

DATE 12-11-96

TIME	LEVEL	FLOW
23:00:00	46.0	41.6
22:00:00	45.9	41.1
21:00:00	45.8	40.7
20:00:00	45.9	41.1
19:00:00	45.9	41.1
18:00:00	46.1	42.1
17:00:00	46.0	41.6
16:00:00	45.8	40.7
15:00:00	45.9	41.1
14:00:00	45.9	41.1
13:00:00	46.1	42.1
12:00:00	45.7	40.2
11:00:00	45.8	40.7
10:00:00	45.7	40.2
09:00:00	45.8	40.7
08:00:00	45.8	40.7
07:00:00	45.7	40.2
06:00:00	45.7	40.2
05:00:00	45.9	41.1
04:00:00	46.1	42.1
03:00:00	46.1	42.1
02:00:00	46.1	42.1
01:00:00	45.9	41.1
00:00:00	45.9	41.1

DATE 12-10-96

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	46.0	41.6
21:00:00	46.1	42.1
20:00:00	45.9	41.1
19:00:00	45.8	40.7
18:00:00	46.1	42.1
17:00:00	46.0	41.6
16:00:00	46.0	41.6
15:00:00	45.9	41.1
14:00:00	45.8	40.7
13:00:00	45.7	40.2
12:00:00	45.8	40.7
11:00:00	45.8	40.7
10:00:00	46.1	42.1
09:00:00	45.9	41.1
08:00:00	45.9	41.1
07:00:00	45.8	40.7
06:00:00	46.1	42.1
05:00:00	46.1	42.1
04:00:00	45.7	40.2
03:00:00	46.0	41.6
02:00:00	45.9	41.1
01:00:00	45.8	40.7
00:00:00	45.9	41.1

DATE 12-09-96

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	46.0	41.6
21:00:00	46.2	42.6
20:00:00	45.8	40.7
19:00:00	46.2	42.6
18:00:00	45.8	40.7
17:00:00	45.8	40.7
16:00:00	45.8	40.7
15:00:00	45.8	40.7
14:00:00	45.9	41.1
13:00:00	45.9	41.1
12:00:00	46.0	41.6
11:00:00	45.8	40.7
10:00:00	45.8	40.7
09:00:00	45.7	40.2
08:00:00	45.7	40.2
07:00:00	45.7	40.2
06:00:00	45.7	40.2
05:00:00	45.7	40.2
04:00:00	45.7	40.2
03:00:00	45.7	40.2
02:00:00	45.8	40.7
01:00:00	45.8	40.7
00:00:00	45.8	40.7

DATE 12-08-96

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.8	40.7
21:00:00	46.2	42.6
20:00:00	45.8	40.7
19:00:00	46.0	41.6
18:00:00	46.2	42.6
17:00:00	45.8	40.7
16:00:00	46.1	42.1
15:00:00	46.0	41.6
14:00:00	45.9	41.1
13:00:00	45.7	40.2
12:00:00	45.9	41.1
11:00:00	45.8	40.7
10:00:00	45.8	40.7
09:00:00	46.4	43.5
08:00:00	46.5	44.0
07:00:00	46.5	44.0
06:00:00	46.5	44.0
05:00:00	46.5	44.0
04:00:00	46.4	43.5
03:00:00	46.2	42.6
02:00:00	46.2	42.6
01:00:00	46.1	42.1
00:00:00	46.0	41.6

DATE 12-07-96

TIME	LEVEL	FLOW
23:00:00	46.1	42.1
22.00:00	45.9	41.1
21:00:00	46.0	41.6
20:00:00	46.2	42.6
19:00:00	45.9	41.1
18:00:00	45.8	40.7
17:00:00	46.9	46.0
16:00:00	46.2	42.6
15:00:00	45.9	41.1
14:00:00	45.8	40.7
13:00:00	46.0	41.6
12:00:00	46.1	42.1
11:00:00	45.9	41.1
10:00:00	45.7	40.2
09:00:00	45.7	40 2
08:00:00	45.8	40.7
07:00:00	45.7	40.2
06:00:00	45.7	40.2
05:00:00	45.7	40.2
04:00:00	45.7	40.2
03:00:00	45.7	40.2
02:00:00	45.7	40.2
01:00:00	45.7	40.2
00:00:00	45.8	40.7

DATE 12-06-96

TIME	LEVEL	FLOW
23:00:00	46.0	41.6
22:00:00	45.9	41.1
21:00:00	45.7	40.2
20:00:00	45.9	41.1
19:00:00	46.2	42.6
18:00:00	45.9	41.1
17:00:00	45.7	40.2
16:00:00	46.1	42.1
15:00:00	45.9	41.1
14:00:00	45.9	41.1
13:00:00	46.0	41.6
12:00:00	45.9	41.1
11:00:00	45.9	41.1
10:00:00	45.9	41.1
09:00:00	45.9	41.1
08:00:00	45.9	41.1
07:00:00	46.1	42.1
06:00:00	45.8	40.7
05:00:00	45.7	40.2
04:00:00	45.9	41.1
03:00:00	46.0	41.6
02:00:00	46.0	41.6
01:00:00	45.8	40.7
00:00:00	45.9	41.1

DATE 12-05-96

TIME	LEVEL	FLOW
23:00:00	46.0	41.6
22:00:00	45.8	40.7
21:00:00	45.9	41.1
20:00:00	46.0	41.6
19:00:00	45.9	41.1
18:00:00	46.1	42.1
17:00:00	45.8	40.7
16:00:00	45.9	41.1
15:00:00	46.9	46.0
14:00:00	46.2	42.6
13:00:00	45.8	40.7
12:00:00	45.8	40.7
11:00:00	45.9	41.1
10:00:00	45.9	41.1
09:00:00	46.1	42.1
08:00:00	45.7	40.2
07:00:00	45.9	41.1
06:00:00	46.0	41.6
05:00:00	46.2	42.6
04:00:00	46.1	42.1
03:00:00	45.7	40.2
02:00:00	45.9	41.1
01:00:00	45.9	41.1
00:00:00	45.9	41.1

DATE 12-04-96

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	46.2	42.6
21:00:00	46.0	41.6
20:00:00	45.9	41.1
19:00:00	45.9	41.1
18:00:00	46.2	42.6
17:00:00	46.0	41.6
16:00:00	45.9	41.1
15:00:00	46.1	42.1
14:00:00	46.0	41.6
13:00:00	45.9	41.1
12:00:00	46.1	42.1
11:00:00	46.1	42.1
10:00:00	46.1	42.1
09:00:00	45.7	40.2
08:00:00	45.7	40.2
07:00:00	45.7	40.2
06:00:00	45.9	41.1
05:00:00	45.8	40.7
04:00:00	45.7	40.2
03:00:00	45.7	40.2
02:00:00	45.8	40.7
01:00:00	45.9	41.1
00:00:00	46.0	41.6

DATE 12-03-96

TIME	LEVEL	FLOW
23:00:00	46.0	41 6
22:00:00	45.9	41.1
21:00:00	45.8	40.7
20:00:00	45.7	40.2
19:00:00	45.7	40.2
18:00:00	45.8	40.7
17:00:00	45.9	41.1
16:00:00	46.1	42.1
15:00:00	46.1	42.1
14:00:00	46.0	41.6
13:00:00	45.9	41.1
12:00:00	45.9	41.1
11:00:00	45.9	41.1
10:00:00	46.1	42.1
09:00:00	46.1	42.1
08:00:00	46.0	41.6
07:00:00	45.9	41.1
06:00:00	45.7	40.2
05:00:00	45.7	40.2
04:00:00	45.9	41.1
03:00:00	45.8	40.7
02:00:00	45.9	41.1
01:00:00	45.8	40.7
00:00:00	46.0	41.6

DATE 12-02-96

TIME	LEVEL	FLOW
23:00:00	46.0	41.6
22:00:00	46.2	42.6
21:00:00	46.1	42.1
20:00:00	46.0	41.6
19:00:00	45.8	40.7
18:00:00	45.9	41.1
17:00:00	46.1	42.1
16:00:00	46.1	42.1
15:00:00	45.8	40.7
14:00:00	45.8	40.7
13:00:00	45.9	41.1
12:00:00	45.9	41.1
11:00:00	45.9	41.1
10:00:00	45.8	40.7
09:00:00	45.8	40.7
08:00:00	45.8	40.7
07:00:00	46.0	41.6
06:00:00	46.0	41.6
05:00:00	45.9	41.1
04:00:00	45.8	40.7
03:00:00	45.7	40.2
02:00:00	45.9	41.1
01:00:00	45.7	40.2
00:00:00	45.8	40.7

DATE 12-01-96

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.8	40.7
21:00:00	45.8	40.7
20:00:00	45.9	41.1
19:00:00	46.0	41.6
18:00:00	45.8	40.7
17:00:00	45.8	40.7
16:00:00	46.1	42.1
15:00:00	46.0	41.6
14:00:00	45.7	40.2
13:00:00	45.8	40.7
12:00:00	45.8	40.7
11:00:00	46.0	41.6
10:00:00	46.1	42.1
09:00:00	45.9	41.1
08:00:00	45.8	40.7
07:00:00	45.7	40.2
06:00:00	45.9	41.1
05:00:00	45.8	40.7
04:00:00	45.9	41.1
03:00:00	45.9	41.1
02:00:00	46.2	42.6
01:00:00	46.0	41.6
00:00:00	45.9	41.1

DATE 11-30-96

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	45.9	41.1
21:00:00	46.0	41.6
20:00:00	46.1	42.1
19:00:00	46.0	41.6
18:00:00	45.8	40.7
17:00:00	45.8	40.7
16:00:00	45.7	40.2
15:00:00	45.9	41.1
14:00:00	45.8	40.7
13:00:00	45.8	40.7
12:00:00	45.9	41.1
11:00:00	45.8	40.7
10:00:00	45.7	40.2
09:00:00	45.8	40.7
08:00:00	45.7	40.2
07:00:00	45.7	40.2
06:00:00	45.7	40.2
05:00:00	45.9	41.1
04:00:00	45.9	41.1
03:00:00	45.7	40.2
02:00:00	46.1	42.1
01:00:00	45.9	41.1
00:00:00	45.8	40.7

DATE 11-29-96

TIME	LEVEL	FLOW
23:00:00	46.0	41.6
22:00:00	45.7	40.2
21:00:00	45.7	40.2
20:00:00	45.8	40.7
19:00:00	45.9	41.1
18:00:00	46.0	41.6
17:00:00	46.0	41.6
16:00:00	45.7	40.2
15:00:00	45.9	41.1
14:00:00	45.8	40.7
13:00:00	46.2	42.6
12:00:00	46.0	41.6
11:00:00	45.7	40.2
10:00:00	45.7	40.2
09:00:00	45.8	40.7
08:00:00	45.9	41.1
07:00:00	45.9	41.1
06:00:00	45.8	40.7
05:00:00	45.9	41.1
04:00:00	45.9	41.1
03:00:00	46.1	42.1
02:00:00	46.0	41.6
01:00:00	46.2	42.6
00:00:00	46.1	42.1

DATE 11-28-96

TIME	LEVEL	FLOW
23:00:00	46.2	42.6
22:00:00	45.9	41.1
21:00:00	45.9	41.1
20:00:00	45.8	40.7
19:00:00	45.8	40.7
18:00:00	46.0	41.6
17:00:00	46.1	42.1
16:00:00	46.1	42.1
15:00:00	46.1	42.1
14:00:00	46.0	41.6
13:00:00	45.9	41.1
12:00:00	46.0	41.6
11:00:00	45.7	40.2
10:00:00	45.8	40.7
09:00:00	45.7	40.2
08:00:00	45.9	41.1
07:00:00	45.8	40.7
06:00:00	45.9	41.1
05:00:00	45.8	40.7
04:00:00	45.9	41.1
03:00:00	45.9	41.1
02:00:00	46.1	42.1
01:00:00	46.0	41.6
00:00:00	46.0	41.6

DATE 11-27-96

TIME	LEVEL	FLOW
23:00:00	46.1	42.1
22:00:00	46.0	41.6
21:00:00	46.0	41.6
20:00:00	45.9	41.1
19:00:00	45.7	40.2
18:00:00	46.1	42.1
17:00:00	45.8	40.7
16:00:00	45.9	41.1
15:00:00	45.9	41.1
14:00:00	46.0	41.6
13:00:00	46.1	42.1
12:00:00	45.9	41.1
11:00:00	45.9	41.1
10:00:00	46.2	42.6
09:00:00	45.7	40.2
08:00:00	45.9	41.1
07:00:00	45.8	40.7
06:00:00	46.1	42.1
05:00:00	46.1	42.1
04:00:00	45.9	41.1
03:00:00	45.9	41.1
02:00:00	46.1	42.1
01:00:00	46.0	41.6
00:00:00	45.8	40.7

DATE 11-26-96

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	46.0	41.6
21:00:00	45.9	41.1
20:00:00	46.1	42.1
19:00:00	45.7	40.2
18:00:00	45.8	40.7
17:00:00	45.7	40.2
16:00:00	45.8	40.7
15:00:00	45.9	41.1
14:00:00	45.9	41.1
13:00:00	45.9	41.1
12:00:00	45.8	40.7
11:00:00	45.9	41.1
10:00:00	45.9	41.1
09:00:00	46.2	42.6
08:00:00	45.8	40.7
07:00:00	45.7	40.2
06:00:00	45.8	40.7
05:00:00	45.8	40.7
04:00:00	45.8	40.7
03:00:00	45.9	41.1
02:00:00	46.1	42.1
01:00:00	46.1	42.1
00:00:00	46.1	42.1

DATE 11-25-96

TIME	LEVEL	FLOW
23:00:00	46.1	42.1
22:00:00	45.8	40.7
21:00:00	45.8	40.7
20:00:00	45.9	41.1
19:00:00	45.9	41.1
18:00:00	46.2	42.6
17:00:00	45.9	41.1
16:00:00	46.2	42.6
15:00:00	46.0	41.6
14:00:00	45.9	41.1
13:00:00	45.9	41.1
12:00:00	46.0	41.6
11:00:00	45.9	41.1
10:00:00	45.9	41.1
09:00:00	46.0	41.6
08:00:00	46.0	41.6
07:00:00	46.1	42.1
06:00:00	46.1	42.1
05:00:00	45.9	41.1
04:00:00	45.8	40.7
03:00:00	46.0	41.6
02:00:00	45.9	41.1
01:00:00	45.9	41.1
00:00:00	45.9	41.1

DATE 11-24-96

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.9	41.1
21:00.00	46.0	41.6
20:00:00	45.9	41.1
19:00:00	46.0	41.6
18:00:00	45.9	41 1
17:00:00	45.8	40.7
16:00:00	45.7	40.2
15:00:00	45.8	40.7
14:00:00	45.7	40.2
13:00:00	45.8	40.7
12:00:00	45.7	40.2
11:00:00	45.8	40.7
10:00:00	45.9	41.1
09:00:00	45.8	40 7
08:00:00	45.8	40.7
07:00:00	45.7	40.2
06:00:00	45.8	40.7
05:00:00	45.9	41.1
04:00:00	46.0	41.6
03:00:00	46.0	41.6
02:00:00	45.9	41 1
01:00:00	45.8	40.7
00:00:00	45.7	40.2

DATE 11-23-96

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	46.1	42.1
21:00:00	45.9	41 1
20:00:00	45.7	40.2
19:00:00	46.0	41.6
18:00:00	45.9	41.1
17:00:00	45.8	40.7
16:00:00	45.9	41.1
15:00:00	46.1	42.1
14:00:00	46.1	42.1
13:00:00	45.9	41.1
12:00:00	45.9	41 1
11:00:00	46.0	41.6
10:00:00	45.9	41.1
09:00:00	46.0	41.6
08:00:00	46.0	41.6
07:00:00	45.9	41.1
06:00:00	46.0	41.6
05:00:00	45.8	40.7
04:00:00	46.0	41.6
03:00:00	45.7	40.2
02:00:00	45.9	41.1
01:00:00	46.1	42.1
00:00:00	46.0	41.6

DATE 11-22-96

TIME	LEVEL	FLOW
23:00:00	46.0	41.6
22:00:00	45.9	41.1
21:00:00	45.9	41.1
20:00:00	46.0	41.6
19:00:00	45.9	41.1
18:00:00	46.0	41.6
17:00:00	45.9	41.1
16:00:00	46.5	44.0
15:00:00	45.9	41.1
14:00:00	45.8	40.7
13:00:00	46.1	42.1
12:00:00	46.1	42.1
11:00:00	45.8	40.7
10:00:00	45.8	40.7
09:00:00	46.0	41.6
08:00:00	45.8	40.7
07:00:00	45.9	41.1
06:00:00	45.9	41.1
05:00:00	46.0	41.6
04:00:00	46.0	41.6
03:00:00	46.3	43.0
02:00:00	45.9	41.1
01:00:00	46.0	41.6
00:00:00	46.2	42.6

DATE 11-21-96

TIME	LEVEL	FLOW
23:00:00	46.2	42.6
22:00:00	45.8	40.7
21:00:00	45.9	41.1
20:00:00	46.0	41.6
19:00:00	45.8	40.7
18:00:00	45.7	40.2
17:00:00	45.8	40.7
16:00:00	45.7	40.2
15:00:00	45.7	40.2
14:00:00	45.7	40.2
13:00:00	45.9	41.1
12:00:00	46.1	42.1
11:00:00	46.2	42.6
10:00:00	46.1	42.1
09:00:00	46.0	41.6
08:00:00	46.2	42.6
07:00:00	46.1	42.1
06:00:00	46.0	41.6
05:00:00	45.9	41.1
04:00:00	45.7	40.2
03:00:00	46.2	42.6
02:00:00	46.0	41.6
01:00:00	45.9	41.1
00:00:00	46.0	41.6

DATE 11-20-96

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.9	41.1
21:00:00	45.8	40.7
20:00:00	46.0	41.6
19:00:00	46.2	42.6
18:00:00	45.9	41.1
17:00:00	45.8	40.7
16:00:00	45.9	41.1
15:00:00	45.8	40.7
14:00:00	45.8	40.7
13:00:00	45.8	40.7
12:00:00	45.7	40.2
11:00:00	45.8	40.7
10:00:00	45.9	41.1
09:00:00	45.9	41.1
08:00:00	45.7	40.2
07:00:00	46.2	42.6
06:00:00	46.0	41.6
05:00:00	45.9	41.1
04:00:00	46.0	41.6
03:00:00	45.9	41.1
02:00:00	46.1	42.1
01:00:00	46.0	41.6
00:00:00	46.2	42.6

DATE 11-19-96

TIME	LEVEL	FLOW
23:00:00	46.0	41.6
22:00:00	46.2	42.6
21:00:00	45.9	41.1
20:00:00	45.9	41.1
19:00:00	45.9	41.1
18:00:00	45.9	41.1
17:00:00	45.8	40.7
16:00:00	45.9	41.1
15:00:00	46.1	42.1
14:00:00	45.7	40.2
13:00:00	45.9	41.1
12:00:00	46.1	42.1
11:00:00	45.9	41.1
10:00:00	45.8	40.7
09:00:00	45.8	40.7
08:00:00	46.0	41.6
07:00:00	46.0	41.6
06:00:00	46.1	42.1
05:00:00	46.0	41.6
04:00:00	45.9	41.1
03:00:00	45.9	41.1
02:00:00	46.1	42.1
01:00:00	45.9	41.1
00:00:00	46.0	41.6

DATE 11-18-96

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	46.0	41.6
21:00:00	47.0	46.5
20:00:00	46.3	43.0
19:00:00	45.9	41.1
18:00:00	45.8	40.7
17:00:00	45.9	41.1
16:00:00	45.9	41.1
15:00:00	46.0	41.6
14:00:00	45.8	40.7
13:00:00	46.0	41.6
12:00:00	45.8	40.7
11:00:00	45.9	41.1
10:00:00	46.1	42.1
09:00:00	46.0	41.6
08:00:00	45.9	41.1
07:00:00	46.0	41.6
06:00:00	46.2	42.6
05:00:00	46.2	42.6
04:00:00	46.1	42.1
03:00:00	46.1	42.1
02:00:00	46.0	41.6
01:00:00	46.0	41.6
00:00:00	45.8	40.7

DATE 11-17-96

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.9	41.1
21:00:00	46.2	42.6
20:00:00	46.1	42.1
19:00:00	45.9	41.1
18:00:00	45.9	41.1
17:00:00	45.9	41.1
16:00:00	46.1	42.1
15:00:00	46.0	41.6
14:00:00	45.9	41.1
13:00:00	45.8	40.7
12:00:00	45.7	40.2
11:00:00	45.7	40.2
10:00:00	45.8	40.7
09:00:00	46.0	41.6
08:00:00	46.0	41.6
07:00:00	45.8	40.7
06:00:00	45.8	40.7
05:00:00	45.9	41.1
04:00:00	45.9	41.1
03:00:00	45.9	41.1
02:00:00	46.0	41.6
01:00:00	46.2	42.6
00:00:00	46.0	41.6

DATE 11-16-96

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	45.9	41.1
21:00:00	45.8	40.7
20:00:00	45.8	40.7
19:00:00	45.7	40.2
18:00:00	45.9	41.1
17:00:00	45.8	40.7
16:00:00	45.8	40.7
15:00:00	45.7	40.2
14:00:00	45.8	40.7
13:00:00	45.9	41.1
12:00:00	46.0	41.6
11:00:00	45.9	41.1
10:00:00	45.8	40.7
09:00:00	45.9	41.1
08:00:00	45.7	40.2
07:00:00	45.8	40.7
06:00:00	45.8	40.7
05:00:00	45.7	40.2
04:00:00	45.8	40.7
03:00:00	45.9	41.1
02:00:00	46.0	41.6
01:00:00	46.0	41.6
00:00:00	45.9	41.1

DATE 11-15-96

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	45.9	41.1
21:00:00	45.9	41.1
20:00:00	45.9	41.1
19:00:00	45.9	41.1
18:00:00	45.9	41.1
17:00:00	46.1	42.1
16:00:00	46.0	41.6
15:00:00	46.1	42.1
14:00:00	46.1	42.1
13:00:00	46.0	41.6
12:00:00	46.0	41.6
11:00:00	46.0	41.6
10:00:00	46.2	42.6
09:00:00	45.9	41.1
08:00:00	46.0	41.6
07:00:00	45.9	41.1
06:00:00	46.1	42.1
05:00:00	46.0	41.6
04:00:00	46.0	41.6
03:00:00	46.0	41.6
02:00:00	45.9	41.1
01:00:00	45.8	40.7
00:00:00	45.8	40.7

DATE 11-14-96

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.9	41.1
21:00:00	45.8	40.7
20:00:00	45.9	41.1
19:00:00	46.0	41.6
18:00:00	46.1	42.1
17:00:00	46.0	41.6
16:00:00	45.9	41.1
15:00:00	45.9	41.1
14:00:00	45.8	40.7
13:00:00	45.9	41.1
12:00:00	45.8	40.7
11:00:00	45.7	40.2
10:00:00	45.9	41.1
09:00:00	45.9	41.1
08:00:00	45.9	41.1
07:00:00	46.1	42.1
06:00:00	46.0	41.6
05:00:00	46.0	41.6
04:00:00	46.1	42.1
03:00:00	46.0	41.6
02:00:00	46.0	41.6
01:00:00	45.9	41.1
00:00:00	45.9	41.1

DATE 11-13-96

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	46.1	42.1
21:00:00	45.9	41.1
20:00:00	45.9	41.1
19:00:00	45.9	41.1
18:00:00	45.9	41.1
17:00:00	46.0	41.6
16:00:00	46.1	42.1
15:00:00	46.0	41.6
14:00:00	46.0	41.6
13:00:00	45.9	41.1
12:00:00	45.8	40.7
11:00:00	45.9	41.1
10:00:00	45.9	41.1
09:00:00	45.8	40.7
08:00:00	46.1	42.1
07:00:00	46.0	41.6
06:00:00	46.0	41.6
05:00:00	46.0	41.6
04:00:00	45.9	41.1
03:00:00	45.8	40.7
02:00:00	45.9	41.1
01:00:00	45.9	41.1
00:00:00	45.9	41.1

DATE 11-12-96

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	45.8	40.7
21:00:00	45.8	40.7
20:00:00	45.8	40.7
19:00:00	45.7	40.2
18:00:00	45.8	40.7
17:00:00	45.9	41.1
16:00:00	45.9	41.1
15:00:00	46.0	41.6
14:00:00	46.1	42.1
13:00:00	46.0	41.6
12:00:00	45.9	41.1
11:00:00	46.0	41.6
10:00:00	46.0	41.6
09:00:00	46.0	41.6
08:00:00	46.1	42.1
07:00:00	46.2	42.6
06:00:00	45.8	40.7
05:00:00	45.9	41.1
04:00:00	45.7	40.2
03:00:00	46.0	41.6
02:00:00	46.0	41.6
01:00:00	45.9	41.1
00:00:00	45.8	40.7

DATE 11-11-96

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.8	40.7
21:00:00	45.7	40.2
20:00:00	45.7	40.2
19:00:00	46.0	41.6
18:00:00	46.1	42.1
17:00:00	45.9	41.1
16:00:00	45.9	41.1
15:00:00	45.9	41.1
14:00:00	45.8	40.7
13:00:00	45.9	41.1
12:00:00	45.9	41.1
11:00:00	46.0	41.6
10:00:00	46.0	41.6
09:00:00	46.0	41.6
08:00:00	46.2	42.6
07:00:00	45.8	40.7
06:00:00	45.8	40.7
05:00:00	45.9	41.1
04:00:00	46.0	41.6
03:00:00	46.0	41.6
02:00:00	46.0	41.6
01:00:00	45.9	41.1
00:00:00	45.7	40.2

DATE 11-10-96

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.8	40.7
21:00:00	45.9	41.1
20:00:00	45.9	41.1
19:00:00	45.8	40.7
18:00:00	45.7	40.2
17:00:00	45.7	40.2
16:00:00	45.7	40.2
15:00:00	45.9	41.1
14:00:00	45.8	40.7
13:00:00	46.1	42.1
12:00:00	46.1	42.1
11:00:00	46.1	42.1
10:00:00	45.9	41.1
09:00:00	46.0	41 6
08:00:00	45.9	41.1
07:00:00	45.7	40.2
06:00:00	45.8	40.7
05:00:00	45.8	40.7
04:00:00	45.9	41.1
03:00:00	45.8	40.7
02:00:00	45.8	40.7
01:00:00	46.1	42.1
00:00:00	46.2	42.6

DATE 11-09-96

TIME	LEVEL	FLOW
23:00:00	46.0	41.6
22:00:00	46.0	41.6
21:00:00	46.0	41.6
20:00:00	45.9	41.1
19:00:00	45.8	40.7
18:00:00	46.0	41.6
17:00:00	45.8	40.7
16:00:00	45.7	40.2
15:00:00	45.7	40.2
14:00:00	45.9	41.1
13:00:00	46.1	42.1
12:00:00	45.9	41.1
11:00:00	45.9	41.1
10:00:00	46.0	41.6
09:00:00	46.0	41.6
08:00:00	46.0	41.6
07:00:00	45.9	41.1
06:00:00	46.1	42.1
05:00:00	46.0	41.6
04:00:00	46.1	42.1
03:00:00	45.9	41.1
02:00:00	45.9	41.1
01:00:00	45.9	41.1
00:00:00	46.0	41.6

DATE 11-08-96

TIME	LEVEL	FLOW
23:00:00	46.0	41.6
22:00:00	45.9	41.1
21:00:00	45.8	40.7
20:00:00	45.8	40.7
19:00:00	45.8	40.7
18:00:00	45.9	41.1
17:00:00	45.9	41.1
16:00:00	46.0	41.6
15:00:00	46.0	41.6
14:00:00	46.0	41.6
13:00:00	46.1	42.1
12:00:00	46.0	41.6
11:00:00	45.9	41.1
10:00:00	45.9	41.1
09:00:00	46.0	41.6
08:00:00	45.9	41.1
07:00:00	46.0	41.6
06:00:00	45.9	41.1
05:00:00	45.9	41.1
04:00:00	46.0	41.6
03:00:00	46.1	42.1
02:00:00	45.9	41.1
01:00:00	45.9	41.1
00:00:00	46.0	41.6

DATE 11-07-96

TIME	LEVEL	FLOW
23:00:00	46.1	42.1
22:00:00	45.9	41.1
21:00:00	45.9	41.1
20:00:00	45.8	40.7
19:00:00	45.8	40.7
18:00:00	45.8	40.7
17:00:00	45.7	40.2
16:00:00	45.7	40.2
15:00:00	45.8	40.7
14:00:00	45.9	41.1
13:00:00	46.0	41.6
12:00:00	46.0	41.6
11:00:00	46.0	41.6
10:00:00	46.1	42.1
09:00:00	46.0	41.6
08:00:00	45.9	41.1
07:00:00	46.0	41.6
06:00:00	45.8	40.7
05:00:00	45.8	40.7
04:00:00	45.8	40.7
03:00:00	45.8	40.7
02:00:00	45.9	41.1
01:00:00	46.0	41.6
00:00:00	46.1	42.1

DATE 11-06-96

TIME	LEVEL	FLOW
23:00:00	46.1	42.1
22:00:00	46.0	41.6
21:00:00	45.8	40.7
20:00:00	45.8	40.7
19:00:00	45.9	41.1
18:00:00	46.0	41.6
17:00:00	45.8	40.7
16:00:00	45.8	40.7
15:00:00	46.1	42.1
14:00:00	46.2	42.6
13:00:00	46.0	41.6
12:00:00	45.8	40.7
11:00:00	45.7	40.2
10:00:00	45.7	40.2
09:00:00	45.7	40.2
08:00:00	45.8	40.7
07:00:00	45.7	40.2
06:00:00	45.9	41.1
05:00:00	45.9	41.1
04:00:00	45.9	41.1
03:00:00	45.8	40.7
02:00:00	45.8	40.7
01:00:00	45.7	40.2
00:00:00	45.8	40.7

DATE 11-05-96

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.8	40.7
21:00:00	46.1	42.1
20:00:00	46.2	42.6
19:00:00	45.8	40.7
18:00:00	45.9	41.1
17:00:00	45.9	41.1
16:00:00	45.9	41.1
15:00:00	45.8	40.7
14:00:00	45.8	40.7
13:00:00	45.8	40.7
12:00:00	45.9	41.1
11:00:00	45.9	41.1
10:00:00	45.9	41.1
09:00:00	46.0	41.6
08:00:00	45.8	40.7
07:00:00	45.8	40.7
06:00:00	45.8	40.7
05:00:00	45.9	41.1
04:00:00	46.2	42.6
03:00:00	46.0	41.6
02:00:00	45.8	40.7
01:00:00	45.9	41.1
00:00:00	45.9	41.1

DATE 11-04-96

TIME	LEVEL	FLOW
23:00:00	46.0	41.6
22:00:00	46.1	42.1
21:00:00	45.7	40.2
20:00:00	45.8	40.7
19:00:00	46.2	42.6
18:00:00	46.0	41.6
17:00:00	46.3	43.0
16:00:00	46.0	41.6
15:00:00	45.9	41.1
14:00:00	46.0	41.6
13:00:00	46.0	41.6
12:00:00	46.1	42.1
11:00:00	46.1	42.1
10:00:00	46.1	42.1
09:00:00	45.9	41.1
08:00:00	45.8	40.7
07:00:00	45.9	41.1
06:00:00	46.0	41.6
05:00:00	45.8	40.7
04:00:00	45.8	40.7
03:00:00	45.8	40.7
02:00:00	46.0	41.6
01:00:00	45.8	40.7
00:00:00	45.7	40.2

DATE 11-03-96

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.9	41.1
21:00:00	45.8	40.7
20:00:00	45.8	40.7
19:00:00	45.7	40.2
18:00:00	45.7	40.2
17:00:00	45.9	41.1
16:00:00	46.0	41.6
15:00:00	46.2	42.6
14:00:00	46.0	41.6
13:00:00	45.7	40.2
12:00:00	45.7	40.2
11:00:00	45.8	40.7
10:00:00	46.0	41.6
09:00:00	45.9	41.1
08:00:00	45.7	40.2
07:00:00	45.7	40.2
06:00:00	45.7	40.2
05:00:00	45.7	40.2
04:00:00	45.7	40.2
03:00:00	45.9	41.1
02:00:00	46.1	42.1
01:00:00	46.1	42.1
00:00:00	46.1	42.1

DATE 11-02-96

TIME	LEVEL	FLOW
23:00:00	46.0	41.6
22:00:00	46.0	41.6
21:00:00	45.8	40.7
20:00:00	45.7	40.2
19:00:00	46.1	42.1
18:00:00	45.8	40.7
17:00:00	45.8	40.7
16:00:00	46.0	41.6
15:00:00	46.1	42.1
14:00:00	46.0	41.6
13:00:00	46.1	42.1
12:00:00	45.7	40.2
11:00:00	45.8	40.7
10:00:00	45.7	40.2
09:00:00	45.7	40.2
08:00:00	45.7	40.2
07:00:00	46.2	42.6
06:00:00	45.7	40.2
05:00:00	45.7	40.2
04:00:00	45.7	40.2
03:00:00	46.7	45.0
02:00:00	45.9	41.1
01:00:00	45.7	40.2
00:00:00	45.7	40.2

DATE 11-01-96

TIME		FLOW
23:00:00	46.2	42.6
22:00:00	45.8	40.7
21:00:00	45.7	40.2
20:00:00	45.7	40.2
19:00:00	45.7	40.2
18:00:00	45.7	40.2
17:00:00	45.7	40.2
16:00:00	45.7	40.2
15:00:00	45.7	40.2
14:00:00	45.7	40.2
13:00:00	45.7	40.2
12:00:00	45.7	40.2
11:00:00	45.8	40.7
10:00:00	46.1	42.1
09:00:00	46.0	41.6
08:00:00	45.9	41.1
07:00:00	46.1	42.1
06:00:00	46.1	42.1
05:00:00	46.1	42.1
04:00:00	46.1	42.1
03:00:00	46.2	42.6
02:00:00	46.0	41.6
01:00:00	45.8	40.7
00:00:00	45.7	40.2

State of Idaho
DEPARTMENT OF WATER RESOURCES
1301 North Orchard Street, Statehouse Mail, Boise, Idaho 83720-9000
Phone: (208) 327-7900 FAX: (208) 327-7866

PHILIP E. BATT
GOVERNOR

KARL J. DREHER
DIRECTOR

December 13, 1996

Commercial Energy Mgmt, Inc.
c/o Maher F. Wissa
P.O. Box 4518
Pocatello, ID 83205

RE: PERMIT NO. 29-07699 - Portneuf River

Dear Mr. Wissa:

I have reviewed your letter dated December 9, 1996 in which you seek the department's approval to install an adjustable arm for the closing position limit switch on the water by-pass facility at your hydro-electric project near Lava Hot Springs, Idaho. The purpose of the adjustable arm installation is a more acceptable alternative as compared with disabling the by-pass valve during the non-irrigation season.

If the adjustable arm installation allows you to continue to comply with the intent of Conclusion of Law No. 12 in the department's permit approval order for the project, the department does not object to the installation.

If you have questions, please feel free to contact me or the department.

Sincerely,

L. Glen Saxton

L. GLEN SAXTON, Chief
Water Allocation Bureau

c: IDWR - E. Region

CEM COMMERCIAL ENERGY MGMT, INC.
P.O. Box 4518 • Pocatello, Idaho 83205 • Telephone (208) 237-3563 • Fax (208) 237-3563

December 09, 1996
Ref: CEM/1078

RECEIVED
DEC 11 1996
Department of Water Resources

Mr. L. GLEN SAXTON
Chief, Water Allocation Bureau
Idaho Department of Water Resources
1301 North Orchard Street
Boise, ID 83720-9000

Subject: Portneuf River Hydroelectric Plant
Lava Hot Springs, Idaho
Permit No. 29-7699

Dear Mr. Saxton:

Thank you for your letter dated October 18, 1996.

As per your request we have contacted the manufacture's representatives of the bypass valve and hydraulic control unit.

After evaluating the existing operational condition, their recommendation is to install an adjustable arm for the closing position limit switch. This will enable us to adjust the valve opening position during the winter months to accommodate the low flow.

We would appreciate receiving your approval on this solution in order for us to proceed with the field work.

Thank you very much for your cooperation in resolving this matter.

Sincerely,

Maher F. Wissa
President

CEM COMMERCIAL ENERGY MGMT, INC.
P.O. Box 4518 • Pocatello, Idaho 83205 • Telephone (208) 237-3563 • Fax (208) 237-3563

October 26, 1996
Ref: CEM/1076

Mr. L. GLEN SAXTON
Chief, Water Allocation Bureau
State of Idaho, Department of Water Resources
1301 North Orchard Street
Statehouse Mail
Boise, ID 83720-9000

RECEIVED
NOV 2 9 1996
Department of Water Resources

Subject: Portneuf River Hydroelectric Project
Lava Hot Springs, Idaho
FERC Project No. 7447-002
Permit No. 29-7699

Dear Mr. Saxton:

Attached please find copies of the bypass channel flow records for the period from September 1 to October 31, 1996.

Sincerely,

Maher F. Wissa
President

Attachments: 31 sheets

DATE 10-31-96

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	46.0	41.6
21:00:00	45.8	40.7
20:00:00	45.8	40.7
19:00:00	46.0	41.6
18:00:00	46.1	42.1
17:00:00	46.1	42.1
16:00:00	46.0	41.6
15:00:00	45.8	40.7
14:00:00	45.8	40.7
13:00:00	45.8	40.7
12:00:00	45.8	40.7
11:00:00	46.2	42.6
10:00:00	46.0	41.6
09:00:00	45.9	41.1
08:00:00	45.9	41.1
07:00:00	45.9	41.1
06:00:00	45.8	40.7
05:00:00	45.7	40.2
04:00:00	45.8	40.7
03:00:00	45.7	40.2
02:00:00	45.8	40.7
01:00:00	45.9	41.1
00:00:00	45.8	40.7

DATE 10-30-96

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.8	40.7
21:00:00	45.8	40.7
20:00:00	45.9	41.1
19:00:00	45.9	41.1
18:00:00	45.7	40.2
17:00:00	45.7	40.2
16:00:00	45.7	40.2
15:00:00	45.7	40.2
14:00:00	45.7	40.2
13:00:00	45.7	40.2
12:00:00	45.8	40.7
11:00:00	45.8	40.7
10:00:00	45.9	41.1
09:00:00	45.9	41.1
08:00:00	45.8	40.7
07:00:00	46.0	41.6
06:00:00	45.9	41.1
05:00:00	45.8	40.7
04:00:00	45.9	41.1
03:00:00	46.2	42.6
02:00:00	46.1	42.1
01:00:00	45.8	40.7
00:00:00	46.0	41.6

DATE 10-29-96

TIME	LEVEL	FLOW
23:00:00	46.0	41.6
22:00:00	46.1	42.1
21:00:00	45.9	41.1
20:00:00	45.8	40.7
19:00:00	45.9	41.1
18:00:00	45.8	40.7
17:00:00	45.8	40.7
16:00:00	45.7	40.2
15:00:00	45.8	40.7
14:00:00	45.8	40.7
13:00:00	45.7	40.2
12:00:00	45.7	40.2
11:00:00	45.8	40.7
10:00:00	45.7	40.2
09:00:00	45.7	40.2
08:00:00	46.0	41.6
07:00:00	45.8	40.7
06:00:00	45.8	40.7
05:00:00	45.9	41.1
04:00:00	46.1	42.1
03:00:00	46.2	42.6
02:00:00	45.9	41.1
01:00:00	45.9	41.1
00:00:00	45.8	40.7

DATE 10-28-96

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.8	40.7
21:00:00	45.8	40.7
20:00:00	45.8	40.7
19:00:00	45.8	40.7
18:00:00	45.9	41.1
17:00:00	45.8	40.7
16:00:00	45.9	41.1
15:00:00	45.9	41.1
14:00:00	46.0	41.6
13:00:00	46.2	42.6
12:00:00	46.1	42.1
11:00:00	46.1	42.1
10:00:00	46.0	41.6
09:00:00	45.8	40.7
08:00:00	45.9	41.1
07:00:00	46.1	42.1
06:00:00	46.0	41.6
05:00:00	46.1	42.1
04:00:00	46.1	42.1
03:00:00	46.0	41.6
02:00:00	45.8	40.7
01:00:00	45.9	41.1
00:00:00	45.9	41.1

DATE 10-27-96

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	46.1	42.1
21:00:00	46.0	41.6
20:00:00	46.1	42.1
19:00:00	45.8	40.7
18:00:00	46.0	41.6
17:00:00	45.9	41.1
16:00:00	45.9	41.1
15:00:00	45.9	41.1
14:00:00	46.0	41.6
13:00:00	46.1	42.1
12:00:00	45.7	40.2
11:00:00	45.8	40.7
10:00:00	45.9	41.1
09:00:00	46.1	42.1
08:00:00	45.9	41.1
07:00:00	46.0	41.6
06:00:00	46.0	41.6
05:00:00	46.0	41.6
04:00:00	46.0	41.6
03:00:00	46.0	41.6
02:00:00	46.0	41.6
01:00:00	46.0	41.6
00:00:00	46.0	41.6

DATE 10-26-96

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	45.8	40.7
21:00:00	45.8	40.7
20:00:00	46.0	41.6
19:00:00	45.8	40.7
18:00:00	45.8	40.7
17:00:00	45.8	40.7
16:00:00	46.0	41.6
15:00:00	45.8	40.7
14:00:00	45.8	40.7
13:00:00	45.8	40.7
12:00:00	45.9	41.1
11:00:00	45.9	41.1
10:00:00	46.1	42.1
09:00:00	45.9	41.1
08:00:00	45.8	40.7
07:00:00	45.8	40.7
06:00:00	45.8	40.7
05:00:00	45.9	41.1
04:00:00	45.8	40.7
03:00:00	45.8	40.7
02:00:00	45.9	41.1
01:00:00	46.0	41.6
00:00:00	45.9	41.1

DATE 10-25-96

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.8	40.7
21:00:00	45.8	40.7
20:00:00	46.2	42.6
19:00:00	45.9	41.1
18:00:00	46.1	42.1
17:00:00	46.0	41.6
16:00:00	46.2	42.6
15:00:00	45.8	40.7
14:00:00	45.9	41.1
13:00:00	45.8	40.7
12:00:00	46.2	42.6
11:00:00	46.3	43.0
10:00:00	45.8	40.7
09:00:00	45.8	40.7
08:00:00	45.8	40.7
07:00:00	46.0	41.6
06:00:00	46.0	41.6
05:00:00	46.1	42.1
04:00:00	46.1	42.1
03:00:00	46.1	42.1
02:00:00	45.9	41.1
01:00:00	45.9	41.1
00:00:00	45.8	40.7

DATE 10-24-96

TIME	LEVEL	FLOW
23:00:00	46.0	41.6
22:00:00	46.0	41.6
21:00:00	45.8	40.7
20:00:00	45.8	40.7
19:00:00	45.9	41.1
18:00:00	45.8	40.7
17:00:00	45.8	40.7
16:00:00	45.8	40.7
15:00:00	45.9	41.1
14:00:00	45.9	41.1
13:00:00	46.0	41.6
12:00:00	45.9	41.1
11:00:00	46.0	41.6
10:00:00	46.0	41.6
09:00:00	45.9	41.1
08:00:00	45.8	40.7
07:00:00	45.8	40.7
06:00:00	45.8	40.7
05:00:00	45.9	41.1
04:00:00	45.8	40.7
03:00:00	45.9	41.1
02:00:00	45.9	41.1
01:00:00	46.0	41.6
00:00:00	46.0	41.6

DATE 10-23-96

TIME	LEVEL	FLOW
23:00:00	46.0	41.6
22:00:00	46.0	41.6
21:00:00	45.8	40.7
20:00:00	45.8	40.7
19:00:00	45.8	40.7
18:00:00	45.7	40.2
17:00:00	45.7	40.2
16:00:00	45.7	40.2
15:00:00	45.7	41.1
14:00:00	45.9	40.7
13:00:00	45.8	40.7
12:00:00	45.8	40.7
11:00:00	45.9	41.1
10:00:00	45.9	41.1
09:00:00	45.8	40.7
08:00:00	45.8	40.7
07:00:00	45.8	40.7
06:00:00	45.8	40.7
05:00:00	45.7	40.2
04:00:00	45.7	40.2
03:00:00	45.9	41.1
02:00:00	45.9	41.1
01:00:00	45.9	41.1
00:00:00	45.9	41.1

DATE 10-22-96

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	45.8	40.7
21:00:00	45.8	40.7
20:00:00	45.9	41.1
19:00:00	46.0	41.6
18:00:00	45.9	41.1
17:00:00	46.0	41.6
16:00:00	45.9	41.1
15:00:00	45.9	41.1
14:00:00	45.9	41.1
13:00:00	45.8	40.7
12:00:00	45.8	40.7
11:00:00	45.9	41.1
10:00:00	45.9	41.1
09:00:00	45.7	40.2
08:00:00	45.8	40.7
07:00:00	45.9	41.1
06:00:00	46.0	41.6
05:00:00	46.1	42.1
04:00:00	46.0	41.6
03:00:00	46.0	41.6
02:00:00	45.9	41.1
01:00:00	45.8	40.7
00:00:00	45.8	40.7

DATE 10-21-96

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.8	40.7
21:00:00	45.9	41.1
20:00:00	45.9	41.1
19:00:00	45.9	41.1
18:00:00	45.9	41.1
17:00:00	45.9	41.1
16:00:00	45.9	41.1
15:00:00	45.8	40.7
14:00:00	45.8	40.7
13:00:00	46.0	41.6
12:00:00	46.0	41.6
11:00:00	46.0	41.6
10:00:00	45.9	41.1
09:00:00	45.8	40.7
08:00:00	45.9	41.1
07:00:00	46.0	41.6
06:00:00	45.9	41.1
05:00:00	45.9	41.1
04:00:00	45.9	41.1
03:00:00	45.9	41.1
02:00:00	45.9	41.1
01:00:00	45.8	40.7
00:00:00	45.8	40.7

DATE 10-20-96

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	45.9	41.1
21:00:00	45.9	41.1
20:00:00	45.8	40.7
19:00:00	54.1	86.7
18:00:00	50.0	62.3
17:00:00	50.0	62.3
16:00:00	50.0	62.3
15:00:00	50.0	62.3
14:00:00	49.9	61.7
13:00:00	50.0	62.3
12:00:00	50.0	62.3
11:00:00	49.9	61.7
10:00:00	49.9	61.7
09:00:00	49.9	61.7
08:00:00	50.0	62.3
07:00:00	50.0	62.3
06:00:00	50.0	62.3
05:00:00	50.0	62.3
04:00:00	49.9	61.7
03:00:00	49.9	61.7
02:00:00	49.9	61.7
01:00:00	49.9	61.7
00:00:00	49.9	61.7

DATE 10-19-96

TIME	LEVEL	FLOW
23:00:00	49.9	61.7
22:00:00	49.8	61.2
21:00:00	49.8	61.2
20:00:00	49.9	61.7
19:00:00	49.9	61.7
18:00:00	49.8	61.2
17:00:00	49.9	61.7
16:00:00	49.8	61.2
15:00:00	49.8	61.2
14:00:00	49.8	61.2
13:00:00	49.8	61.2
12:00:00	49.8	61.2
11:00:00	49.7	60.6
10:00:00	49.7	60.6
09:00:00	49.7	60.6
08:00:00	49.7	60.6
07:00:00	49.7	60.6
06:00:00	49.7	60.6
05:00:00	49.7	60.6
04:00:00	49.7	60.6
03:00:00	49.6	60.1
02:00:00	49.6	60.1
01:00:00	49.5	59.5
00:00:00	49.4	59.0

DATE 10-18-96

TIME	LEVEL	FLOW
23:00:00	49.4	59.0
22:00:00	49.5	59.5
21:00:00	49.4	59.0
20:00:00	49.4	59.0
19:00:00	49.3	58.4
18:00:00	49.3	58.4
17:00:00	49.5	59.5
16:00:00	49.6	60.1
15:00:00	49.6	60.1
14:00:00	49.6	60.1
13:00:00	49.5	59.5
12:00:00	49.5	59.5
11:00:00	49.5	59.5
10:00:00	49.5	59.5
09:00:00	49.5	59.5
08:00:00	49.6	60.1
07:00:00	49.6	60.1
06:00:00	49.6	60.1
05:00:00	49.6	60.1
04:00:00	49.6	60.1
03:00:00	49.5	64.5
02:00:00	49.5	59.5
01:00:00	49.6	60.1
00:00:00	49.5	59.5

DATE 10-17-96

TIME	LEVEL	FLOW
23:00:00	49.5	59.5
22:00:00	49.5	59.5
21:00:00	49.5	59.5
20:00:00	49.5	59.5
19:00:00	49.6	60.1
18:00:00	49.6	60.1
17:00:00	49.6	60.1
16:00:00	49.6	60.1
15:00:00	49.7	60.6
14:00:00	49.7	60.6
13:00:00	49.7	60.6
12:00:00	49.7	60.6
11:00:00	49.7	60.6
10:00:00	49.7	60.6
09:00:00	49.7	60.6
08:00:00	49.6	60.1
07:00:00	49.6	60.1
06:00:00	49.6	60.1
05:00:00	49.6	60.1
04:00:00	49.7	60.6
03:00:00	49.6	60.1
02:00:00	49.7	60.6
01:00:00	49.7	60.6
00:00:00	49.8	61.2

DATE 10-16-96

TIME	LEVEL	FLOW
23:00:00	49.8	61.2
22:00:00	49.8	61.2
21:00:00	49.8	61.2
20:00:00	49.7	60.6
19:00:00	49.7	60.6
18:00:00	49.7	60.6
17:00:00	49.7	60.6
16:00:00	49.6	60.1
15:00:00	49.6	60.1
14:00:00	49.6	60.1
13:00:00	49.5	59.5
12:00:00	49.6	60.1
11:00:00	49.5	59.5
10:00:00	49.6	60.1
09:00:00	49.5	59.5
08:00:00	49.6	60.1
07:00:00	49.6	60.1
06:00:00	49.6	60.1
05:00:00	49.6	60.1
04:00:00	49.5	59.5
03:00:00	49.5	59.5
02:00:00	49.4	59.0
01:00:00	49.5	59.5
00:00:00	49.5	59.5

DATE 10-15-96

TIME	LEVEL	FLOW
23:00:00	49.5	59.5
22:00:00	49.5	59.5
21:00:00	49.5	59.5
20:00:00	49.6	60.1
19:00:00	49.6	60.1
18:00:00	49.6	60.1
17:00:00	49.5	59.5
16:00:00	49.5	59.5
15:00:00	49.5	59.5
14:00:00	49.6	60.1
13:00:00	49.6	60.1
12:00:00	49.6	60.1
11:00:00	49.6	60.1
10:00:00	49.6	60.1
09:00:00	49.6	60.1
08:00:00	49.6	60.1
07:00:00	49.7	60.6
06:00:00	49.7	60.6
05:00:00	49.7	60.6
04:00:00	49.7	60.6
03:00:00	49.6	60.1
02:00:00	49.6	60.1
01:00:00	49.6	60.1
00:00:00	49.5	59.5

DATE 10-14-96

TIME	LEVEL	FLOW
23:00:00	49.5	59.5
22:00:00	49.5	59.5
21:00:00	49.4	59.0
20:00:00	49.5	59.5
19:00:00	49.5	59.5
18:00:00	49.5	59.5
17:00:00	49.5	59.5
16:00:00	49.5	59.5
15:00:00	49.4	59.0
14:00:00	49.4	59.0
13:00:00	49.4	59.0
12:00:00	49.4	59.0
11:00:00	49.5	59.5
10:00:00	49.5	59.5
09:00:00	49.5	59.5
08:00:00	49.4	59.0
07:00:00	49.4	59.0
06:00:00	49.4	59.0
05:00:00	49.3	58.4
04:00:00	49.3	58.4
03:00:00	49.3	58.4
02:00:00	49.2	57.9
01:00:00	49.1	57.4
00:00:00	49.1	57.4

DATE 10-13-96

TIME	LEVEL	FLOW
23:00:00	49.1	57.4
22:00:00	49.2	57.9
21:00:00	49.2	57.9
20:00:00	49.2	57.9
19:00:00	49.2	57.9
18:00:00	49.3	58.4
17:00:00	49.4	59.0
16:00:00	49.5	59.5
15:00:00	49.5	59.5
14:00:00	49.6	60.1
13:00:00	49.6	60.1
12:00:00	49.6	60.1
11:00:00	49.6	60.1
10:00:00	49.7	60.6
09:00:00	49.7	60.6
08:00:00	49.7	60.6
07:00:00	49.7	60.6
06:00:00	49.7	60.6
05:00:00	49.7	60.6
04:00:00	49.7	60.6
03:00:00	49.6	60.1
02:00:00	49.6	60.1
01:00:00	49.7	60.6
00:00:00	49.5	59.5

DATE 10-12-96

TIME	LEVEL	FLOW
23:00:00	49.6	60.1
22:00:00	49.5	59.5
21:00:00	49.5	59.5
20:00:00	49.5	59.5
19:00:00	49.5	59.5
18:00:00	49.6	60.1
17:00:00	49.6	60.1
16:00:00	49.7	60.6
15:00:00	49.7	60.6
14:00:00	49.8	61.2
13:00:00	49.7	60.6
12:00:00	49.7	60.6
11:00:00	49.7	60.6
10:00:00	49.7	60.6
09:00:00	49.7	60.6
08:00:00	49.7	60.6
07:00:00	49.7	60.6
06:00:00	49.7	60.6
05:00:00	49.7	60.6
04:00:00	49.7	60.6
03:00:00	49.7	60.6
02:00:00	49.6	60.1
01:00:00	49.6	60.1
00:00:00	49.6	60.1

DATE 10-11-96

TIME	LEVEL	FLOW
23:00:00	49.6	65.5
22:00:00	49.6	60.1
21:00:00	49.6	60.1
20:00:00	49.6	60.1
19:00:00	49.7	60.6
18:00:00	49.7	60.6
17:00:00	49.7	60.6
16:00:00	49.7	60.6
15:00:00	49.8	61.2
14:00:00	49.8	61.2
13:00:00	49.8	61.2
12:00:00	49.7	60.6
11:00:00	49.8	61.2
10:00:00	49.7	60.6
09:00:00	49.7	60.6
08:00:00	49.7	60.6
07:00:00	49.7	60.6
06:00:00	49.8	61.2
05:00:00	49.8	61.2
04:00:00	49.7	60.6
03:00:00	49.7	60.6
02:00:00	49.6	60.1
01:00:00	49.6	60.1
00:00:00	49.6	60.1

DATE 10-10-96

TIME	LEVEL	FLOW
23:00:00	49.6	60.1
22:00:00	49.6	60.1
21:00:00	49.6	60.1
20:00:00	49.6	60.1
19:00:00	49.6	60.1
18:00:00	49.8	61.2
17:00:00	49.8	61.2
16:00:00	49.8	61.2
15:00:00	49.8	61.2
14:00:00	49.9	61.7
13:00:00	49.8	61.2
12:00:00	49.8	61.2
11:00:00	49.8	61.2
10:00:00	49.8	61.2
09:00:00	49.8	61.2
08:00:00	49.8	61.2
07:00:00	49.9	61.7
06:00:00	49.9	61.7
05:00:00	49.9	61.7
04:00:00	49.8	61.2
03:00:00	49.8	61.2
02:00:00	49.8	61.2
01:00:00	49.7	60.6
00:00:00	49.7	60.6

DATE 10-09-96

TIME	LEVEL	FLOW
23:00:00	49.7	60.6
22:00:00	49.7	60.6
21:00:00	49.7	60.6
20:00:00	49.7	60.6
19:00:00	49.7	60.6
18:00:00	49.8	61.2
17:00:00	49.7	60.6
16:00:00	49.8	61.2
15:00:00	49.8	61.2
14:00:00	49.8	61.2
13:00:00	49.8	61.2
12:00:00	49.8	61.2
11:00:00	49.7	60.6
10:00:00	49.7	60.6
09:00:00	49.7	60.6
08:00:00	49.8	61.2
07:00:00	49.8	61.2
06:00:00	49.8	61.2
05:00:00	49.8	61.2
04:00:00	49.7	60.6
03:00:00	49.7	60.6
02:00:00	49.6	60.1
01:00:00	49.6	60.1
00:00:00	49.5	59.5

DATE 10-08-96

TIME	LEVEL	FLOW
23:00:00	49.6	60.1
22:00:00	49.5	59.5
21:00:00	49.6	60.1
20:00:00	49.6	60.1
19:00:00	49.6	60.1
18:00:00	49.7	60.6
17:00:00	49.7	60.6
16:00:00	49.7	60.6
15:00:00	49.7	60.6
14:00:00	49.7	60.6
13:00:00	49.8	61.2
12:00:00	49.8	61.2
11:00:00	49.8	61.2
10:00:00	49.7	60.6
09:00:00	49.8	61.2
08:00:00	49.7	60.6
07:00:00	49.7	60.6
06:00:00	49.7	60.6
05:00:00	49.7	60.6
04:00:00	49.6	60.1
03:00:00	49.5	59.5
02:00:00	49.5	59.5
01:00:00	49.5	59.5
00:00:00	49.4	59.0

DATE 10-07-96

TIME	LEVEL	FLOW
23:00:00	49.4	59.0
22:00:00	49.4	59.0
21:00:00	49.5	59.5
20:00:00	49.5	59.5
19:00:00	49.6	60.1
18:00:00	49.5	59.5
17:00:00	49.5	59.5
16:00:00	49.5	59.5
15:00:00	49.6	60.1
14:00:00	49.6	60.1
13:00:00	49.5	59.5
12:00:00	49.5	59.5
11:00:00	49.5	59.5
10:00:00	49.6	60.1
09:00:00	49.5	59.5
08:00:00	49.5	59.5
07:00:00	49.5	59.5
06:00:00	49.6	60.1
05:00:00	49.5	59.5
04:00:00	49.5	59.5
03:00:00	49.5	59.5
02:00:00	49.4	59.0
01:00:00	49.4	59.0
00:00:00	49.3	58.4

DATE 10-06-96

TIME	LEVEL	FLOW
23:00:00	49.3	58.4
22:00:00	49.4	59.0
21:00:00	49.4	59.0
20:00:00	49.4	59.0
19:00:00	49.5	59.5
18:00:00	49.5	59.5
17:00:00	49.5	59.5
16:00:00	49.6	60.1
15:00:00	49.6	60.1
14:00:00	49.5	59.5
13:00:00	49.6	60.1
12:00:00	49.6	60.1
11:00:00	49.7	60.6
10:00:00	49.7	60.6
09:00:00	49.7	60.6
08:00:00	49.8	61.2
07:00:00	49.8	61.2
06:00:00	49.7	60.6
05:00:00	49.8	61.2
04:00:00	49.8	61.2
03:00:00	49.9	61.7
02:00:00	49.9	61.7
01:00:00	49.8	61.2
00:00:00	49.9	61.7

DATE 10-05-96

TIME	LEVEL	FLOW
23:00:00	49.9	61.7
22:00:00	49.9	61.7
21:00:00	49.9	61.7
20:00:00	49.9	61.7
19:00:00	49.8	61.2
18:00:00	49.8	61.2
17:00:00	49.8	61.2
16:00:00	49.8	61.2
15:00:00	49.9	61.7
14:00:00	49.8	61.2
13:00:00	49.8	61.2
12:00:00	49.9	61.7
11:00:00	49.9	61.7
10:00:00	49.8	61.2
09:00:00	49.9	61.7
08:00:00	49.9	61.7
07:00:00	49.9	61.7
06:00:00	49.8	61.2
05:00:00	49.8	61.2
04:00:00	49.8	61.2
03:00:00	49.8	61.2
02:00:00	49.8	61.2
01:00:00	49.8	61.2
00:00:00	49.8	61.2

DATE 10-04-96

TIME	LEVEL	FLOW
23:00:00	49.8	61.2
22:00:00	49.8	61.2
21:00:00	49.7	60.6
20:00:00	49.8	61.2
19:00:00	49.8	61.2
18:00:00	49.8	61.2
17:00:00	49.7	60.6
16:00:00	49.7	60.6
15:00:00	49.7	60.6
14:00:00	49.7	60.6
13:00:00	49.7	60.6
12:00:00	49.7	60.6
11:00:00	49.6	60.1
10:00:00	49.6	60.1
09:00:00	49.6	60.1
08:00:00	49.7	60.6
07:00:00	49.7	60.6
06:00:00	49.6	60.1
05:00:00	49.6	60.1
04:00:00	49.7	60.6
03:00:00	49.7	60.6
02:00:00	49.7	60.6
01:00:00	49.7	60.6
00:00:00	49.7	60.6

DATE 10-03-96

TIME	LEVEL	FLOW
23:00:00	49.7	60.6
22:00:00	49.7	60.6
21:00:00	49.6	60.1
20:00:00	49.6	60.1
19:00:00	49.5	59.5
18:00:00	49.5	59.5
17:00:00	49.5	59.5
16:00:00	49.5	59.5
15:00:00	49.6	60.1
14:00:00	49.7	60.6
13:00:00	49.7	60.6
12:00:00	49.8	61.2
11:00:00	49.9	61.7
10:00:00	50.1	62.9
09:00:00	50.3	64.0
08:00:00	50.4	64.5
07:00:00	50.5	65.1
06:00:00	50.0	62.3
05:00:00	49.6	60.1
04:00:00	49.2	57.9
03:00:00	49.1	57.4
02:00:00	49.0	56.8
01:00:00	48.9	56.3
00:00:00	48.9	56.3

DATE 10-02-96

TIME	LEVEL	FLOW
23:00:00	48.9	56.3
22:00:00	48.9	56.3
21:00:00	48.9	56.3
20:00:00	49.0	56.8
19:00:00	49.0	56.8
18:00:00	49.1	57.4
17:00:00	49.2	57.9
16:00:00	49.1	57.4
15:00:00	49.2	61.4
14:00:00	49.2	61.4
13:00:00	49.2	57.9
12:00:00	49.2	57.9
11:00:00	49.1	57.4
10:00:00	49.1	60.5
09:00:00	49.2	57.9
08:00:00	49.2	57.9
07:00:00	49.2	57.9
06:00:00	49.1	57.4
05:00:00	49.2	57.9
04:00:00	49.0	56.8
03:00:00	49.0	56.8
02:00:00	48.9	56.3
01:00:00	48.9	56.3
00:00:00	48.8	55.8

DATE 10-01-96

TIME	LEVEL	FLOW
23:00:00	48.8	55.8
22:00:00	48.8	55.8
21:00:00	48.8	55.8
20:00:00	48.9	56.3
19:00:00	49.0	56.8
18:00:00	49.1	57.4
17:00:00	49.0	56.8
16:00:00	49.0	56.8
15:00:00	49.0	56.8
14:00:00	49.0	56.8
13:00:00	49.0	56.8
12:00:00	49.0	56.8
11:00:00	49.1	57.4
10:00:00	49.1	57.4
09:00:00	49.0	56.8
08:00:00	49.0	56.8
07:00:00	49.0	56.8
06:00:00	49.0	56.8
05:00:00	49.0	56.8
04:00:00	49.0	56.8
03:00:00	49.0	56.8
02:00:00	48.9	56.3
01:00:00	48.9	56.3
00:00:00	48.8	55.8

DATE 09-30-96

TIME	LEVEL	FLOW
23:00:00	48.7	55.2
22:00:00	48.7	55.2
21:00:00	48.8	55.8
20:00:00	48.8	55.8
19:00:00	48.8	55.8
18:00:00	48.9	56.3
17:00:00	49.0	56.8
16:00:00	49.0	56.8
15:00:00	49.0	56.8
14:00:00	49.1	57.4
13:00:00	49.1	57.4
12:00:00	49.0	56.8
11:00:00	49.0	56.8
10:00:00	49.0	56.8
09:00:00	49.0	56.8
08:00:00	49.0	56.8
07:00:00	49.0	56.8
06:00:00	49.0	56.8
05:00:00	49.0	56.8
04:00:00	48.9	56.3
03:00:00	48.9	56.3
02:00:00	48.8	55.8
01:00:00	48.7	55.2
00:00:00	48.7	55.2

DATE 09-29-96

TIME	LEVEL	FLOW
23:00:00	48.7	55.2
22:00:00	48.7	55.2
21:00:00	48.7	55.2
20:00:00	48.7	55.2
19:00:00	48.8	55.8
18:00:00	48.8	55.8
17:00:00	48.8	55.8
16:00:00	48.7	55.2
15:00:00	48.7	55.2
14:00:00	48.7	55.2
13:00:00	48.7	55.2
12:00:00	48.6	54.7
11:00:00	48.6	54.7
10:00:00	48.6	54.7
09:00:00	48.6	54.7
08:00:00	48.7	55.2
07:00:00	48.7	55.2
06:00:00	48.7	55.2
05:00:00	48.6	54.7
04:00:00	48.6	54.7
03:00:00	48.6	54.7
02:00:00	48.6	54.7
01:00:00	48.6	54.7
00:00:00	48.6	54.7

DATE 09-28-96

TIME	LEVEL	FLOW
23:00:00	48.7	55.2
22:00:00	48.7	55.2
21:00:00	48.7	55.2
20:00:00	48.7	55.2
19:00:00	48.8	55.8
18:00:00	48.8	55.8
17:00:00	48.8	55.8
16:00:00	48.6	54.7
15:00:00	48.8	55.8
14:00:00	48.6	54.7
13:00:00	48.4	53.6
12:00:00	48.4	53.6
11:00:00	48.4	53.6
10:00:00	48.3	53.1
09:00:00	48.4	53.6
08:00:00	48.4	53.6
07:00:00	48.4	53.6
06:00:00	48.3	53.1
05:00:00	48.3	53.1
04:00:00	48.3	53.1
03:00:00	48.2	52.6
02:00:00	48.2	52.6
01:00:00	48.2	52.6
00:00:00	48.2	52.6

DATE 09-27-96

TIME	LEVEL	FLOW
23:00:00	48.2	52.6
22:00:00	48.2	52.6
21:00:00	48.2	52.6
20:00:00	48.3	53.1
19:00:00	48.3	53.1
18:00:00	48.3	53.1
17:00:00	48.3	53.1
16:00:00	48.4	53.6
15:00:00	48.5	54.2
14:00:00	48.4	53.6
13:00:00	48.4	53.6
12:00:00	48.4	53.6
11:00:00	48.4	53.6
10:00:00	48.4	53.6
09:00:00	48.4	53.6
08:00:00	48.4	53.6
07:00:00	48.4	53.6
06:00:00	48.3	53.1
05:00:00	48.3	53.1
04:00:00	48.2	52.6
03:00:00	48.1	52.1
02:00:00	48.1	52.1
01:00:00	48.1	52.1
00:00:00	48.0	51.5

DATE 09-26-96

TIME	LEVEL	FLOW
23:00:00	48.0	51.5
22:00:00	48.1	52.1
21:00:00	48.1	52.1
20:00:00	48.2	52.6
19:00:00	48.3	53.1
18:00:00	48.3	53.1
17:00:00	48.3	53.1
16:00:00	48.4	53.6
15:00:00	48.4	53.6
14:00:00	48.3	53.1
13:00:00	48.3	53.1
12:00:00	48.3	53.1
11:00:00	48.3	53.1
10:00:00	48.3	53.1
09:00:00	48.3	53.1
08:00:00	48.3	53.1
07:00:00	48.2	52.6
06:00:00	48.1	52.1
05:00:00	48.1	52.1
04:00:00	48.1	52.1
03:00:00	47.9	51.0
02:00:00	47.8	50.5
01:00:00	47.8	50.5
00:00:00	47.8	50.5

DATE 09-25-96

TIME	LEVEL	FLOW
23:00:00	47.9	51.0
22:00:00	47.8	50.5
21:00:00	47.9	51.0
20:00:00	48.0	51.5
19:00:00	48.0	51.5
18:00:00	48.0	51.5
17:00:00	48.1	52.1
16:00:00	48.1	52.1
15:00:00	48.2	52.6
14:00:00	48.1	52.1
13:00:00	48.1	52.1
12:00:00	48.0	51.5
11:00:00	48.1	52.1
10:00:00	48.0	51.5
09:00:00	48.0	51.5
08:00:00	48.1	52.1
07:00:00	48.1	52.1
06:00:00	48.0	51.5
05:00:00	48.0	51.5
04:00:00	47.9	51.0
03:00:00	47.9	51.0
02:00:00	47.9	51.0
01:00:00	47.9	51.0
00:00:00	47.9	51.0

DATE 09-24-96

TIME	LEVEL	FLOW
23:00:00	47.9	51.0
22:00:00	47.9	51.0
21:00:00	48.0	51.5
20:00:00	48.0	51.5
19:00:00	48.1	52.1
18:00:00	48.0	51.5
17:00:00	48.0	51.5
16:00:00	48.1	52.1
15:00:00	48.1	52.1
14:00:00	48.1	52.1
13:00:00	48.1	52.1
12:00:00	48.0	51.5
11:00:00	48.0	51.5
10:00:00	48.0	51.5
09:00:00	48.0	51.5
08:00:00	48.0	51.5
07:00:00	48.0	51.5
06:00:00	48.0	51.5
05:00:00	47.9	51.0
04:00:00	47.9	51.0
03:00:00	47.8	50.5
02:00:00	47.8	50.5
01:00:00	47.8	50.5
00:00:00	47.8	50.5

DATE 09-23-96

TIME	LEVEL	FLOW
23:00:00	47.8	50.5
22:00:00	47.8	50.5
21:00:00	47.8	50.5
20:00:00	47.9	51.0
19:00:00	47.9	51.0
18:00:00	48.0	51.5
17:00:00	48.2	52.6
16:00:00	48.3	53.1
15:00:00	48.4	53.6
14:00:00	48.2	52.6
13:00:00	48.2	52.6
12:00:00	48.2	52.6
11:00:00	48.2	52.6
10:00:00	48.3	53.1
09:00:00	48.2	52.6
08:00:00	48.2	52.6
07:00:00	48.1	52.1
06:00:00	48.1	52.1
05:00:00	48.0	51.5
04:00:00	47.9	51.0
03:00:00	47.9	51.0
02:00:00	47.9	51.0
01:00:00	47.8	50.5
00:00:00	47.8	50.5

DATE 09-22-96

TIME	LEVEL	FLOW
23:00:00	47.9	51.0
22:00:00	47.8	50.5
21:00:00	47.8	50.5
20:00:00	47.9	51.0
19:00:00	48.0	51.5
18:00:00	48.0	51.5
17:00:00	48.1	52.6
16:00:00	48.2	53.1
15:00:00	48.3	52.6
14:00:00	48.2	53.1
13:00:00	48.3	53.1
12:00:00	48.3	53.1
11:00:00	48.3	53.1
10:00:00	48.3	53.1
09:00:00	48.2	52.6
08:00:00	48.3	53.1
07:00:00	48.3	53.1
06:00:00	48.4	53.6
05:00:00	48.2	52.6
04:00:00	48.2	52.6
03:00:00	48.2	52.6
02:00:00	48.2	52.6
01:00:00	48.2	52.6
00:00:00	48.2	52.6

DATE 09-21-96

TIME	LEVEL	FLOW
23:00:00	48.2	52.6
22:00:00	48.2	52.6
21:00:00	48.3	53.1
20:00:00	48.3	53.1
19:00:00	48.3	53.1
18:00:00	48.4	53.6
17:00:00	48.3	53.1
16:00:00	48.3	53.1
15:00:00	48.3	53.1
14:00:00	48.3	53.1
13:00:00	48.3	53.1
12:00:00	48.2	52.6
11:00:00	48.2	52.6
10:00:00	48.2	52.6
09:00:00	48.2	52.6
08:00:00	48.2	52.6
07:00:00	48.2	52.6
06:00:00	48.2	52.6
05:00:00	48.2	52.6
04:00:00	48.1	52.1
03:00:00	48.1	52.1
02:00:00	48.1	52.1
01:00:00	48.1	52.1
00:00:00	48.1	52.1

DATE 09-20-96

TIME	LEVEL	FLOW
23:00:00	48.0	51.5
22:00:00	48.0	51.5
21:00:00	48.0	51.5
20:00:00	48.2	52.6
19:00:00	48.2	52.6
18:00:00	48.3	53.1
17:00:00	48.3	53.1
16:00:00	48.3	53.1
15:00:00	48.4	53.6
14:00:00	48.4	53.6
13:00:00	48.4	53.6
12:00:00	48.4	53.6
11:00:00	48.4	53.6
10:00:00	48.5	54.2
09:00:00	48.4	53.6
08:00:00	48.3	53.1
07:00:00	48.3	53.1
06:00:00	48.2	52.6
05:00:00	48.2	52.6
04:00:00	48.2	52.6
03:00:00	48.2	52.6
02:00:00	48.3	53.1
01:00:00	48.3	53.1
00:00:00	48.3	53.1

DATE 09-19-96

TIME	LEVEL	FLOW
23:00:00	48.3	53.1
22:00:00	48.3	53.1
21:00:00	48.3	53.1
20:00:00	48.2	52.6
19:00:00	48.2	52.6
18:00:00	48.1	52.1
17:00:00	48.1	52.1
16:00:00	48.1	52.1
15:00:00	48.1	52.1
14:00:00	48.1	52.1
13:00:00	48.1	52.1
12:00:00	48.2	52.6
11:00:00	48.2	52.6
10:00:00	48.1	52.1
09:00:00	48.1	52.1
08:00:00	48.1	52.1
07:00:00	48.1	52.1
06:00:00	48.1	52.1
05:00:00	48.1	52.1
04:00:00	48.1	52.1
03:00:00	48.0	51.5
02:00:00	48.0	51.5
01:00:00	48.0	51.5
00:00:00	48.0	51.5

DATE 09-18-96

TIME	LEVEL	FLOW
23:00:00	48.0	51.5
22:00:00	48.0	51.5
21:00:00	48.0	51.5
20:00:00	48.2	52.6
19:00:00	48.2	52.6
18:00:00	48.1	52.1
17:00:00	48.1	52.1
16:00:00	48.1	52.1
15:00:00	48.1	52.1
14:00:00	48.1	52.1
13:00:00	48.1	52.1
12:00:00	48.1	52.1
11:00:00	48.1	52.1
10:00:00	48.1	52.1
09:00:00	48.1	52.1
08:00:00	48.1	52.1
07:00:00	48.1	52.1
06:00:00	48.1	52.1
05:00:00	48.1	52.1
04:00:00	48.1	52.1
03:00:00	48.0	51.5
02:00:00	48.0	51.5
01:00:00	48.0	51.5
00:00:00	47.9	51.0

DATE 09-17-96

TIME	LEVEL	FLOW
23:00:00	47.9	51.0
22:00:00	47.9	51.0
21:00:00	48.0	51.5
20:00:00	48.0	51.5
19:00:00	48.1	52.1
18:00:00	48.2	52.6
17:00:00	48.3	53.1
16:00:00	48.3	53.1
15:00:00	48.4	53.6
14:00:00	48.4	53.6
13:00:00	48.2	52.6
12:00:00	48.1	52.1
11:00:00	48.0	51.5
10:00:00	47.9	51.0
09:00:00	47.6	49.5
08:00:00	47.6	49.5
07:00:00	47.8	50.5
06:00:00	47.9	51.0
05:00:00	47.9	51.0
04:00:00	47.9	51.0
03:00:00	47.8	50.5
02:00:00	47.8	50.5
01:00:00	47.9	51.0
00:00:00	47.9	51.0

DATE 09-16-96

TIME	LEVEL	FLOW
23:00:00	48.0	51.5
22:00:00	48.0	51.5
21:00:00	47.9	51.0
20:00:00	48.2	52.6
19:00:00	48.2	52.6
18:00:00	48.1	52.1
17:00:00	48.1	52.1
16:00:00	48.2	52.6
15:00:00	48.1	52.1
14:00:00	48.0	51.5
13:00:00	48.2	52.6
12:00:00	48.1	52.1
11:00:00	48.0	51.5
10:00:00	48.0	51.5
09:00:00	48.0	51.5
08:00:00	48.0	51.5
07:00:00	48.0	51.5
06:00:00	48.0	51.5
05:00:00	48.1	52.1
04:00:00	48.1	52.1
03:00:00	48.1	52.1
02:00:00	48.1	52.1
01:00:00	48.1	52.1
00:00:00	48.2	52.6

DATE 09-15-96

TIME	LEVEL	FLOW
23:00:00	48.3	53.1
22:00:00	48.5	54.2
21:00:00	48.6	54.7
20:00:00	48.9	56.3
19:00:00	48.9	56.3
18:00:00	45.8	40.7
17:00:00	45.8	40.7
16:00:00	45.8	40.7
15:00:00	45.8	40.7
14:00:00	45.8	40.7
13:00:00	45.8	40.7
12:00:00	45.7	40.2
11:00:00	45.7	40.2
10:00:00	45.8	40.7
09:00:00	45.8	40.7
08:00:00	45.8	40.7
07:00:00	45.8	40.7
06:00:00	45.9	41.1
05:00:00	45.9	41.1
04:00:00	46.1	42.1
03:00:00	46.0	41.6
02:00:00	45.8	40.7
01:00:00	45.8	40.7
00:00:00	45.9	41.1

DATE 09-14-96

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	45.9	41.1
21:00:00	45.8	40.7
20:00:00	45.8	40.7
19:00:00	45.9	41.1
18:00:00	45.8	40.7
17:00:00	45.7	40.2
16:00:00	45.8	40.7
15:00:00	45.7	40.2
14:00:00	45.7	40.2
13:00:00	45.9	41.1
12:00:00	45.8	40.7
11:00:00	45.8	40.7
10:00:00	45.8	40.7
09:00:00	45.8	40.7
08:00:00	45.8	40.7
07:00:00	45.8	40.7
06:00:00	45.8	40.7
05:00:00	45.8	40.7
04:00:00	45.8	40.7
03:00:00	46.1	42.1
02:00:00	46.0	41.6
01:00:00	45.9	41.1
00:00:00	46.1	42.1

DATE 09-13-96

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.9	41.1
21:00:00	46.1	42.1
20:00:00	45.8	40.7
19:00:00	45.8	40.7
18:00:00	45.7	40.2
17:00:00	45.7	40.2
16:00:00	45.8	40.7
15:00:00	45.8	40.7
14:00:00	45.9	41.1
13:00:00	46.0	41.6
12:00:00	46.1	42.1
11:00:00	45.9	41.1
10:00:00	45.8	40.7
09:00:00	46.0	41.6
08:00:00	45.8	40.7
07:00:00	45.9	41.1
06:00:00	45.9	41.1
05:00:00	45.9	41.1
04:00:00	45.9	41.1
03:00:00	46.1	42.1
02:00:00	46.1	42.1
01:00:00	46.1	42.1
00:00:00	46.0	41.6

DATE 09-12-96

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	45.9	41.1
21:00:00	46.1	42.1
20:00:00	45.9	41.1
19:00:00	45.8	40.7
18:00:00	45.8	40.7
17:00:00	45.8	40.7
16:00:00	45.9	41.1
15:00:00	46.0	41.6
14:00:00	45.9	41.1
13:00:00	45.9	41.1
12:00:00	46.0	41.6
11:00:00	45.9	41.1
10:00:00	46.0	41.6
09:00:00	45.8	40.7
08:00:00	45.8	40.7
07:00:00	45.8	40.7
06:00:00	45.8	40.7
05:00:00	45.7	40.2
04:00:00	45.7	40.2
03:00:00	45.7	40.2
02:00:00	45.9	41.1
01:00:00	46.2	42.6
00:00:00	45.9	41.1

DATE 09-11-96

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	46.0	41.6
21:00:00	45.9	41.1
20:00:00	45.9	41.1
19:00:00	46.1	42.1
18:00:00	46.1	42.1
17:00:00	45.8	40.7
16:00:00	46.0	41.6
15:00:00	45.8	40.7
14:00:00	45.9	41.1
13:00:00	45.8	40.7
12:00:00	45.8	40.7
11:00:00	46.0	41.6
10:00:00	46.0	41.6
09:00:00	45.8	40.7
08:00:00	45.9	41.1
07:00:00	45.9	41.1
06:00:00	45.8	40.7
05:00:00	45.8	40.7
04:00:00	45.8	40.7
03:00:00	45.8	40.7
02:00:00	45.8	40.7
01:00:00	46.1	42.1
00:00:00	46.0	41.6

DATE 09-10-96

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	46.0	41.6
21:00:00	45.8	40.7
20:00:00	45.9	41.1
19:00:00	45.8	40.7
18:00:00	45.8	40.7
17:00:00	45.7	40.2
16:00:00	45.7	40.2
15:00:00	45.7	40.2
14:00:00	45.8	40.7
13:00:00	45.9	41.1
12:00:00	45.9	41.1
11:00:00	45.9	41.1
10:00:00	45.8	40.7
09:00:00	45.8	40.7
08:00:00	45.8	40.7
07:00:00	45.9	41.1
06:00:00	46.0	41.6
05:00:00	46.0	41.6
04:00:00	45.9	41.1
03:00:00	46.0	41.6
02:00:00	45.8	40.7
01:00:00	45.9	41.1
00:00:00	46.1	42.1

DATE 09-09-96

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	46.0	41.6
21:00:00	46.0	41.6
20:00:00	45.8	40.7
19:00:00	46.1	42.1
18:00:00	45.8	40.7
17:00:00	45.8	40.7
16:00:00	45.9	41.1
15:00:00	45.9	41.1
14:00:00	46.0	41.6
13:00:00	45.8	40.7
12:00:00	46.0	41.6
11:00:00	45.9	41.1
10:00:00	45.9	41.1
09:00:00	45.8	40.7
08:00:00	45.8	40.7
07:00:00	46.0	41.6
06:00:00	46.1	42.1
05:00:00	46.1	42.1
04:00:00	46.1	42.1
03:00:00	46.1	42.1
02:00:00	46.1	42.1
01:00:00	46.0	41.6
00:00:00	45.8	40.7

DATE 09-08-96

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	46.0	41.6
21:00:00	45.9	41.1
20:00:00	46.0	41.6
19:00:00	45.9	41.1
18:00:00	46.0	41.6
17:00:00	45.9	41.1
16:00:00	45.8	40.7
15:00:00	45.7	40.2
14:00:00	45.9	41.1
13:00:00	45.9	41.1
12:00:00	46.0	41.6
11:00:00	46.1	42.1
10:00:00	45.8	40.7
09:00:00	45.8	40.7
08:00:00	45.8	40.7
07:00:00	45.8	40.7
06:00:00	45.7	40.2
05:00:00	45.7	40.2
04:00:00	45.9	41.1
03:00:00	45.9	41.1
02:00:00	45.8	40.7
01:00:00	46.1	42.1
00:00:00	45.8	40.7

DATE 09-07-96

TIME	LEVEL	FLOW
23:00:00	46.0	41.6
22:00:00	45.8	40.7
21:00:00	45.8	40.7
20:00:00	45.8	40.7
19:00:00	45.8	40.7
18:00:00	45.8	40.7
17:00:00	46.0	41.6
16:00:00	46.0	41.6
15:00:00	46.0	41.6
14:00:00	45.8	40.7
13:00:00	45.8	40.7
12:00:00	46.0	41.6
11:00:00	45.8	40.7
10:00:00	45.9	41.1
09:00:00	46.0	41.6
08:00:00	45.8	40.7
07:00:00	45.7	40.2
06:00:00	45.9	41.1
05:00:00	46.2	42.6
04:00:00	46.0	41.6
03:00:00	45.8	40.7
02:00:00	45.8	40.7
01:00:00	46.1	42.1
00:00:00	45.8	40.7

DATE 09-06-96

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.8	40.7
21:00:00	46.3	43.0
20:00:00	45.8	40.7
19:00:00	45.8	40.7
18:00:00	45.8	40.7
17:00:00	45.8	40.7
16:00:00	46.2	42.6
15:00:00	46.0	41.6
14:00:00	46.0	41.6
13:00:00	45.9	41.1
12:00:00	46.1	42.1
11:00:00	46.1	42.1
10:00:00	46.0	41.6
09:00:00	45.9	41.1
08:00:00	45.8	40.7
07:00:00	45.7	40.2
06:00:00	45.7	40.2
05:00:00	46.1	42.1
04:00:00	46.0	41.6
03:00:00	45.9	41.1
02:00:00	46.1	42.1
01:00:00	45.9	41.1
00:00:00	45.9	41.1

DATE 09-05-96

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.9	41.1
21:00:00	46.0	41.6
20:00:00	46.0	41.6
19:00:00	45.8	40.7
18:00:00	45.9	41.1
17:00:00	46.0	41.6
16:00:00	45.8	40.7
15:00:00	45.8	40.7
14:00:00	45.9	41.1
13:00:00	46.0	41.6
12:00:00	45.9	41.1
11:00:00	45.8	40.7
10:00:00	45.8	40.7
09:00:00	45.9	41.1
08:00:00	45.8	40.7
07:00:00	46.1	42.1
06:00:00	45.9	41.1
05:00:00	45.9	41.1
04:00:00	45.8	40.7
03:00:00	46.0	41.6
02:00:00	45.9	41.1
01:00:00	45.9	41.1
00:00:00	46.1	42.1

DATE 09-04-96

TIME	LEVEL	FLOW
23:00:00	46.0	41.6
22:00:00	46.0	41.6
21:00:00	45.8	40.7
20:00:00	45.8	40.7
19:00:00	45.8	40.7
18:00:00	45.8	40.7
17:00:00	45.8	40.7
16:00:00	45.8	40.7
15:00:00	45.8	40.7
14:00:00	45.8	40.7
13:00:00	46.0	41.6
12:00:00	46.1	42.1
11:00:00	46.0	41.6
10:00:00	46.0	41.6
09:00:00	45.9	41.1
08:00:00	45.9	41.1
07:00:00	46.0	41.6
06:00:00	45.9	41.1
05:00:00	46.0	41.6
04:00:00	46.0	41.6
03:00:00	45.8	40.7
02:00:00	46.0	41.6
01:00:00	46.0	41.6
00:00:00	45.9	41.1

DATE 09-03-96

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	46.0	41.6
21:00:00	45.8	40.7
20:00:00	45.8	40.7
19:00:00	45.8	40.7
18:00:00	45.8	40.7
17:00:00	45.7	40.7
16:00:00	45.8	41.1
15:00:00	45.9	41.1
14:00:00	45.9	40.7
13:00:00	45.8	40.7
12:00:00	45.8	40.7
11:00:00	45.8	40.7
10:00:00	45.8	40.7
09:00:00	45.8	40.7
08:00:00	46.0	41.6
07:00:00	46.0	41.6
06:00:00	46.1	42.1
05:00:00	46.1	42.1
04:00:00	45.8	40.7
03:00:00	45.9	41.1
02:00:00	46.1	42.1
01:00:00	46.1	42.1
00:00:00	46.1	42.1

DATE 09-02-96

TIME	LEVEL	FLOW
23:00:00	46.0	41.6
22:00:00	45.8	40.7
21:00:00	46.0	41.6
20:00:00	46.1	42.1
19:00:00	46.1	42.1
18:00:00	46.1	42.1
17:00:00	45.9	41.1
16:00:00	45.8	40.7
15:00:00	46.1	42.1
14:00:00	46.1	42.1
13:00:00	45.9	41.1
12:00:00	46.1	42.1
11:00:00	45.9	41.1
10:00:00	45.9	41.1
09:00:00	46.0	41.6
08:00:00	46.0	41.6
07:00:00	46.1	42.1
06:00:00	46.1	42.1
05:00:00	46.0	41.6
04:00:00	46.0	41.6
03:00:00	45.9	41.1
02:00:00	45.8	40.7
01:00:00	45.8	40.7
00:00:00	46.1	42.1

DATE 09-01-96

TIME		FLOW
23:00:00	45.9	41.1
22:00:00	45.8	40.7
21:00:00	45.8	40.7
20:00:00	45.7	40.2
19:00:00	45.7	40.2
18:00:00	45.8	40.7
17:00:00	46.0	41.6
16:00:00	45.8	40.7
15:00:00	45.8	40.7
14:00:00	45.9	41.1
13:00:00	45.9	41.1
12:00:00	46.2	42.6
11:00:00	45.8	40.7
10:00:00	45.7	40.2
09:00:00	45.8	40.7
08:00:00	46.2	42.6
07:00:00	46.0	41.6
06:00:00	45.8	40.7
05:00:00	45.8	40.7
04:00:00	45.9	41.1
03:00:00	46.0	41.6
02:00:00	46.0	41.6
01:00:00	46.1	42.1
00:00:00	46.0	41.6

State of Idaho
DEPARTMENT OF WATER RESOURCES
1301 North Orchard Street, Statehouse Mail, Boise, Idaho 83720-9000
Phone: (208) 327-7900 FAX: (208) 327-7866

PHILIP E. BATT
GOVERNOR

KARL J. DREHER
DIRECTOR

October 18, 1996

Commercial Energy Mgmt, Inc.
c/o Maher F. Wissa
P.O. Box 4518
Pocatello, ID 83205

RE: PERMIT NO. 29-07699

Dear Mr. Wissa:

I have reviewed your letter dated October 14, 1996 in connection with conditions of approval of the above referenced permit. You have asked that the department partially waive Condition of Approval No. 15 by allowing you to disable the bypass valve during the non-irrigation months of October through February.

Conclusion of Law No. 12. in the department's approval of the water right permit which provides the department's purpose for requiring the by-pass feature reads as follows:

> 12. The project must be designed so that the reach of the Portneuf River between the diversion structure and the powerhouse will not be subject to large, rapid fluctuations of water flow. The project must also be designed to avoid large fluctuations of water downstream from the powerhouse. To accomplish these goals, the penstock must be designed so the water can flow from the penstock to the Portneuf River without passing through the generator.

The department is willing to consider your request to disable the by-pass facility during part of the year, but first it appears you need to evaluate other alternatives similar to those suggested by FERC and convince the department that you will still meet the intent of Conclusion of Law No. 12. FERC's suggested alternatives include adjustment of the installed by-pass valve, replacement with a different valve or operational changes such as using a different release method. You then need to provide a report which evaluates the alternatives to the department.

If you have questions, please feel free to contact me.

Sincerely,

L. GLEN SAXTON, Chief
Water Allocation Bureau

c: IDWR - E. Region

CEM COMMERCIAL ENERGY MGMT, INC.
P.O. Box 4518 • Pocatello, Idaho 83205 • Telephone (208) 237-3563 • Fax (208) 237-3563

October 14, 1996
Ref: CEM/1074

Mr. L. GLEN SAXTON
Chief, Water Allocation Bureau
Idaho Department of Water Resources
1301 North Orchard Street
Boise, ID 83720-9000

RECEIVED
OCT 17 1996
Department of Water Resources

Subject: Portneuf River Hydroelectric Plant
Lava Hot Springs, Idaho
Permit No. 29-7699

Dear Mr. Saxton:

As required under condition 15 of the subject permit a bypass valve was installed to release the water flow from the Portneuf River without passing through the generator in case of emergency shut off. It is our understanding that this valve was required to eliminate any fluctuation of the water flow downstream of the turbine during the irrigation season, due to a sudden/emergency generator shutoff.

The power plant has been in operation for more than three years. During this period the automatic function, triggered by "utility out of tolerance" trips, has been successful in meeting the stated condition. The valve capacity is more than twice the required bypass flow of 40 cfs. However, during the autumn/winter months (October through February) when the water flow drops below the valve capacity, its operation has caused a deficiency in the bypass flow at the point of the diversion. This is causing a contradiction to the requirement of condition 13 of the permit.

This situation has been discussed in correspondence between CEM, IDF&G and FERC. Attached is a copy of the recent FERC's letter on this matter.

To alleviate this situation we propose to disable the bypass valve during the non irrigation months, i.e. October through February.

We respectfully request your approval on the above stated proposal to resolve the conflicting requirements of conditions 13 and 15 of the subject permit.

If you have any questions concerning this matter, please feel free to contact me. Thank you very much for your cooperation in resolving this situation.

Sincerely,

Maher F. Wissa
President

Attachments: 1

c: Mr. Dave Walrath,
Idaho Department of Water Resources
900 N. Skyline Drive
Idaho Falls, ID 83402

FEDERAL ENERGY REGULATORY COMMISSION

WASHINGTON, D. C. 20426

Project No. 7447-024 & 025--Idaho
Portneuf Project
Commercial Energy Management Inc.

SEP 26 1996

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Maher F. Wissa
Commercial Energy Management Inc.
P.O. Box 4518
Pocatello, ID 83205

Dear Mr. Wissa:

We received your March 11, 1996 report, responding to our letter of February 13, 1996. We also received your July 17, 1996 report addressing issues raised during the July 16 inspection of your project by the Commission's Portland Regional Office (PRO).

License Requirements

Article 403 requires that you operate the project in an instantaneous run-of-river mode, where fluctuation of the reservoir surface elevation is minimized, maintaining a discharge downstream of the tailrace that approximates reservoir inflow. Article 403 also requires that you pass a continuous minimum flow of 40 cubic feet per second (cfs) over the diversion spillway.

Minimum Flow Compliance

In our February 13, 1996 letter to you, we requested information on a reported minimum flow deficiency that occurred on December 5, 1995. The information in your March 11, 1996 report indicates that there were deficiencies on both December 4 and 5, 1995. You attributed these to interruptions in generation caused by periods of "utility out of tolerance" trips, which cause the turbine bypass valve to open when generation stops. You indicated that the flow of water through the bypass valve is greater than the flow used for power generation. Therefore, when the turbine stops and the valve opens, the diversion pool depth and minimum flow spill are reduced, resulting in minimum flow deficiencies.

In addition, we also received a report that project records indicated that minimum flows had not been passed on multiple days during January and February 1996. As a result of discussion with PRO staff, you filed your July 17, 1996 report. According to records included in that report, flows of 39.7 cfs were recorded on January 2, 3, 4, 6, 7, 20, 21, 22, 28, and 31, 1996 and February 5 through 8, 10 through 13, and 15 through 22, 1996. You explained in your filing that you discussed with PRO staff that

you believe that 39.7 cfs is equal to the required minimum flow of 40 cfs. You also indicated that you have adjusted the project automatic controller to a higher setpoint to help avoid future problems. You stated that you have no knowledge of any environmental damage from the January and February reductions in bypass flow.

Run-of-River Requirements

As indicated in our February 13, 1996 letter to you, project records indicate that streamflow fluctuations that are produced when the project shuts off may violate the run-of-river requirement of article 403. We previously noted, in our August 31, 1995 letter, that your records showed that changes in project operation sometimes changed bypass reach flows by a factor of two to four in one hour or less. In our February 13, 1996 letter, we requested a plan to decrease these flow fluctuations through stuctural or operational modifications.

You responded in your March 11, 1996 report by indicating that this problem is caused by the turbine bypass valve, installed to allow water to continue to flow past the powerhouse in the event of a shutdown, thereby decreasing fluctuations downstream. You indicated in your March 11 report that the valve creates the problem rather than solving it. You said that one solution would be to have the Idaho Department of Fish and Game (IDFG) discuss the necessity of the valve with the Idaho Department of Water Resources (IDWR), or for you to disable the automatic function of the valve during low flow periods.

Conclusions and Requested Actions

Minimum flow compliance. After reviewing the available information, we have concluded that minimum flow deficiencies that were recorded on December 4 and 5, 1995, were the result of the operation of the turbine bypass valve following unplanned project shutdowns. Submission of a plan or amendment request regarding reductions in flow fluctuations, as requested below, should accelerate the solving this problem. You have indicated that you have already adjusted the project automatic controller to help avoid future problems. The minimum flow deficiencies that occurred on December 4 and 5, 1995 will not be considered violations of article 403 of the project license. However, future deficiencies associated with the operation of the bypass valve may be considered violations.

According to your July 17, 1996 report, you do not consider the deficiencies recorded on 26 days in January February 1996 to be violations of article 403. You stated that you understand

39.7 cfs to be equal to 40 cfs. We realize that, in our August 31, 1995 letter to you, we identified 154 days of noncompliance based on flow records rounding to less than 40 cfs. That method was used because your bypass flow records were calculated from water levels recorded in tenths of a foot that could not be extrapolated into continuous cfs measurements. Therefore, our August 1995 tabulation used a conservative cutoff for the number days when the minimum flow was not passed. It should not convey that a flow of 39.7 cfs complies with a requirement for 40 cfs.

After reviewing the available information, we have determined that the 26 days in January and February 1996 for which bypass flows of 39.7 cfs were recorded will not be considered violations of license article 403. In the future, however, flows recorded as less than 40 cfs, such as those recorded in January and February 1996, may be considered violations of article 403.

Run-of-river requirements. You have indicated that the flow fluctuations that occur in the river during project shutdowns, and some minimum flow deficiencies, are the result of the operation of the turbine bypass valve. You need to provide the Commission with a plan to reduce fluctuations and deficiencies as soon as possible. A plan could include adjustment of the installed valve, replacement with a more appropriate valve, or use of a different release method. Physical modification of the bypass valve would require the filing of revised as-built exhibits affected by any modifications.

If no possible structural or operational modifications to reduce river level fluctuations are deemed possible, you should consult with the IDWR, IDFG and U.S. Fish and Wildlfe Service and file with the Commission a request for amendment of the run-of-river requirement of article 403. Such an amendment request could pursue quantification of an allowable fluctuation rate and how compliance would be determined on a daily basis.

Please file either a plan to reduce river level fluctuations or an amendment request within 45 days of the date of this letter. Either filing should include copies of written comments from the agencies named above.

Seven copies of the requested material should be filed with:

The Secretary
Federal Energy Regulatory Commission
Mail Code: DPCA, HL21.1
888 First Street, N.E.
Washington, D.C. 20426

Also, please supply our Portland Regional Office with a copy of the requested filing, and any future filings. Thank you for your cooperation in this matter. If you have any questions, contact Pete Yarrington at (202) 219-2939.

Sincerely,

Joseph D Morgan

J. Mark Robinson
Director, Division of
Licensing and Compliance

cc: Jerry Conley, Director
Idaho Department of Fish and Game
600 S. Walnut Street
P.O. Box 25
Boise, ID 83707

Mr. Dave Walrath
Idaho Department of Water Resources
900 N. Skyline Drive
Idaho Falls, ID 83402

Mr. Charles H. Lobdell
U.S. Fish and Wildlife Service
Idaho State Office, Ecological Services
4696 Overland Road
Boise, ID 83705

CEM COMMERCIAL ENERGY MGMT, INC.
P.O. Box 4518 • Pocatello, Idaho 83205 • Telephone (208) 237-3563 • Fax (208) 237-3563

September 24, 1996
Ref: CEM/1073

Mr. L. GLEN SAXTON
Chief, Water Allocation Bureau
State of Idaho, Department of Water Resources
1301 North Orchard Street
Statehouse Mail
Boise, ID 83720-9000

RECEIVED
SEP 27 1996
Department of Water Resources

Subject: Portneuf River Hydroelectric Project
Lava Hot Springs, Idaho
FERC Project No. 7447-002
Permit No. 29-7699

Dear Mr. Saxton:

Attached please find copies of the bypass channel flow records for the period from May 1 to August 31, 1996.

Sincerely,

Maher F. Wissa
President

Attachments: 63 sheets

DATE 05-01-96

TIME	LEVEL	FLOW
23:00:00	46.2	42.6
22:00:00	46.1	42.1
21:00:00	46.1	42.1
20:00:00	45.9	41.1
19:00:00	45.8	40.7
18:00:00	45.7	40.2
17:00:00	45.8	40.7
16:00:00	45.8	40.7
15:00:00	46.0	41.6
14:00:00	46.1	42.1
13:00:00	46.4	43.5
12:00:00	46.4	43.5
11:00:00	46.6	44.5
10:00:00	46.4	43.5
09:00:00	46.5	44.0
08:00:00	46.4	43.5
07:00:00	47.4	48.5
06:00:00	47.3	48.0
05:00:00	47.3	48.0
04:00:00	47.3	48.0
03:00:00	47.3	48.0
02:00:00	47.3	48.0
01:00:00	46.8	45.5
00:00:00	46.4	43.5

DATE 05-03-96

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.8	40.7
21:00:00	46.0	41.6
20:00:00	46.0	41.6
19:00:00	46.0	41.6
18:00:00	46.0	41.6
17:00:00	46.0	41.6
16:00:00	46.2	42.6
15:00:00	46.4	43.5
14:00:00	46.5	44.0
13:00:00	46.5	44.0
12:00:00	46.7	45.0
11:00:00	46.7	45.0
10:00:00	46.8	45.5
09:00:00	46.8	45.5
08:00:00	46.8	45.5
07:00:00	46.7	45.0
06:00:00	46.6	44.5
05:00:00	46.5	44.0
04:00:00	46.5	44.0
03:00:00	46.5	44.0
02:00:00	46.5	44.0
01:00:00	46.5	44.0
00:00:00	46.4	43.5

DATE 05-02-96

TIME	LEVEL	FLOW
23:00:00	46.4	43.5
22:00:00	46.3	43.0
21:00:00	46.2	42.6
20:00:00	46.1	42.1
19:00:00	46.2	42.6
18:00:00	46.2	42.6
17:00:00	46.2	42.6
16:00:00	46.3	43.0
15:00:00	46.5	44.0
14:00:00	46.6	44.5
13:00:00	46.7	45.0
12:00:00	47.0	46.5
11:00:00	47.2	47.5
10:00:00	47.4	48.5
09:00:00	47.4	48.5
08:00:00	47.3	48.0
07:00:00	47.2	47.5
06:00:00	46.8	45.5
05:00:00	46.5	44.0
04:00:00	46.5	44.0
03:00:00	46.4	43.5
02:00:00	46.5	44.0
01:00:00	46.5	44.0
00:00:00	46.3	43.0

DATE 05-05-96

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.7	40.2
21:00:00	45.7	40.2
20:00:00	45.8	40.7
19:00:00	46.0	41.6
18:00:00	46.1	42.1
17:00:00	46.0	41.6
16:00:00	45.9	41.1
15:00:00	45.8	40.7
14:00:00	45.7	40.2
13:00:00	45.8	40.7
12:00:00	45.8	40.7
11:00:00	46.0	41.6
10:00:00	46.0	41.6
09:00:00	46.0	41.6
08:00:00	46.1	42.1
07:00:00	46.0	41.6
06:00:00	46.0	41.6
05:00:00	46.1	42.1
04:00:00	46.2	42.6
03:00:00	45.9	41.1
02:00:00	45.7	40.2
01:00:00	45.7	40.2
00:00:00	46.2	42.6

DATE 05-04-96

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.7	40.2
21:00:00	45.7	40.2
20:00:00	45.9	41.1
19:00:00	45.7	40.2
18:00:00	45.7	40.2
17:00:00	45.8	40.7
16:00:00	45.8	40.7
15:00:00	46.0	41.6
14:00:00	46.0	41.6
13:00:00	45.7	40.2
12:00:00	45.7	40.2
11:00:00	45.7	40.2
10:00:00	45.7	40.2
09:00:00	45.9	41.1
08:00:00	45.9	41.1
07:00:00	45.9	41.1
06:00:00	45.8	40.7
05:00:00	45.7	40.2
04:00:00	45.7	40.2
03:00:00	45.7	40.2
02:00:00	45.7	40.2
01:00:00	45.8	40.7
00:00:00	46.0	41.6

DATE 05-07-96

TIME	LEVEL	FLOW
23:00:00	46.0	41.6
22:00:00	46.3	43.0
21:00:00	46.3	43.0
20:00:00	46.3	43.0
19:00:00	45.8	40.7
18:00:00	45.7	40.2
17:00:00	45.7	40.2
16:00:00	45.7	40.2
15:00:00	45.9	41.1
14:00:00	46.0	41.6
13:00:00	46.0	41.6
12:00:00	46.0	41.6
11:00:00	46.1	42.1
10:00:00	46.1	42.1
09:00:00	46.1	42.1
08:00:00	46.0	41.6
07:00:00	45.9	41.1
06:00:00	46.6	44.5
05:00:00	46.5	44.0
04:00:00	46.3	43.0
03:00:00	46.2	42.6
02:00:00	46.0	41.6
01:00:00	45.7	40.2
00:00:00	45.8	40.7

DATE 05-06-96

TIME	LEVEL	FLOW
23:00:00	46.1	42.1
22:00:00	46.3	43.0
21:00:00	46.4	43.5
20:00:00	46.8	45.5
19:00:00	55.2	145.7
18:00:00	45.8	40.7
17:00:00	45.9	41.1
16:00:00	45.8	40.7
15:00:00	45.8	40.7
14:00:00	45.7	40.2
13:00:00	45.7	40.2
12:00:00	45.8	40.7
11:00:00	45.8	40.7
10:00:00	46.0	41.6
09:00:00	45.8	40.7
08:00:00	45.7	40.2
07:00:00	46.0	41.6
06:00:00	46.0	41.6
05:00:00	46.0	41.6
04:00:00	46.1	42.1
03:00:00	46.2	42.6
02:00:00	46.0	41.6
01:00:00	45.8	40.7
00:00:00	45.8	40.7

DATE 05-09-96

TIME	LEVEL	FLOW
23:00:00	46.4	43.5
22:00:00	46.3	43.0
21:00:00	46.3	43.0
20:00:00	46.4	43.5
19:00:00	46.5	44.0
18:00:00	45.7	40.2
17:00:00	46.1	42.1
16:00:00	50.4	74.6
15:00:00	56.5	169.0
14:00:00	52.0	95.4
13:00:00	47.8	50.5
12:00:00	47.9	51.0
11:00:00	47.9	51.0
10:00:00	47.9	51.0
09:00:00	48.0	51.5
08:00:00	47.9	51.0
07:00:00	47.9	51.0
06:00:00	47.7	50.0
05:00:00	47.6	49.5
04:00:00	47.4	48.5
03:00:00	47.2	47.5
02:00:00	47.0	46.5
01:00:00	46.8	45.5
00:00:00	46.5	44.0

DATE 05-08-96

TIME	LEVEL	FLOW
23:00:00	46.3	43.0
22:00:00	46.3	43.0
21:00:00	46.4	43.5
20:00:00	46.5	44.0
19:00:00	46.5	44.0
18:00:00	46.6	44.5
17:00:00	46.7	45.0
16:00:00	46.7	45.0
15:00:00	46.7	45.0
14:00:00	46.8	45.5
13:00:00	46.9	46.0
12:00:00	47.0	46.5
11:00:00	47.0	46.5
10:00:00	47.0	46.5
09:00:00	47.1	47.0
08:00:00	47.0	46.5
07:00:00	47.2	47.5
06:00:00	47.1	47.0
05:00:00	47.0	46.5
04:00:00	46.9	46.0
03:00:00	46.7	45.0
02:00:00	46.4	43.5
01:00:00	46.3	43.0
00:00:00	46.1	42.1

DATE 05-11-96

TIME	LEVEL	FLOW
23:00:00	46.1	42.1
22:00:00	45.7	40.2
21:00:00	45.7	40.2
20:00:00	46.2	42.6
19:00:00	47.2	47.5
18:00:00	49.3	62.4
17:00:00	54.3	130.5
16:00:00	46.4	43.5
15:00:00	46.6	44.5
14:00:00	46.5	44.0
13:00:00	46.4	43.5
12:00:00	46.2	42.6
11:00:00	46.1	42.1
10:00:00	46.1	42.1
09:00:00	46.2	42.6
08:00:00	46.5	44.0
07:00:00	46.5	44.0
06:00:00	46.4	43.5
05:00:00	46.3	43.0
04:00:00	46.2	42.6
03:00:00	46.2	42.6
02:00:00	46.1	42.1
01:00:00	46.1	42.1
00:00:00	46.1	42.1

DATE 05-10-96

TIME	LEVEL	FLOW
23:00:00	46.0	41.6
22:00:00	46.1	42.1
21:00:00	46.0	41.6
20:00:00	46.2	42.6
19:00:00	46.4	43.5
18:00:00	46.8	45.5
17:00:00	47.8	50.5
16:00:00	48.1	52.1
15:00:00	48.2	52.8
14:00:00	48.3	53.6
13:00:00	48.4	54.3
12:00:00	48.5	55.1
11:00:00	48.5	55.1
10:00:00	48.5	55.1
09:00:00	48.5	55.1
08:00:00	48.5	55.1
07:00:00	48.5	55.1
06:00:00	48.4	54.3
05:00:00	48.3	53.6
04:00:00	48.2	52.8
03:00:00	48.1	52.1
02:00:00	47.8	50.5
01:00:00	47.3	48.0
00:00:00	46.7	45.0

DATE 05-13-96

TIME	LEVEL	FLOW
23:00:00	46.3	43.0
22:00:00	46.7	45.0
21:00:00	46.6	44.5
20:00:00	46.9	46.0
19:00:00	48.0	51.5
18:00:00	48.1	52.1
17:00:00	48.0	51.5
16:00:00	48.0	51.5
15:00:00	48.1	52.1
14:00:00	48.0	51.5
13:00:00	48.1	52.1
12:00:00	48.1	52.1
11:00:00	48.1	52.1
10:00:00	48.0	51.5
09:00:00	48.0	51.5
08:00:00	47.9	51.0
07:00:00	49.1	60.5
06:00:00	48.7	56.8
05:00:00	48.4	54.3
04:00:00	48.0	51.5
03:00:00	47.6	49.5
02:00:00	47.2	47.5
01:00:00	46.8	45.5
00:00:00	46.4	43.5

DATE 05-12-96

TIME	LEVEL	FLOW
23:00:00	46.3	43.0
22:00:00	45.7	40.2
21:00:00	45.7	40.2
20:00:00	46.4	43.5
19:00:00	46.0	41.6
18:00:00	45.9	41.1
17:00:00	45.9	41.1
16:00:00	46.2	42.6
15:00:00	47.3	48.0
14:00:00	47.3	48.0
13:00:00	47.3	48.0
12:00:00	47.5	49.0
11:00:00	47.5	49.0
10:00:00	47.4	48.5
09:00:00	47.4	48.5
08:00:00	47.2	47.5
07:00:00	48.7	56.8
06:00:00	48.5	55.1
05:00:00	48.3	53.6
04:00:00	48.0	51.5
03:00:00	47.7	50.0
02:00:00	47.3	48.0
01:00:00	46.8	45.5
00:00:00	46.4	43.5

DATE 05-15-96

TIME	LEVEL	FLOW
23:00:00	44.6	60.0
22:00:00	46.1	67.3
21:00:00	46.2	67.8
20:00:00	47.1	72.5
19:00:00	47.9	76.8
18:00:00	48.8	83.7
17:00:00	48.6	81.9
16:00:00	48.4	80.2
15:00:00	48.4	80.2
14:00:00	48.3	79.4
13:00:00	48.2	78.7
12:00:00	48.2	78.7
11:00:00	48.2	78.7
10:00:00	48.1	78.0
09:00:00	48.1	78.0
08:00:00	47.9	76.8
07:00:00	48.5	81.0
06:00:00	48.5	81.0
05:00:00	48.3	79.4
04:00:00	48.1	78.0
03:00:00	47.9	76.8
02:00:00	47.7	75.7
01:00:00	47.6	75.2
00:00:00	47.2	73.0

DATE 05-14-96

TIME	LEVEL	FLOW
23:00:00	46.9	71.5
22:00:00	46.7	70.4
21:00:00	46.4	68.9
20:00:00	46.3	68.4
19:00:00	45.7	65.3
18:00:00	46.1	67.3
17:00:00	46.2	67.8
16:00:00	44.6	60.0
15:00:00	45.8	65.8
14:00:00	48.0	77.3
13:00:00	48.0	77.3
12:00:00	48.0	77.3
11:00:00	47.9	76.8
10:00:00	47.9	76.8
09:00:00	47.8	76.2
08:00:00	47.6	75.2
07:00:00	47.5	74.6
06:00:00	50.4	74.6
05:00:00	50.3	73.4
04:00:00	49.8	67.7
03:00:00	49.4	63.5
02:00:00	49.0	59.5
01:00:00	48.6	55.9
00:00:00	47.7	50.0

DATE 05-17-96

TIME	LEVEL	FLOW
23:00:00	48.5	371.0
22:00:00	48.4	369.6
21:00:00	47.7	361.3
20:00:00	47.2	355.8
19:00:00	48.6	337.8
18:00:00	48.1	319.8
17:00:00	48.1	296.9
16:00:00	56.5	197.0
15:00:00	55.3	175.1
14:00:00	55.0	169.9
13:00:00	51.5	115.2
12:00:00	50.7	104.7
11:00:00	50.8	106.0
10:00:00	50.3	99.8
09:00:00	50.1	97.4
08:00:00	50.0	96.2
07:00:00	50.5	102.2
06:00:00	50.3	99.8
05:00:00	50.2	98.6
04:00:00	50.1	97.4
03:00:00	49.9	95.1
02:00:00	50.7	104.7
01:00:00	52.0	122.2
00:00:00	52.4	128.0

DATE 05-16-96

TIME	LEVEL	FLOW
23:00:00	51.4	113.8
22:00:00	51.0	108.5
21:00:00	50.5	102.2
20:00:00	50.4	101.0
19:00:00	50.2	98.6
18:00:00	49.3	88.6
17:00:00	48.3	79.4
16:00:00	47.1	72.5
15:00:00	46.4	68.9
14:00:00	46.6	69.9
13:00:00	47.7	75.7
12:00:00	47.1	72.5
11:00:00	46.7	70.4
10:00:00	46.4	68.9
09:00:00	46.4	68.9
08:00:00	46.5	69.4
07:00:00	46.4	68.9
06:00:00	46.3	68.4
05:00:00	46.2	67.8
04:00:00	45.9	66.3
03:00:00	45.7	65.3
02:00:00	45.5	64.4
01:00:00	45.8	65.8
00:00:00	46.5	69.4

DATE 05-19-96

TIME	LEVEL	FLOW
23:00:00	54.0	710.1
22:00:00	54.2	715.3
21:00:00	54.3	718.0
20:00:00	54.6	726.0
19:00:00	54.8	731.4
18:00:00	55.1	739.6
17:00:00	55.4	747.8
16:00:00	55.8	758.9
15:00:00	55.3	745.0
14:00:00	55.9	761.7
13:00:00	56.1	767.3
12:00:00	55.9	761.7
11:00:00	55.8	758.9
10:00:00	55.3	745.0
09:00:00	55.1	739.6
08:00:00	54.7	728.7
07:00:00	54.2	715.3
06:00:00	55.2	742.3
05:00:00	55.2	742.3
04:00:00	55.3	745.0
03:00:00	55.4	747.8
02:00:00	55.8	758.9
01:00:00	55.2	742.3
00:00:00	55.8	758.9

DATE 05-18-96

TIME	LEVEL	FLOW
23:00:00	55.9	761.7
22:00:00	55.8	758.9
21:00:00	53.7	702.2
20:00:00	56.4	612.6
19:00:00	56.0	603.1
18:00:00	55.5	591.4
17:00:00	55.0	579.9
16:00:00	54.6	570.9
15:00:00	54.1	559.8
14:00:00	54.0	557.6
13:00:00	54.2	562.0
12:00:00	54.0	557.6
11:00:00	52.7	530.1
10:00:00	52.6	528.0
09:00:00	53.3	457.5
08:00:00	52.2	435.0
07:00:00	50.3	399.5
06:00:00	50.0	394.3
05:00:00	49.3	382.9
04:00:00	49.6	387.7
03:00:00	49.8	391.0
02:00:00	49.4	384.5
01:00:00	49.2	381.3
00:00:00	48.8	375.3

DATE 05-21-96

TIME	LEVEL	FLOW
23:00:00	49.7	502.2
22:00:00	49.9	506.2
21:00:00	50.1	510.3
20:00:00	50.2	512.4
19:00:00	50.5	518.7
18:00:00	50.6	520.9
17:00:00	51.1	531.7
16:00:00	51.4	538.4
15:00:00	52.0	552.1
14:00:00	52.1	554.5
13:00:00	51.6	543.0
12:00:00	49.2	596.8
11:00:00	49.5	602.9
10:00:00	49.6	605.0
09:00:00	50.1	615.7
08:00:00	50.4	622.3
07:00:00	50.9	633.5
06:00:00	51.2	640.5
05:00:00	50.9	633.5
04:00:00	50.3	620.1
03:00:00	51.4	645.1
02:00:00	51.8	654.6
01:00:00	52.4	669.2
00:00:00	52.7	676.7

DATE 05-20-96

TIME	LEVEL	FLOW
23:00:00	52.4	669.2
22:00:00	52.4	669.2
21:00:00	52.6	674.2
20:00:00	52.6	674.2
19:00:00	52.5	671.7
18:00:00	51.6	649.9
17:00:00	52.2	664.3
16:00:00	52.1	661.9
15:00:00	51.4	645.1
14:00:00	51.9	657.0
13:00:00	52.5	671.7
12:00:00	52.3	666.8
11:00:00	52.4	669.2
10:00:00	53.2	689.3
09:00:00	53.0	684.2
08:00:00	52.9	681.7
07:00:00	53.0	684.2
06:00:00	52.8	679.2
05:00:00	52.9	681.7
04:00:00	52.8	679.2
03:00:00	52.8	679.2
02:00:00	52.7	676.7
01:00:00	52.8	679.2
00:00:00	52.7	676.7

DATE 05-23-96

TIME	LEVEL	FLOW
23:00:00	51.0	457.6
22:00:00	51.1	459.8
21:00:00	51.3	464.2
20:00:00	51.5	468.7
19:00:00	52.4	489.5
18:00:00	51.6	471.0
17:00:00	48.0	471.3
16:00:00	48.6	481.3
15:00:00	49.3	494.3
14:00:00	49.3	494.3
13:00:00	49.2	492.4
12:00:00	49.2	492.4
11:00:00	49.2	492.4
10:00:00	49.7	502.2
09:00:00	50.4	516.6
08:00:00	50.8	525.2
07:00:00	50.9	527.4
06:00:00	51.5	540.7
05:00:00	51.3	536.2
04:00:00	51.9	549.8
03:00:00	52.2	556.8
02:00:00	51.9	549.8
01:00:00	52.6	566.3
00:00:00	52.4	561.5

DATE 05-22-96

TIME	LEVEL	FLOW
23:00:00	51.9	549.8
22:00:00	51.9	549.8
21:00:00	52.0	552.1
20:00:00	51.7	545.2
19:00:00	51.1	531.7
18:00:00	51.6	543.0
17:00:00	51.3	536.2
16:00:00	52.3	559.2
15:00:00	51.6	543.0
14:00:00	51.7	545.2
13:00:00	51.4	538.4
12:00:00	51.3	536.2
11:00:00	51.7	545.2
10:00:00	50.5	518.7
09:00:00	48.7	483.1
08:00:00	48.9	486.7
07:00:00	49.4	496.2
06:00:00	48.9	486.7
05:00:00	49.2	492.4
04:00:00	49.7	502.2
03:00:00	49.7	502.2
02:00:00	49.7	502.2
01:00:00	49.4	496.2
00:00:00	49.4	496.2

DATE 05-25-96

TIME	LEVEL	FLOW
23:00:00	50.5	446.9
22:00:00	50.7	451.1
21:00:00	50.7	451.1
20:00:00	51.1	459.8
19:00:00	51.0	457.6
18:00:00	50.8	453.3
17:00:00	50.8	453.3
16:00:00	50.8	453.3
15:00:00	50.8	453.3
14:00:00	50.9	455.5
13:00:00	50.9	455.5
12:00:00	51.1	459.8
11:00:00	50.7	451.1
10:00:00	51.0	457.6
09:00:00	50.8	453.3
08:00:00	51.0	457.6
07:00:00	50.6	449.0
06:00:00	51.0	457.6
05:00:00	50.7	451.1
04:00:00	50.3	442.7
03:00:00	50.9	455.5
02:00:00	50.5	446.9
01:00:00	50.1	438.6
00:00:00	50.5	446.9

DATE 05-24-96

TIME	LEVEL	FLOW
23:00:00	50.9	455.5
22:00:00	50.2	440.6
21:00:00	50.0	436.5
20:00:00	50.3	442.7
19:00:00	51.6	471.0
18:00:00	51.3	464.2
17:00:00	51.3	464.2
16:00:00	51.8	475.5
15:00:00	51.3	464.2
14:00:00	49.5	426.6
13:00:00	49.6	428.5
12:00:00	49.9	434.5
11:00:00	50.2	440.6
10:00:00	50.6	449.0
09:00:00	50.4	444.8
08:00:00	49.8	432.5
07:00:00	49.7	430.5
06:00:00	50.5	446.9
05:00:00	49.8	432.5
04:00:00	50.0	436.5
03:00:00	50.2	440.6
02:00:00	50.4	444.8
01:00:00	50.9	455.5
00:00:00	51.1	459.8

DATE 05-27-96

TIME	LEVEL	FLOW
23:00:00	50.1	563.0
22:00:00	50.2	565.1
21:00:00	50.6	573.8
20:00:00	50.1	563.0
19:00:00	50.9	580.4
18:00:00	50.1	563.0
17:00:00	50.7	576.0
16:00:00	51.2	587.2
15:00:00	50.9	580.4
14:00:00	51.7	598.7
13:00:00	51.3	589.5
12:00:00	51.6	596.4
11:00:00	51.2	587.2
10:00:00	51.5	594.1
09:00:00	51.2	587.2
08:00:00	51.2	587.2
07:00:00	51.1	584.9
06:00:00	51.0	582.7
05:00:00	50.4	569.4
04:00:00	50.3	567.3
03:00:00	50.5	571.6
02:00:00	50.2	565.1
01:00:00	50.1	563.0
00:00:00	50.3	567.3

DATE 05-26-96

TIME	LEVEL	FLOW
23:00:00	50.4	569.4
22:00:00	50.4	569.4
21:00:00	48.7	535.0
20:00:00	48.5	531.4
19:00:00	48.7	535.0
18:00:00	49.2	544.6
17:00:00	50.3	567.3
16:00:00	53.4	513.6
15:00:00	53.3	511.2
14:00:00	52.9	501.4
13:00:00	52.1	482.4
12:00:00	51.6	471.0
11:00:00	51.7	473.2
10:00:00	51.3	464.2
09:00:00	51.1	459.8
08:00:00	50.6	449.0
07:00:00	50.2	440.6
06:00:00	50.3	442.7
05:00:00	50.4	444.8
04:00:00	50.5	446.9
03:00:00	50.5	446.9
02:00:00	50.5	446.9
01:00:00	50.6	449.0
00:00:00	50.6	449.0

DATE 05-29-96

TIME	LEVEL	FLOW
23:00:00	50.6	580.1
22:00:00	50.2	573.9
21:00:00	51.3	591.1
20:00:00	50.7	581.7
19:00:00	51.3	591.1
18:00:00	50.7	581.7
17:00:00	50.8	583.3
16:00:00	51.0	586.4
15:00:00	52.1	603.7
14:00:00	53.2	621.2
13:00:00	53.1	619.6
12:00:00	53.4	624.4
11:00:00	51.3	626.6
10:00:00	52.2	641.1
09:00:00	51.3	626.6
08:00:00	51.2	625.0
07:00:00	51.8	634.7
06:00:00	49.0	590.1
05:00:00	48.4	580.7
04:00:00	48.3	579.1
03:00:00	48.1	576.0
02:00:00	48.3	579.1
01:00:00	48.6	583.8
00:00:00	48.0	574.4

DATE 05-28-96

TIME	LEVEL	FLOW
23:00:00	48.3	579.1
22:00:00	48.8	586.9
21:00:00	49.4	596.4
20:00:00	49.8	602.7
19:00:00	50.1	607.5
18:00:00	50.5	613.8
17:00:00	50.9	620.2
16:00:00	51.0	621.8
15:00:00	52.1	608.2
14:00:00	52.0	605.8
13:00:00	51.7	598.7
12:00:00	51.0	582.7
11:00:00	50.9	580.4
10:00:00	50.2	565.1
09:00:00	50.1	563.0
08:00:00	50.3	567.3
07:00:00	49.8	556.7
06:00:00	50.2	565.1
05:00:00	49.5	550.6
04:00:00	49.6	552.6
03:00:00	49.7	554.6
02:00:00	49.5	550.6
01:00:00	49.7	554.6
00:00:00	49.8	556.7

DATE 05-31-96

TIME	LEVEL	FLOW
23:00:00	48.3	475.7
22:00:00	48.0	471.3
21:00:00	48.2	474.2
20:00:00	50.2	503.6
19:00:00	49.8	497.7
18:00:00	50.2	503.6
17:00:00	49.7	496.2
16:00:00	50.6	509.6
15:00:00	51.9	529.1
14:00:00	52.3	535.1
13:00:00	52.4	536.6
12:00:00	51.3	520.0
11:00:00	51.9	529.1
10:00:00	51.3	520.0
09:00:00	51.7	526.1
08:00:00	51.9	529.1
07:00:00	51.7	526.1
06:00:00	51.9	529.1
05:00:00	50.9	514.0
04:00:00	51.5	523.0
03:00:00	52.4	536.6
02:00:00	52.5	538.2
01:00:00	52.6	539.7
00:00:00	52.5	538.2

DATE 05-30-96

TIME	LEVEL	FLOW
23:00:00	52.5	538.2
22:00:00	53.4	551.9
21:00:00	53.3	550.4
20:00:00	53.1	547.3
19:00:00	53.0	545.8
18:00:00	53.1	547.3
17:00:00	52.7	541.2
16:00:00	53.7	556.5
15:00:00	53.0	545.8
14:00:00	52.5	538.2
13:00:00	50.0	535.7
12:00:00	50.0	535.7
11:00:00	50.8	547.9
10:00:00	50.2	538.8
09:00:00	50.0	535.7
08:00:00	50.9	549.4
07:00:00	51.3	555.6
06:00:00	49.3	560.0
05:00:00	49.7	566.2
04:00:00	49.8	567.7
03:00:00	50.4	577.0
02:00:00	49.5	563.1
01:00:00	49.2	558.4
00:00:00	49.9	569.3

DATE 06-02-96

TIME	LEVEL	FLOW
23:00:00	52.8	249.1
22:00:00	53.9	269.2
21:00:00	53.5	261.8
20:00:00	53.4	259.9
19:00:00	54.0	271.1
18:00:00	52.9	250.8
17:00:00	49.5	197.0
16:00:00	50.0	203.9
15:00:00	49.7	199.7
14:00:00	50.4	209.8
13:00:00	50.4	209.8
12:00:00	50.0	203.9
11:00:00	43.6	195.8
10:00:00	44.1	200.3
09:00:00	45.1	209.6
08:00:00	45.4	212.4
07:00:00	49.1	251.2
06:00:00	49.0	249.8
05:00:00	49.5	257.1
04:00:00	49.5	257.1
03:00:00	49.4	255.6
02:00:00	49.2	252.7
01:00:00	49.9	263.2
00:00:00	51.5	290.1

DATE 06-01-96

TIME	LEVEL	FLOW
23:00:00	51.2	284.8
22:00:00	49.3	254.1
21:00:00	49.5	257.1
20:00:00	49.6	258.6
19:00:00	49.5	257.1
18:00:00	49.5	257.1
17:00:00	50.1	266.4
16:00:00	49.8	261.6
15:00:00	49.9	263.2
14:00:00	51.6	291.9
13:00:00	51.1	294.9
12:00:00	51.0	293.1
11:00:00	47.9	538.5
10:00:00	53.2	665.8
09:00:00	44.7	523.7
08:00:00	49.4	496.2
07:00:00	50.0	508.3
06:00:00	50.5	518.7
05:00:00	48.5	479.5
04:00:00	48.5	479.5
03:00:00	48.7	483.1
02:00:00	47.9	469.8
01:00:00	48.7	483.1
00:00:00	48.5	479.5

DATE 06-04-96

TIME	LEVEL	FLOW
23:00:00	53.4	259.9
22:00:00	53.6	263.6
21:00:00	53.7	265.5
20:00:00	53.7	265.5
19:00:00	54.0	271.1
18:00:00	53.9	269.2
17:00:00	53.8	267.3
16:00:00	52.9	250.8
15:00:00	52.4	242.0
14:00:00	52.2	238.6
13:00:00	53.5	261.8
12:00:00	53.9	269.2
11:00:00	53.8	267.3
10:00:00	53.7	265.5
09:00:00	53.5	261.8
08:00:00	53.6	263.6
07:00:00	53.5	261.8
06:00:00	53.5	261.8
05:00:00	53.3	258.1
04:00:00	53.4	259.9
03:00:00	53.2	256.3
02:00:00	52.9	250.8
01:00:00	52.9	250.8
00:00:00	52.9	250.8

DATE 06-03-96

TIME	LEVEL	FLOW
23:00:00	52.7	247.3
22:00:00	52.7	247.3
21:00:00	52.5	243.8
20:00:00	52.8	249.1
19:00:00	52.4	242.0
18:00:00	52.4	242.0
17:00:00	52.6	245.5
16:00:00	52.9	250.8
15:00:00	52.6	245.5
14:00:00	53.1	254.4
13:00:00	53.1	254.4
12:00:00	52.8	249.1
11:00:00	52.8	249.1
10:00:00	52.9	250.8
09:00:00	53.0	252.6
08:00:00	53.1	254.4
07:00:00	52.8	249.1
06:00:00	52.9	250.8
05:00:00	52.9	250.8
04:00:00	52.9	250.8
03:00:00	53.0	252.6
02:00:00	53.0	252.6
01:00:00	53.1	254.4
00:00:00	53.0	252.6

DATE 06-06-96

TIME	LEVEL	FLOW
23:00:00	52.6	245.5
22:00:00	52.6	245.5
21:00:00	52.2	238.6
20:00:00	51.9	233.5
19:00:00	51.7	230.2
18:00:00	51.8	231.8
17:00:00	52.1	236.9
16:00:00	52.4	242.0
15:00:00	52.5	243.8
14:00:00	52.5	243.8
13:00:00	52.6	245.5
12:00:00	52.5	243.8
11:00:00	52.8	249.1
10:00:00	52.6	245.5
09:00:00	52.8	249.1
08:00:00	52.7	247.3
07:00:00	52.7	247.3
06:00:00	52.5	243.8
05:00:00	52.5	243.8
04:00:00	52.5	243.8
03:00:00	53.0	252.6
02:00:00	54.1	273.0
01:00:00	54.5	280.7
00:00:00	54.1	273.0

DATE 06-05-96

TIME	LEVEL	FLOW
23:00:00	53.0	252.6
22:00:00	51.9	233.5
21:00:00	52.1	236.9
20:00:00	52.1	236.9
19:00:00	52.1	236.9
18:00:00	52.1	236.9
17:00:00	52.5	243.8
16:00:00	53.0	252.6
15:00:00	53.9	269.2
14:00:00	54.2	274.9
13:00:00	54.0	271.1
12:00:00	54.3	276.9
11:00:00	54.0	271.1
10:00:00	54.5	280.7
09:00:00	54.2	274.9
08:00:00	54.6	282.7
07:00:00	54.3	276.9
06:00:00	54.1	273.0
05:00:00	54.4	278.8
04:00:00	54.5	280.7
03:00:00	54.2	274.9
02:00:00	54.0	271.1
01:00:00	53.8	267.3
00:00:00	53.8	267.3

DATE 06-08-96

TIME	LEVEL	FLOW
23:00:00	49.6	198.4
22:00:00	53.9	269.2
21:00:00	55.3	296.6
20:00:00	52.2	238.6
19:00:00	52.8	249.1
18:00:00	53.0	252.6
17:00:00	52.5	243.8
16:00:00	52.3	240.3
15:00:00	52.9	250.8
14:00:00	53.3	258.1
13:00:00	52.9	250.8
12:00:00	53.0	252.6
11:00:00	53.6	263.6
10:00:00	53.8	267.3
09:00:00	54.3	276.9
08:00:00	53.8	267.3
07:00:00	53.2	256.3
06:00:00	52.9	250.8
05:00:00	53.6	263.6
04:00:00	53.5	261.8
03:00:00	53.3	258.1
02:00:00	53.2	256.3
01:00:00	52.6	245.5
00:00:00	53.5	261.8

DATE 06-07-96

TIME	LEVEL	FLOW
23:00:00	53.2	256.3
22:00:00	53.3	258.1
21:00:00	53.2	256.3
20:00:00	52.3	240.3
19:00:00	52.5	243.8
18:00:00	52.3	240.3
17:00:00	52.3	240.3
16:00:00	52.0	235.2
15:00:00	52.6	245.5
14:00:00	52.5	243.8
13:00:00	52.6	245.5
12:00:00	52.5	243.8
11:00:00	52.4	242.0
10:00:00	52.7	247.3
09:00:00	52.6	245.5
08:00:00	53.3	258.1
07:00:00	52.8	249.1
06:00:00	53.1	254.4
05:00:00	52.7	247.3
04:00:00	52.5	243.8
03:00:00	52.7	247.3
02:00:00	53.4	259.9
01:00:00	53.0	252.6
00:00:00	52.5	243.8

DATE 06-10-96

TIME	LEVEL	FLOW
23:00:00	49.7	199.7
22:00:00	49.7	199.7
21:00:00	49.5	197.0
20:00:00	49.7	199.7
19:00:00	49.8	201.1
18:00:00	49.4	195.7
17:00:00	50.0	203.9
16:00:00	50.9	217.3
15:00:00	50.0	203.9
14:00:00	50.7	214.3
13:00:00	50.8	215.8
12:00:00	51.1	220.5
11:00:00	49.8	201.1
10:00:00	50.2	206.8
09:00:00	50.2	206.8
08:00:00	50.4	209.8
07:00:00	50.6	212.7
06:00:00	50.9	217.3
05:00:00	50.7	214.3
04:00:00	51.0	218.9
03:00:00	50.9	217.3
02:00:00	51.0	218.9
01:00:00	51.0	218.9
00:00:00	50.8	215.8

DATE 06-09-96

TIME	LEVEL	FLOW
23:00:00	51.1	220.5
22:00:00	50.9	217.3
21:00:00	51.1	220.5
20:00:00	50.9	217.3
19:00:00	51.4	225.3
18:00:00	51.3	223.7
17:00:00	51.4	225.3
16:00:00	51.4	225.3
15:00:00	51.4	225.3
14:00:00	51.8	231.8
13:00:00	51.8	231.8
12:00:00	51.8	231.8
11:00:00	50.8	215.8
10:00:00	50.8	215.8
09:00:00	50.7	214.3
08:00:00	51.1	220.5
07:00:00	50.6	212.7
06:00:00	50.3	208.3
05:00:00	50.1	205.4
04:00:00	50.1	205.4
03:00:00	49.9	202.5
02:00:00	48.6	185.8
01:00:00	49.5	197.0
00:00:00	49.2	193.1

DATE 06-12-96

TIME	LEVEL	FLOW
23:00:00	50.6	112.3
22:00:00	50.7	113.5
21:00:00	50.8	114.8
20:00:00	50.8	114.8
19:00:00	51.0	117.4
18:00:00	51.4	122.7
17:00:00	50.9	116.1
16:00:00	50.8	114.8
15:00:00	32.9	74.8
14:00:00	33.8	79.8
13:00:00	37.7	103.5
12:00:00	38.9	111.4
11:00:00	37.0	99.0
10:00:00	37.5	102.2
09:00:00	37.4	101.5
08:00:00	37.6	102.8
07:00:00	37.8	104.1
06:00:00	38.1	106.1
05:00:00	38.5	108.7
04:00:00	38.9	111.4
03:00:00	39.5	115.4
02:00:00	39.2	113.4
01:00:00	40.4	121.6
00:00:00	42.0	133.0

DATE 06-11-96

TIME	LEVEL	FLOW
23:00:00	44.7	153.3
22:00:00	45.3	157.9
21:00:00	46.4	166.6
20:00:00	47.0	171.4
19:00:00	47.4	174.7
18:00:00	47.5	175.5
17:00:00	47.6	176.3
16:00:00	47.9	178.7
15:00:00	47.9	178.7
14:00:00	48.2	181.5
13:00:00	48.5	184.7
12:00:00	48.5	184.7
11:00:00	48.6	185.8
10:00:00	49.2	193.1
09:00:00	49.2	193.1
08:00:00	49.4	195.7
07:00:00	49.9	202.5
06:00:00	49.4	195.7
05:00:00	49.2	193.1
04:00:00	49.6	198.4
03:00:00	49.2	193.1
02:00:00	49.5	197.0
01:00:00	49.3	194.4
00:00:00	49.3	194.4

DATE 06-14-96

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	46.2	42.6
21:00:00	46.4	43.5
20:00:00	46.3	43.0
19:00:00	47.0	46.5
18:00:00	46.3	43.0
17:00:00	46.3	43.0
16:00:00	46.8	45.5
15:00:00	46.9	46.0
14:00:00	46.5	44.0
13:00:00	46.9	46.0
12:00:00	46.7	45.0
11:00:00	46.4	43.5
10:00:00	46.1	42.1
09:00:00	46.4	43.5
08:00:00	46.6	44.5
07:00:00	47.6	49.5
06:00:00	48.5	55.1
05:00:00	49.3	62.4
04:00:00	50.2	72.2
03:00:00	51.0	82.0
02:00:00	51.8	92.6
01:00:00	52.2	98.2
00:00:00	52.3	99.6

DATE 06-13-96

TIME	LEVEL	FLOW
23:00:00	52.2	98.2
22:00:00	52.3	99.6
21:00:00	52.3	99.6
20:00:00	51.7	91.2
19:00:00	47.2	81.5
18:00:00	45.2	71.2
17:00:00	46.0	75.2
16:00:00	46.6	78.4
15:00:00	47.3	82.1
14:00:00	47.7	84.3
13:00:00	48.0	85.9
12:00:00	48.3	88.0
11:00:00	48.5	89.7
10:00:00	48.9	93.3
09:00:00	49.2	96.2
08:00:00	49.6	100.5
07:00:00	50.0	105.0
06:00:00	50.4	109.8
05:00:00	50.7	113.5
04:00:00	50.8	114.8
03:00:00	50.8	114.8
02:00:00	50.7	113.5
01:00:00	50.6	112.3
00:00:00	50.7	113.5

DATE 06-16-96

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	45.8	40.7
21:00:00	45.8	40.7
20:00:00	45.9	41.1
19:00:00	45.9	41.1
18:00:00	46.1	42.1
17:00:00	45.9	41.1
16:00:00	45.9	41.1
15:00:00	46.1	42.1
14:00:00	46.0	41.6
13:00:00	46.0	41.6
12:00:00	46.4	43.5
11:00:00	46.1	42.1
10:00:00	46.0	41.6
09:00:00	46.0	41.6
08:00:00	46.0	41.6
07:00:00	46.0	41.6
06:00:00	46.0	41.6
05:00:00	46.0	41.6
04:00:00	46.1	42.1
03:00:00	46.0	41.6
02:00:00	46.1	42.1
01:00:00	46.1	42.1
00:00:00	46.1	42.1

DATE 06-15-96

TIME	LEVEL	FLOW
23:00:00	46.2	42.6
22:00:00	46.2	42.6
21:00:00	46.4	43.5
20:00:00	46.2	42.6
19:00:00	45.9	41.1
18:00:00	46.0	41.6
17:00:00	46.3	43.0
16:00:00	46.2	42.6
15:00:00	45.9	41.1
14:00:00	45.9	41.1
13:00:00	45.9	41.1
12:00:00	45.8	40.7
11:00:00	46.0	41.6
10:00:00	46.1	42.1
09:00:00	45.7	40.2
08:00:00	45.9	41.1
07:00:00	46.1	42.1
06:00:00	45.9	41.1
05:00:00	46.2	42.6
04:00:00	46.3	43.0
03:00:00	45.7	40.2
02:00:00	46.1	42.1
01:00:00	46.0	41.6
00:00:00	45.7	40.2

DATE 06-18-96

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.8	40.7
21:00:00	45.9	41.1
20:00:00	46.0	41.6
19:00:00	46.0	41.6
18:00:00	46.0	41.6
17:00:00	45.7	40.2
16:00:00	45.7	40.2
15:00:00	45.7	40.2
14:00:00	45.7	40.2
13:00:00	45.8	40.7
12:00:00	45.8	40.7
11:00:00	45.8	40.7
10:00:00	45.8	40.7
09:00:00	45.8	40.7
08:00:00	45.8	40.7
07:00:00	45.8	40.7
06:00:00	45.9	41.1
05:00:00	46.1	42.1
04:00:00	46.0	41.6
03:00:00	46.0	41.6
02:00:00	46.0	41.6
01:00:00	46.0	41.6
00:00:00	46.0	41.6

DATE 06-17-96

TIME	LEVEL	FLOW
23:00:00	46.0	41.6
22:00:00	46.0	41.6
21:00:00	46.2	42.6
20:00:00	46.2	42.6
19:00:00	46.5	44.0
18:00:00	46.5	44.0
17:00:00	46.5	44.0
16:00:00	46.3	43.0
15:00:00	46.3	43.0
14:00:00	46.7	45.0
13:00:00	46.4	43.5
12:00:00	46.0	41.6
11:00:00	46.0	41.6
10:00:00	45.9	41.1
09:00:00	45.8	40.7
08:00:00	45.9	41.1
07:00:00	45.9	41.1
06:00:00	45.8	40.7
05:00:00	46.0	41.6
04:00:00	46.1	42.1
03:00:00	45.8	40.7
02:00:00	45.9	41.1
01:00:00	45.9	41.1
00:00:00	45.8	40.7

DATE 06-20-96

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.8	40.7
21:00:00	45.8	40.7
20:00:00	45.9	41.1
19:00:00	45.9	41.1
18:00:00	46.0	41.6
17:00:00	46.0	41.6
16:00:00	46.0	41.6
15:00:00	45.9	41.1
14:00:00	45.9	41.1
13:00:00	45.7	40.2
12:00:00	45.7	40.2
11:00:00	45.8	40.7
10:00:00	45.8	40.7
09:00:00	47.2	47.5
08:00:00	50.6	77.0
07:00:00	45.7	40.2
06:00:00	46.1	42.1
05:00:00	45.7	40.2
04:00:00	45.8	40.7
03:00:00	45.7	40.2
02:00:00	46.0	41.6
01:00:00	45.7	40.2
00:00:00	45.7	40.2

DATE 06-19-96

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.9	41.1
21:00:00	46.0	41.6
20:00:00	46.0	41.6
19:00:00	46.1	42.1
18:00:00	46.1	42.1
17:00:00	46.0	41.6
16:00:00	45.7	40.2
15:00:00	45.9	41.1
14:00:00	45.9	41.1
13:00:00	45.9	41.1
12:00:00	46.1	42.1
11:00:00	46.1	42.1
10:00:00	46.2	42.6
09:00:00	46.1	42.1
08:00:00	46.0	41.6
07:00:00	46.1	42.1
06:00:00	46.2	42.6
05:00:00	45.8	40.7
04:00:00	45.8	40.7
03:00:00	46.0	41.6
02:00:00	45.8	40.7
01:00:00	46.0	41.6
00:00:00	45.9	41.1

DATE 06-22-96

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	45.7	40.2
21:00:00	45.8	40.7
20:00:00	45.8	40.7
19:00:00	45.8	40.7
18:00:00	45.9	41.1
17:00:00	45.9	41.1
16:00:00	45.7	40.2
15:00:00	46.0	41.6
14:00:00	45.8	40.7
13:00:00	45.7	40.2
12:00:00	46.0	41.6
11:00:00	46.0	41.6
10:00:00	45.8	40.7
09:00:00	46.0	41.6
08:00:00	45.7	40.2
07:00:00	45.7	40.2
06:00:00	45.7	40.2
05:00:00	45.7	40.2
04:00:00	45.7	40.2
03:00:00	46.0	41.6
02:00:00	45.9	41.1
01:00:00	45.7	40.2
00:00:00	45.7	40.2

DATE 06-21-96

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.9	41.1
21:00:00	46.0	41.6
20:00:00	45.8	40.7
19:00:00	45.9	41.1
18:00:00	46.0	41.6
17:00:00	45.8	40.7
16:00:00	45.8	40.7
15:00:00	45.8	40.7
14:00:00	45.8	40.7
13:00:00	45.7	40.2
12:00:00	45.7	40.2
11:00:00	45.8	40.7
10:00:00	45.7	40.2
09:00:00	45.7	40.2
08:00:00	45.7	40.2
07:00:00	45.7	40.2
06:00:00	45.7	40.2
05:00:00	45.7	40.2
04:00:00	45.8	40.7
03:00:00	46.0	41.6
02:00:00	45.8	40.7
01:00:00	45.8	40.7
00:00:00	45.8	40.7

DATE 06-24-96

TIME	LEVEL	FLOW
23:00:00	46.0	41.6
22:00:00	45.8	40.7
21:00:00	45.9	41.1
20:00:00	45.8	40.7
19:00:00	45.8	40.7
18:00:00	45.8	40.7
17:00:00	45.8	40.7
16:00:00	45.8	40.7
15:00:00	45.8	40.7
14:00:00	45.8	40.7
13:00:00	45.9	41.1
12:00:00	45.9	41.1
11:00:00	46.0	41.6
10:00:00	46.0	41.6
09:00:00	46.0	41.6
08:00:00	46.0	41.6
07:00:00	46.1	42.1
06:00:00	46.3	43.0
05:00:00	46.2	42.6
04:00:00	46.1	42.1
03:00:00	46.1	42.1
02:00:00	46.1	42.1
01:00:00	46.0	41.6
00:00:00	45.8	40.7

DATE 06-23-96

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	46.0	41.6
21:00:00	46.0	41.6
20:00:00	45.7	40.2
19:00:00	46.0	41.6
18:00:00	46.1	42.1
17:00:00	46.2	42.1
16:00:00	46.1	40.2
15:00:00	45.7	41.6
14:00:00	46.0	42.1
13:00:00	46.1	42.1
12:00:00	46.1	42.1
11:00:00	46.2	42.6
10:00:00	46.1	42.1
09:00:00	46.1	42.1
08:00:00	45.9	41.1
07:00:00	45.8	40.7
06:00:00	46.1	42.1
05:00:00	46.2	42.6
04:00:00	46.1	42.1
03:00:00	46.2	42.6
02:00:00	46.2	42.6
01:00:00	46.0	41.6
00:00:00	45.9	41.1

DATE 06-26-96

TIME	LEVEL	FLOW
23:00:00	46.0	41.6
22:00:00	46.0	41.6
21:00:00	46.0	41.6
20:00:00	45.9	41.1
19:00:00	45.9	41.1
18:00:00	45.9	41.1
17:00:00	46.0	41.6
16:00:00	45.8	40.7
15:00:00	45.8	40.7
14:00:00	45.8	40.7
13:00:00	45.7	40.2
12:00:00	46.0	41.6
11:00:00	46.1	42.1
10:00:00	45.9	41.1
09:00:00	45.9	41.1
08:00:00	45.9	41.1
07:00:00	45.9	41.1
06:00:00	45.9	41.1
05:00:00	45.9	41.1
04:00:00	46.1	42.1
03:00:00	45.9	41.1
02:00:00	45.8	40.7
01:00:00	45.8	40.7
00:00:00	45.8	40.7

DATE 06-25-96

TIME	LEVEL	FLOW
23:00:00	46.1	42.1
22:00:00	45.7	40.2
21:00:00	45.8	40.7
20:00:00	45.9	41.1
19:00:00	45.9	41.1
18:00:00	45.9	41.1
17:00:00	45.8	40.7
16:00:00	45.8	40.7
15:00:00	45.8	40.7
14:00:00	45.8	40.7
13:00:00	46.0	41.6
12:00:00	46.1	42.1
11:00:00	45.7	40.2
10:00:00	45.8	40.7
09:00:00	46.3	43.0
08:00:00	45.7	40.2
07:00:00	45.9	41.1
06:00:00	46.2	42.6
05:00:00	45.7	40.2
04:00:00	45.9	41.1
03:00:00	46.2	42.6
02:00:00	45.8	40.7
01:00:00	45.7	40.2
00:00:00	46.1	42.1

DATE 06-28-96

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.8	40.7
21:00:00	45.7	40.2
20:00:00	45.7	40.2
19:00:00	45.7	40.2
18:00:00	45.7	40.2
17:00:00	45.8	40.7
16:00:00	45.8	40.7
15:00:00	45.8	40.7
14:00:00	45.7	40.2
13:00:00	45.7	40.2
12:00:00	45.7	40.2
11:00:00	45.9	41.1
10:00:00	45.9	41.1
09:00:00	45.9	41.1
08:00:00	45.7	40.2
07:00:00	45.7	40.2
06:00:00	45.7	40.2
05:00:00	45.8	40.7
04:00:00	45.9	41.1
03:00:00	45.9	41.1
02:00:00	45.9	41.1
01:00:00	46.0	41.6
00:00:00	46.0	41.6

DATE 06-27-96

TIME	LEVEL	FLOW
23:00:00	46.1	42.1
22:00:00	47.5	49.0
21:00:00	45.8	40.7
20:00:00	46.0	41.6
19:00:00	45.8	40.7
18:00:00	45.7	40.2
17:00:00	45.7	40.2
16:00:00	45.7	40.2
15:00:00	45.7	40.2
14:00:00	45.7	40.2
13:00:00	45.7	40.2
12:00:00	45.7	40.2
11:00:00	45.7	40.2
10:00:00	45.7	40.2
09:00:00	45.7	40.2
08:00:00	45.8	40.7
07:00:00	45.9	41.1
06:00:00	45.7	40.2
05:00:00	45.7	40.2
04:00:00	45.7	40.2
03:00:00	45.9	41.1
02:00:00	45.9	41.1
01:00:00	46.0	41.6
00:00:00	46.0	41.6

DATE 06-30-96

TIME	LEVEL	FLOW
23:00:00	46.1	42.1
22:00:00	45.9	41.1
21:00:00	45.8	40.7
20:00:00	45.9	41.1
19:00:00	45.9	41.1
18:00:00	45.9	41.1
17:00:00	45.8	40.7
16:00:00	45.7	40.2
15:00:00	45.9	41.1
14:00:00	46.0	41.6
13:00:00	45.7	40.2
12:00:00	45.8	40.7
11:00:00	46.0	41.6
10:00:00	45.7	40.2
09:00:00	45.9	41.1
08:00:00	46.0	41.6
07:00:00	45.9	41.1
06:00:00	45.7	40.2
05:00:00	46.0	41.6
04:00:00	45.8	40.7
03:00:00	45.7	40.2
02:00:00	45.9	41.1
01:00:00	46.2	42.6
00:00:00	45.9	41.1

DATE 06-29-96

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.8	40.7
21:00:00	45.8	40.7
20:00:00	45.9	41.1
19:00:00	45.7	40.2
18:00:00	45.8	40.7
17:00:00	45.9	41.1
16:00:00	45.7	40.2
15:00:00	45.7	40.2
14:00:00	45.7	40.2
13:00:00	45.7	40.2
12:00:00	45.7	40.2
11:00:00	45.7	40.2
10:00:00	45.7	40.2
09:00:00	45.7	40.2
08:00:00	45.7	40.2
07:00:00	45.8	40.7
06:00:00	45.8	40.7
05:00:00	45.8	40.7
04:00:00	45.9	41.1
03:00:00	45.9	41.1
02:00:00	45.9	41.1
01:00:00	45.9	41.1
00:00:00	45.8	40.7

DATE 07-01-96

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.8	40.7
21:00:00	45.7	40.2
20:00:00	45.8	40.7
19:00:00	46.0	41.6
18:00:00	46.0	41.6
17:00:00	46.0	41.6
16:00:00	45.9	41.1
15:00:00	45.8	40.7
14:00:00	45.7	40.2
13:00:00	45.8	40.7
12:00:00	45.8	40.7
11:00:00	45.9	41.1
10:00:00	46.0	41.6
09:00:00	45.9	41.1
08:00:00	46.1	42.1
07:00:00	46.1	42.1
06:00:00	46.1	42.1
05:00:00	46.0	41.6
04:00:00	46.1	42.1
03:00:00	46.1	42.1
02:00:00	46.1	42.1
01:00:00	46.1	42.1
00:00:00	46.1	42.1

DATE 07-03-96

TIME	LEVEL	FLOW
23:00:00	46.0	41.6
22:00:00	46.0	41.6
21:00:00	45.9	41.1
20:00:00	45.7	40.2
19:00:00	45.8	40.7
18:00:00	45.9	41.1
17:00:00	45.7	40.2
16:00:00	45.7	40.2
15:00:00	45.8	40.7
14:00:00	45.9	41.1
13:00:00	45.9	41.1
12:00:00	45.8	40.7
11:00:00	45.7	40.2
10:00:00	45.8	40.7
09:00:00	46.1	42.1
08:00:00	45.8	40.7
07:00:00	46.1	42.1
06:00:00	46.0	41.6
05:00:00	45.8	40.7
04:00:00	45.9	41.1
03:00:00	45.9	41.1
02:00:00	46.1	42.1
01:00:00	46.1	42.1
00:00:00	46.0	41.6

DATE 07-02-96

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.9	41.1
21:00:00	45.9	41.1
20:00:00	45.7	40.2
19:00:00	45.8	40.7
18:00:00	45.8	40.7
17:00:00	45.9	41.1
16:00:00	46.3	43.0
15:00:00	52.1	96.8
14:00:00	48.9	58.6
13:00:00	45.9	41.1
12:00:00	46.0	41.6
11:00:00	46.6	44.5
10:00:00	50.2	72.2
09:00:00	45.9	41.1
08:00:00	45.8	40.7
07:00:00	45.9	41.1
06:00:00	45.8	40.7
05:00:00	45.7	40.2
04:00:00	45.8	40.7
03:00:00	45.8	40.7
02:00:00	45.9	41.1
01:00:00	45.7	40.2
00:00:00	45.8	40.7

DATE 07-05-96

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.7	40.2
21:00:00	45.7	40.2
20:00:00	45.7	40.2
19:00:00	45.7	40.2
18:00:00	45.9	41.1
17:00:00	46.1	42.1
16:00:00	45.7	40.2
15:00:00	45.7	40.2
14:00:00	46.0	41.6
13:00:00	45.7	40.2
12:00:00	45.8	40.7
11:00:00	45.7	40.2
10:00:00	45.7	40.2
09:00:00	45.7	40.2
08:00:00	46.0	41.6
07:00:00	46.0	41.6
06:00:00	45.8	40.7
05:00:00	46.0	41.6
04:00:00	46.1	42.1
03:00:00	45.8	40.7
02:00:00	45.8	40.7
01:00:00	46.0	41.6
00:00:00	45.7	40.2

DATE 07-04-96

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.8	40.7
21:00:00	45.7	40.2
20:00:00	45.7	40.2
19:00:00	45.8	40.7
18:00:00	45.7	40.2
17:00:00	45.8	40.7
16:00:00	45.8	40.2
15:00:00	45.7	40.7
14:00:00	45.8	40.7
13:00:00	45.8	40.7
12:00:00	45.7	40.2
11:00:00	45.9	41.1
10:00:00	45.7	40.2
09:00:00	46.0	41.6
08:00:00	45.9	41.1
07:00:00	45.8	40.7
06:00:00	45.9	41.1
05:00:00	45.9	41.1
04:00:00	46.1	42.1
03:00:00	46.0	41.6
02:00:00	46.0	41.6
01:00:00	46.0	41.6
00:00:00	46.0	41.6

DATE 07-07-96

TIME	LEVEL	FLOW
23:00:00	46.1	42.1
22:00:00	46.0	41.6
21:00:00	46.0	41.6
20:00:00	45.9	41.1
19:00:00	45.7	40.2
18:00:00	45.7	40.2
17:00:00	45.9	41.1
16:00:00	45.9	41.1
15:00:00	46.0	41.6
14:00:00	46.1	42.1
13:00:00	46.1	42.1
12:00:00	46.1	42.1
11:00:00	45.9	41.1
10:00:00	46.0	41.6
09:00:00	46.1	42.1
08:00:00	45.7	40.2
07:00:00	45.8	40.7
06:00:00	46.1	42.1
05:00:00	45.9	41.1
04:00:00	45.7	40.2
03:00:00	45.8	40.7
02:00:00	46.1	42.1
01:00:00	45.9	41.1
00:00:00	45.8	40.7

DATE 07-06-96

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.7	40.2
21:00:00	45.7	40.2
20:00:00	45.7	40.2
19:00:00	45.7	40.2
18:00:00	45.7	40.2
17:00:00	45.8	40.7
16:00:00	45.8	40.7
15:00:00	45.8	40.7
14:00:00	45.7	40.2
13:00:00	45.7	40.2
12:00:00	45.8	40.7
11:00:00	46.0	41.6
10:00:00	46.1	42.1
09:00:00	46.0	41.6
08:00:00	46.0	41.6
07:00:00	45.9	41.1
06:00:00	45.9	41.1
05:00:00	45.8	40.7
04:00:00	45.8	40.7
03:00:00	45.8	40.7
02:00:00	45.7	40.2
01:00:00	45.7	40.2
00:00:00	45.8	40.7

DATE 07-09-96

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	46.0	41.6
21:00:00	46.0	41.6
20:00:00	45.7	40.2
19:00:00	46.1	42.1
18:00:00	45.8	40.7
17:00:00	45.7	40.2
16:00:00	45.8	40.7
15:00:00	45.9	41.1
14:00:00	46.1	42.1
13:00:00	46.0	41.6
12:00:00	45.7	40.2
11:00:00	46.1	42.1
10:00:00	45.9	41.1
09:00:00	45.7	40.2
08:00:00	46.1	42.1
07:00:00	46.0	41.6
06:00:00	46.1	42.1
05:00:00	46.1	42.1
04:00:00	46.0	41.6
03:00:00	45.7	40.2
02:00:00	45.8	40.7
01:00:00	45.9	41.1
00:00:00	45.9	41.1

DATE 07-08-96

TIME	LEVEL	FLOW
23:00:00	46.0	41.6
22:00:00	46.0	41.6
21:00:00	46.0	41.6
20:00:00	45.9	41.1
19:00:00	45.7	40.2
18:00:00	45.8	40.7
17:00:00	45.8	40.7
16:00:00	46.0	41.6
15:00:00	46.0	41.6
14:00:00	46.0	41.6
13:00:00	46.0	41.6
12:00:00	46.1	42.1
11:00:00	46.1	42.1
10:00:00	46.1	42.1
09:00:00	46.1	42.1
08:00:00	46.1	42.1
07:00:00	46.2	42.6
06:00:00	45.9	41.1
05:00:00	45.7	40.2
04:00:00	45.8	40.7
03:00:00	46.1	42.1
02:00:00	45.9	41.1
01:00:00	46.1	42.1
00:00:00	46.1	42.1

DATE 07-11-96

TIME	LEVEL	FLOW
23:00:00	51.5	88.5
22:00:00	45.8	40.7
21:00:00	45.7	40.2
20:00:00	45.9	41.1
19:00:00	45.8	40.7
18:00:00	45.7	40.2
17:00:00	45.7	40.2
16:00:00	45.8	40.7
15:00:00	45.8	40.7
14:00:00	45.9	41.1
13:00:00	45.9	41.1
12:00:00	46.1	42.1
11:00:00	46.0	41.6
10:00:00	46.0	41.6
09:00:00	46.0	41.6
08:00:00	45.8	40.7
07:00:00	46.0	41.6
06:00:00	45.8	40.7
05:00:00	45.9	41.1
04:00:00	45.8	40.7
03:00:00	45.8	40.7
02:00:00	45.8	40.7
01:00:00	45.8	40.7
00:00:00	45.7	40.2

DATE 07-10-96

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.7	40.2
21:00:00	45.7	40.2
20:00:00	45.7	40.2
19:00:00	45.7	40.2
18:00:00	45.8	40.7
17:00:00	45.9	41.1
16:00:00	45.9	41.1
15:00:00	45.7	40.2
14:00:00	45.8	40.7
13:00:00	46.1	42.1
12:00:00	46.1	42.1
11:00:00	46.1	42.1
10:00:00	45.7	40.2
09:00:00	46.1	42.1
08:00:00	46.1	42.1
07:00:00	45.7	40.2
06:00:00	45.9	41.1
05:00:00	45.9	41.1
04:00:00	45.7	40.2
03:00:00	45.7	40.2
02:00:00	45.7	40.2
01:00:00	45.8	40.7
00:00:00	45.8	40.7

0

DATE 07-13-96

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	45.9	41.1
21:00:00	45.9	41.1
20:00:00	45.9	41.1
19:00:00	46.0	41.6
18:00:00	46.0	41.6
17:00:00	46.1	42.1
16:00:00	46.0	41.6
15:00:00	46.0	41 6
14:00:00	46.0	41.6
13:00:00	46.1	42.1
12:00:00	46.1	42.1
11:00:00	45.8	40.7
10:00:00	45.7	40.2
09:00:00	45.7	40.2
08:00:00	46.1	42.1
07.00:00	46.0	41.6
06:00:00	46.0	41.6
05:00:00	46.0	41.6
04:00:00	46.1	42.1
03:00:00	46.0	41.6
02:00:00	45.8	40.7
01:00:00	45.7	40.2
00:00:00	46.1	42.1

DATE 07-12-96

TIME	LEVEL	FLOW
23:00:00	46.1	42.1
22:00:00	46.1	42.1
21:00:00	46.0	41.6
20:00:00	45.8	40.7
19:00:00	45.8	40.7
18:00:00	45.7	40.2
17:00:00	45.8	40.7
16:00:00	45.9	41.1
15:00:00	45.9	41.1
14:00:00	46.0	41.6
13:00:00	46.0	41.6
12:00:00	46.0	41.6
11:00:00	45.9	41.1
10:00:00	45.9	41.1
09:00:00	45.8	40.7
08:00:00	45.7	40.2
07:00:00	46.1	42.1
06:00:00	45.9	41.1
05:00:00	45.9	41.1
04:00:00	46.1	42.1
03:00:00	46.0	41.6
02:00:00	45.8	40.7
01:00:00	46.2	42.6
00:00:00	45.9	41.1

DATE 07-15-96

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.7	40.2
21:00:00	45.7	40.2
20:00:00	45.8	40.7
19:00:00	46.2	42.6
18:00:00	45.9	41.1
17:00:00	45.8	40.7
16:00:00	45.7	40.2
15:00:00	45.8	40.7
14:00:00	46.0	41.6
13:00:00	45.9	41.1
12:00:00	45.7	40.2
11:00:00	46.0	41.6
10:00:00	45.9	41.1
09:00:00	45.7	40.2
08:00:00	46.3	43.0
07:00:00	46.1	42.1
06:00:00	46.0	41.6
05:00:00	45.9	41.1
04:00:00	45.9	41.1
03:00:00	45.9	41.1
02:00:00	45.9	41.1
01:00:00	45.7	40.2
00:00:00	45.7	40.2

DATE 07-14-96

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.9	41.1
21:00:00	45.7	40.2
20:00:00	45.7	40.2
19:00:00	45.7	40.2
18:00:00	45.9	41.1
17:00:00	45.9	41.1
16:00:00	45.9	41.1
15:00:00	46.2	42.6
14:00:00	46.0	41.6
13:00:00	46.1	42.1
12:00:00	45.8	40.7
11:00:00	46.0	41.6
10:00:00	45.9	41.1
09:00:00	45.9	41.1
08:00:00	45.9	41.1
07:00:00	46.0	41.6
06:00:00	46.1	42.1
05:00:00	45.9	41.1
04:00:00	45.7	40.2
03:00:00	46.1	42.1
02:00:00	45.8	40.7
01:00:00	46.2	42.6
00:00:00	45.9	41.1

DATE 07-17-96

TIME	LEVEL	FLOW
23:00:00	46.0	41.6
22:00:00	45.7	40.2
21:00:00	45.9	41.1
20:00:00	46.2	42.6
19:00:00	45.7	40.2
18:00:00	45.9	41.1
17:00:00	45.9	41.1
16:00:00	45.8	40.7
15:00:00	45.7	40.2
14:00:00	45.8	40.7
13:00:00	45.8	40.7
12:00:00	45.9	41.1
11:00:00	45.8	40.7
10:00:00	45.8	40.7
09:00:00	45.8	40.7
08:00:00	45.8	40.7
07:00:00	45.9	41.1
06:00:00	45.9	41.1
05:00:00	45.9	41.1
04:00:00	45.8	40.7
03:00:00	45.8	40.7
02:00:00	46.0	41.6
01:00:00	46.0	41.6
00:00:00	46.1	42.1

DATE 07-16-96

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	45.8	40.7
21:00:00	46.3	43.0
20:00:00	45.8	40.7
19:00:00	46.2	42.6
18:00:00	45.7	40.2
17:00:00	45.9	41.1
16:00:00	45.8	40.7
15:00:00	45.9	41.1
14:00:00	45.7	40.2
13:00:00	45.7	40.2
12:00:00	45.8	40.7
11:00:00	45.8	40.7
10:00:00	45.9	41.1
09:00:00	45.9	41.1
08:00:00	46.0	41.6
07:00:00	46.1	42.1
06:00:00	45.8	40.7
05:00:00	45.8	40.7
04:00:00	45.7	40.2
03:00:00	45.8	40.7
02:00:00	45.8	40.7
01:00:00	45.7	40.2
00:00:00	45.7	40.2

DATE 07-19-96

TIME	LEVEL	FLOW
23:00:00	46.3	43.0
22:00:00	45.8	40.7
21:00:00	46.0	41.6
20:00:00	45.8	40.7
19:00:00	45.8	40.7
18:00:00	45.8	40.7
17:00:00	45.8	40.7
16:00:00	45.9	41.1
15:00:00	45.8	40.7
14:00:00	45.8	40.7
13:00:00	45.9	41.1
12:00:00	46.0	41.6
11:00:00	46.2	42.6
10:00:00	45.8	40.7
09:00:00	46.0	41.6
08:00:00	45.9	41.1
07:00:00	46.2	42.6
06:00:00	46.2	42.6
05:00:00	46.1	42.1
04:00:00	46.1	42.1
03:00:00	46.1	42.1
02:00:00	46.2	42.6
01:00:00	46.2	42.6
00:00:00	46.2	42.6

DATE 07-18-96

TIME	LEVEL	FLOW
23:00:00	46.2	42.6
22:00:00	46.1	42.1
21:00:00	45.8	40.7
20:00:00	46.1	42.1
19:00:00	45.8	40.7
18:00:00	45.8	40.7
17:00:00	45.9	41.1
16:00:00	45.9	41.1
15:00:00	45.9	41.1
14:00:00	46.2	42.6
13:00:00	46.0	41.6
12:00:00	45.8	40.7
11:00:00	46.3	43.0
10:00:00	45.7	40.2
09:00:00	45.9	41.1
08:00:00	45.8	40.7
07:00:00	46.1	42.1
06:00:00	46.2	42.6
05:00:00	46.0	41.6
04:00:00	45.8	40.7
03:00:00	52.8	106.9
02:00:00	46.3	43.0
01:00:00	46.1	42.1
00:00:00	46.3	43.0

DATE 07-21-96

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	46.0	41.6
21:00:00	45.9	41.1
20:00:00	45.8	40.7
19:00:00	45.8	40.7
18:00:00	45.8	40.7
17:00:00	45.8	40.7
16:00:00	45.9	41.1
15:00:00	46.0	41.6
14:00:00	46.2	42.6
13:00:00	46.1	42.1
12:00:00	46.2	42.6
11:00:00	45.8	40.7
10:00:00	45.9	41.1
09:00:00	46.0	41.6
08:00:00	46.2	42.6
07:00:00	46.2	42.6
06:00:00	46.2	42.6
05:00:00	46.1	42.1
04:00:00	46.1	42.1
03:00:00	45.7	40.2
02:00:00	46.0	41.6
01:00:00	46.1	42.1
00:00:00	45.7	40.2

DATE 07-20-96

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	46.3	43.0
21:00:00	45.8	40.7
20:00:00	45.9	41.1
19:00:00	45.8	40.7
18:00:00	45.9	41.1
17:00:00	46.1	42.1
16:00:00	46.1	42.1
15:00:00	46.1	42.1
14:00:00	45.7	40.2
13:00:00	46.2	42.6
12:00:00	45.7	40.2
11:00:00	46.0	41.6
10:00:00	45.7	40.2
09:00:00	46.0	41.6
08:00:00	46.0	41.6
07:00:00	46.1	42.1
06:00:00	46.1	42.1
05:00:00	46.2	42.6
04:00:00	46.1	42.1
03:00:00	46.0	41.6
02:00:00	45.9	41.1
01:00:00	45.8	40.7
00:00:00	45.9	41.1

DATE 07-23-96

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.9	41.1
21:00:00	45.8	40.7
20:00:00	45.9	41.1
19:00:00	45.9	41.1
18:00:00	45.8	40.7
17:00:00	45.9	40.7
16:00:00	45.8	41.1
15:00:00	45.9	41.6
14:00:00	46.0	41.6
13:00:00	46.0	41.6
12:00:00	46.1	42.1
11:00:00	46.0	41.6
10:00:00	45.8	40.7
09:00:00	45.9	41.1
08:00:00	46.0	41.6
07:00:00	45.8	40.7
06:00:00	45.9	41.1
05:00:00	45.8	40.7
04:00:00	45.9	41.1
03:00:00	45.8	40.7
02:00:00	45.9	41.1
01:00:00	45.7	40.2
00:00:00	45.9	41.1

DATE 07-22-96

TIME	LEVEL	FLOW
23:00:00	46.0	41.6
22:00:00	45.8	40.7
21:00:00	45.7	40.2
20:00:00	45.7	40.2
19:00:00	45.7	40.2
18:00:00	45.7	40.2
17:00:00	45.9	41.1
16:00:00	46.3	43.0
15:00:00	46.1	42.1
14:00:00	45.7	40.2
13:00:00	46.0	41.6
12:00:00	46.1	42.1
11:00:00	45.9	41.1
10:00:00	46.0	41.6
09:00:00	45.9	41.1
08:00:00	45.9	41.1
07:00:00	46.0	41.6
06:00:00	46.1	42.1
05:00:00	45.9	41.1
04:00:00	45.9	41.1
03:00:00	46.0	41.6
02:00:00	45.9	41.1
01:00:00	45.8	40.7
00:00:00	46.3	43.0

DATE 07-25-96

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	[illegible]	41.1
21:00:00	[illegible]	40.7
20:00:00	[illegible]	41.1
19:00:00	45.8	40.7
18:00:00	45.9	41 1
17:00:00	45.8	40.7
16:00:00	45.9	41.1
15:00:00	45.9	41.1
14:00:00	46.1	42.1
13:00:00	46.1	42.1
12:00:00	45.9	41.1
11:00:00	46.0	41 6
10:00:00	46.1	42.1
09:00:00	46.0	41.6
08:00:00	46.0	41.6
07:00:00	46.0	41.6
06:00:00	45.9	41.1
05:00:00	45.8	40.7
04:00:00	45.8	40.7
03:00:00	45.8	40 7
02:00:00	45.8	40.7
01:00:00	45.9	41.1
00:00:00	45.9	41.1

DATE 07-24-96

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.9	41 1
21:00:00	45.8	40.7
20:00:00	45.8	40.7
19:00:00	45.8	40.7
18:00:00	45.9	41.1
17:00:00	45.9	41.1
16:00:00	45.9	41.1
15:00:00	45.8	40.7
14:00:00	46.0	41.6
13:00:00	45.8	40.7
12:00:00	45.8	40.7
11:00:00	45.8	40.7
10:00:00	45.8	40.7
09:00:00	46.0	41.6
08:00:00	46.0	41.6
07:00:00	45.9	41.1
06:00:00	46.0	41.6
05:00:00	46.0	41.6
04:00:00	46.1	42.1
03:00:00	46.0	41.6
02:00:00	45.8	40.7
01:00:00	45.9	41.1
00:00:00	46.1	42.1

DATE 07-27-96

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.8	40.7
21:00:00	46.0	41.6
20:00:00	45.8	40.7
19:00:00	45.7	40.2
18:00:00	45.8	40.7
17:00:00	45.9	41.1
16:00:00	45.8	40.7
15:00:00	45.9	41.1
14:00:00	45.9	41.1
13:00:00	46.1	42.1
12:00:00	46.1	42.1
11:00:00	46.0	41.6
10:00:00	46.0	41.6
09:00:00	46.0	41.6
08:00:00	45.8	40.7
07:00:00	45.8	40.7
06:00:00	45.9	41.1
05:00:00	45.8	40.7
04:00:00	45.9	41.1
03:00:00	45.9	41.1
02:00:00	45.9	41.1
01:00:00	45.9	41.1
00:00:00	46.0	41.6

DATE 07-26-96

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	46.0	41.6
21:00:00	45.9	41.1
20:00:00	45.8	40.7
19:00:00	45.9	41.1
18:00:00	45.9	41.1
17:00:00	46.0	41.6
16:00:00	45.9	41.1
15:00:00	45.9	41.1
14:00:00	45.9	41.1
13:00:00	45.9	41.1
12:00:00	45.9	41.1
11:00:00	45.8	40.7
10:00:00	46.0	41.6
09:00:00	46.0	41.6
08:00:00	45.9	41.1
07:00:00	45.8	40.7
06:00:00	45.9	41.1
05:00:00	45.8	40.7
04:00:00	46.0	41.6
03:00:00	46.0	41.6
02:00:00	45.8	40.7
01:00:00	46.0	41.6
00:00:00	45.8	40.7

DATE 07-29-96

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	45.9	41.1
21:00:00	45.8	40.7
20:00:00	45.8	40.7
19:00:00	45.7	40.2
18:00:00	45.9	41.1
17:00:00	45.9	41.1
16:00:00	45.9	41.1
15:00:00	45.8	40.7
14:00:00	45.8	40.7
13:00:00	45.9	41.1
12:00:00	45.9	41.1
11:00:00	45.7	40.2
10:00:00	45.8	40.7
09:00:00	45.8	40.7
08:00:00	46.5	44.0
07:00:00	46.1	42.1
06:00:00	46.3	43.0
05:00:00	45.9	41.1
04:00:00	45.8	40.7
03:00:00	45.9	41.1
02:00:00	46.2	42.6
01:00:00	46.1	42.1
00:00:00	46.0	41.6

DATE 07-28-96

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	46.0	41.6
21:00:00	46.0	41.6
20:00:00	45.9	41.1
19:00:00	45.9	41.1
18:00:00	45.8	40.7
17:00:00	45.8	40.7
16:00:00	45.8	40.7
15:00:00	45.9	41.1
14:00:00	46.1	42.1
13:00:00	46.0	41.6
12:00:00	45.9	41.1
11:00:00	46.1	42.1
10:00:00	45.9	41.1
09:00:00	46.0	41.6
08:00:00	46.1	42.1
07:00:00	46.0	41.6
06:00:00	46.1	42.1
05:00:00	46.1	42.1
04:00:00	46.0	41.6
03:00:00	45.8	40.7
02:00:00	45.8	40.7
01:00:00	45.9	41.1
00:00:00	45.9	41.1

DATE 07-31-96

TIME	LEVEL	FLOW
23:00:00	46.0	41.6
22:00:00	45.9	41.1
21:00:00	45.7	40.2
20:00:00	46.0	41 6
19:00:00	45.7	40.2
18:00:00	52.4	101.1
17:00:00	54.4	132.2
16:00:00	45.9	41.1
15:00:00	45.8	40.7
14:00:00	45.8	40.7
13:00:00	46.0	41.6
12:00:00	46.0	41.6
11:00:00	45.9	41.1
10:00:00	46.1	42.1
09:00:00	46.1	42.1
08:00:00	46.1	42.1
07:00:00	45.9	41.1
06:00:00	46.0	41.6
05:00:00	45.8	40.7
04:00:00	45.9	41.1
03:00:00	46.0	41.6
02:00:00	46.0	41.6
01:00:00	46.1	42.1
00:00:00	46.0	41.6

DATE 07-30-96

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.8	40.7
21:00:00	45.7	40.2
20:00:00	45.8	40.7
19:00:00	45.8	40.7
18:00:00	45.9	41.1
17:00:00	45.9	41.1
16:00:00	45.8	40.7
15:00:00	45.9	41.1
14:00:00	45.9	41.1
13:00:00	46.0	41.6
12:00:00	46.0	41.6
11:00:00	46.0	41.6
10:00:00	46.0	41.6
09:00:00	46.0	41.6
08:00:00	46.0	41.6
07:00:00	45.9	41.1
06:00:00	45.8	40.7
05:00:00	45.9	41.1
04:00:00	45.8	40.7
03:00:00	45.8	40.7
02:00:00	45.8	40.7
01:00:00	45.8	40.7
00:00:00	45.7	40.2

DATE 08-01-96

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	46.1	42.1
21:00:00	45.7	40.2
20:00.00	46.0	41.6
19:00:00	45.8	40.7
18:00:00	46.0	41.6
17:00:00	46.0	41 6
16:00:00	45.8	40.7
15:00:00	45.8	40.7
14:00:00	45.7	40.2
13:00:00	45.7	40.2
12:00:00	45.9	41.1
11:00:00	46.0	41.6
10:00:00	45.7	40.2
09:00:00	45.8	40.7
08:00:00	45.9	41.1
07:00:00	45.7	40.2
06:00:00	45 9	41.1
05:00:00	46.0	41 6
04:00:00	46 1	42.1
03:00:00	46.0	41.6
02:00:00	45.8	40 7
01:00:00	46.0	41.6
00:00:00	45 8	40.7

DATE 08-03-96

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	46.0	41.6
21:00:00	45.7	40.2
20:00:00	45.9	41.1
19:00:00	46.1	42.1
18:00:00	46.1	42.1
17:00:00	46.1	42.1
16:00:00	46.2	42.6
15:00:00	46.1	42.1
14:00:00	46.0	41.6
13:00:00	46.0	41.6
12:00:00	46.0	41.6
11:00:00	46.0	41.6
10:00:00	45.8	40.7
09:00:00	45.9	41.1
08:00:00	46.1	42.1
07:00:00	46.1	42.1
06:00:00	46.1	42.1
05:00:00	46.2	42.6
04:00:00	46.2	42.6
03:00:00	46.1	42.1
02:00:00	46.0	41.6
01:00:00	45.9	41.1
00:00:00	45.9	41.1

DATE 08-02-96

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.8	40.7
21:00:00	46.1	42.1
20:00:00	45.9	41.1
19:00:00	45.8	40.7
18:00:00	46.0	41.6
17:00:00	45.8	40.7
16:00:00	45.8	40.7
15:00:00	45.9	41.1
14:00:00	45.7	40.2
13:00:00	45.8	40.7
12:00:00	45.9	41.1
11:00:00	46.1	42.1
10:00:00	46.2	42.6
09:00:00	45.8	40.7
08:00:00	46.0	41.6
07:00:00	45.8	40.7
06:00:00	46.1	42.1
05:00:00	46.0	41.6
04:00:00	46.0	41.6
03:00:00	46.0	41.6
02:00:00	46.0	41.6
01:00:00	45.8	40.7
00:00:00	45.7	40.2

DATE 08-05-96

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	46.0	41.6
21:00:00	46.2	42.6
20:00:00	45.8	40.7
19:00:00	45.7	40.2
18:00:00	46.0	41.6
17:00:00	45.7	40.2
16:00:00	46.0	41.6
15:00:00	46.0	41.6
14:00:00	45.9	41.1
13:00:00	45.9	41.1
12:00:00	46.0	41.6
11:00:00	46.1	42.1
10:00:00	45.8	40.7
09:00:00	45.9	41.1
08:00:00	46.0	41.6
07:00:00	46.1	42.1
06:00:00	45.8	40.7
05:00:00	45.9	41.1
04:00:00	45.9	41.1
03:00:00	45.9	41.1
02:00:00	46.1	42.1
01:00:00	46.2	42.6
00:00:00	45.8	40.7

DATE 08-04-96

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	46.1	42.1
21:00:00	45.8	40.7
20:00:00	45.9	41.1
19:00:00	45.9	41.1
18:00:00	45.9	41.1
17:00:00	45.8	41.1
16:00:00	45.9	41.1
15:00:00	45.9	41.1
14:00:00	45.9	41.6
13:00:00	46.0	41.6
12:00:00	45.9	41.1
11:00:00	46.0	41.6
10:00:00	46.1	42.1
09:00:00	46.0	41.6
08:00:00	46.2	42.6
07:00:00	46.1	42.1
06:00:00	46.0	41.6
05:00:00	46.0	41.6
04:00:00	46.0	41.6
03:00:00	46.0	41.6
02:00:00	46.1	42.1
01:00:00	46.0	41.6
00:00:00	45.7	40.2

DATE 08-07-96

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.8	40.7
21:00:00	45.9	41.1
20:00:00	46.0	41.6
19:00:00	45.7	40.2
18:00:00	46.1	42.1
17:00:00	45.9	41.1
16:00:00	45.9	41.1
15:00:00	46.0	41 6
14:00:00	45.9	41.1
13:00:00	45.9	41.1
12:00:00	46.1	42.1
11:00:00	46.0	41.6
10:00:00	45.7	40.2
09:00:00	46.0	41.6
08:00:00	46.1	42.1
07:00:00	46.2	42.6
06:00:00	46.2	42.6
05:00:00	46.1	42.1
04:00:00	46.0	41.6
03:00:00	45.8	40.7
02:00:00	45.9	41.1
01:00:00	46.1	42.1
00:00:00	45.9	41.1

DATE 08-06-96

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	45.7	40.2
21:00:00	45.7	40.2
20:00:00	46.0	41.6
19:00:00	46.2	42.6
18:00:00	46.0	41.6
17:00:00	45.8	40.7
16:00:00	45.7	40.2
15:00:00	45.7	40.2
14:00:00	46.2	42.6
13:00:00	45.9	41.1
12:00:00	45.8	40.7
11:00:00	46.2	42.6
10:00:00	45.8	40.7
09:00:00	45.9	41.1
08:00:00	45.8	40.7
07:00:00	45.7	40.2
06:00:00	45.9	41.1
05:00:00	46.1	42.1
04:00:00	46.3	43.0
03:00:00	46.2	42.6
02:00:00	45.8	40.7
01:00:00	46.0	41.6
00:00:00	45.7	40.2

DATE 08-09-96

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	46.2	42.6
21:00:00	45.8	40.7
20:00:00	46.0	41.6
19:00:00	45.8	40.7
18:00:00	46.0	41.6
17:00:00	45.7	40.2
16:00:00	45.8	40.7
15:00:00	45.8	40.7
14:00:00	45.9	41.1
13:00:00	45.9	41 1
12:00:00	45.9	41.1
11:00:00	45.8	40.7
10:00:00	45.8	40.7
09:00:00	46.0	41.6
08:00:00	46.0	41.6
07:00:00	45.9	41 1
06:00:00	46.0	41 6
05:00:00	46.0	41.6
04:00:00	46.2	42.6
03:00:00	46.1	42.1
02:00:00	45.7	40.2
01:00:00	46.0	41 6
00:00:00	45.7	40.2

DATE 08-08-96

TIME	LEVEL	FLOW
23:00:00	46.1	42.1
22:00:00	46.1	42.1
21:00:00	45.9	41.1
20:00:00	45.8	40.7
19:00:00	45.7	40.2
18:00:00	45.9	41.1
17:00:00	46.0	41.6
16:00:00	46.0	41.6
15:00:00	46.0	41.6
14:00:00	46.0	41.6
13:00:00	45.8	40.7
12:00:00	45.8	40.7
11:00:00	46.0	41.6
10:00:00	45.7	40.2
09:00:00	46.0	41.6
08:00:00	46.2	42.6
07:00:00	46.0	41.6
06:00:00	46.0	41.6
05:00:00	46.0	41.6
04:00:00	45.9	41.1
03:00:00	45.9	41.1
02:00:00	45.9	41.1
01:00:00	46.1	42.1
00:00:00	45.9	41.1

DATE 08-11-96

TIME	LEVEL	FLOW
23:00:00	46.1	42.1
22:00:00	45.9	41.1
21:00:00	45.8	40.7
20:00:00	45.8	40.7
19:00:00	45.8	40.7
18:00:00	45.9	41.1
17:00:00	46.0	41.6
16:00:00	46.1	42.1
15:00:00	46.1	42.1
14:00:00	46.2	42.6
13:00:00	46.1	42.1
12:00:00	45.7	40.2
11:00:00	46.0	41.6
10:00:00	45.7	40.2
09:00:00	46.0	41.6
08:00:00	45.7	40.2
07:00:00	45.8	40.7
06:00:00	45.8	40.7
05:00:00	45.8	40.7
04:00:00	46.0	41.6
03:00:00	46.2	42.6
02:00:00	45.8	40.7
01:00:00	46.3	43.0
00:00:00	45.9	41.1

DATE 08-10-96

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.8	40.7
21:00:00	46.1	42.1
20:00:00	45.8	40.7
19:00:00	45.8	40.7
18:00:00	46.1	42.1
17:00:00	45.7	40.2
16:00:00	46.1	42.1
15:00:00	46.1	42.1
14:00:00	45.8	40.7
13:00:00	46.1	42.1
12:00:00	45.7	40.2
11:00:00	45.9	41.1
10:00:00	46.0	41.6
09:00:00	45.9	41.1
08:00:00	45.8	40.7
07:00:00	45.9	41.1
06:00:00	45.9	41.1
05:00:00	45.9	41.1
04:00:00	46.0	41.6
03:00:00	46.1	42.1
02:00:00	46.0	41.6
01:00:00	45.7	40.2
00:00:00	46.1	42.1

DATE 08-13-96

TIME	LEVEL	FLOW
23:00:00	46.2	42.6
22:00:00	45.8	40.7
21:00:00	46.2	42.6
20:00:00	45.7	40.2
19:00:00	45.9	41.1
18:00:00	45.9	41.1
17:00:00	45.7	40.2
16:00:00	46.1	42.1
15:00:00	45.9	41.1
14:00:00	45.8	40.7
13:00:00	46.2	42.6
12:00:00	45.8	40.7
11:00:00	46.0	41.6
10:00:00	45.7	40.2
09:00:00	46.1	42.1
08:00:00	46.0	41.6
07:00:00	45.9	41.1
06:00:00	45.9	41.1
05:00:00	45.8	40.7
04:00:00	45.8	40.7
03:00:00	45.8	40.7
02:00:00	46.0	41.6
01:00:00	46.2	42.6
00:00:00	45.8	40.7

DATE 08-12-96

TIME	LEVEL	FLOW
23:00:00	46.1	42.1
22:00:00	45.8	40.7
21:00:00	46.3	43.0
20:00:00	45.8	40.7
19:00:00	45.7	40.2
18:00:00	45.8	40.7
17:00:00	45.8	40.7
16:00:00	45.9	41.1
15:00:00	46.1	42.1
14:00:00	46.2	42.6
13:00:00	46.2	42.6
12:00:00	46.2	42.6
11:00:00	46.1	42.1
10:00:00	46.0	41.6
09:00:00	45.9	41.1
08:00:00	46.0	41.6
07:00:00	45.8	40.7
06:00:00	45.9	41.1
05:00:00	46.0	41.6
04:00:00	45.8	40.7
03:00:00	46.3	43.0
02:00:00	45.8	40.7
01:00:00	46.1	42.1
00:00:00	45.8	40.7

DATE 08-15-96

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	46.0	41.6
21:00:00	46.2	42.6
20:00:00	45.8	40.7
19:00:00	46.2	42.6
18:00:00	45.7	40.2
17:00:00	45.9	41.1
16:00:00	46.0	41.6
15:00:00	46.0	41.6
14:00:00	46.0	41 6
13:00:00	45.8	40.7
12:00:00	45.9	41.1
11:00:00	46.2	42.6
10:00:00	45.7	40.2
09:00:00	46.0	41.6
08:00:00	45.7	40.2
07.00:00	45.8	40.7
06:00:00	45.8	40.7
05:00:00	45.8	40.7
04:00:00	45.9	41.1
03:00:00	45.9	41.1
02:00:00	46.1	42.1
01:00:00	46.3	43.0
00:00:00	46.3	43.0

DATE 08-14-96

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.7	40.2
21:00:00	46.0	41.6
20:00:00	45.7	40.2
19:00:00	45.8	40.7
18:00:00	45.9	41.1
17:00:00	46.0	41.6
16:00:00	46.0	41.6
15:00:00	46.0	41.6
14:00:00	46.1	42.1
13:00:00	46.2	42.6
12:00:00	45.8	40.7
11:00:00	45.9	41.1
10:00:00	46.2	42.6
09:00:00	45.9	41.1
08:00:00	46.2	42.6
07:00:00	46.0	41.6
06:00:00	45.8	40.7
05:00:00	45.8	40.7
04:00:00	45.9	41.1
03:00:00	46.1	42.1
02:00:00	46.2	42.6
01:00:00	45.9	41.1
00:00:00	45.9	41.1

DATE 08-17-96

TIME	LEVEL	FLOW
23:00:00	46.1	42.1
22:00:00	46.1	42.1
21:00:00	46.2	42.6
20:00:00	45.8	40.7
19:00:00	46.0	41.6
18:00:00	45.9	41.1
17:00:00	45.8	40.7
16:00:00	45.9	41.1
15:00:00	46.0	41.6
14:00:00	46.1	42.1
13:00:00	46.3	43.0
12:00:00	46.2	42.6
11:00:00	46.0	41.6
10:00:00	45.9	41 1
09:00:00	45 8	40.7
08:00:00	46.0	41.6
07:00.00	46.1	42.1
06:00:00	46.1	42.1
05:00:00	46.1	42.1
04:00:00	46.1	42.1
03:00:00	46.1	42.1
02:00:00	46.0	41.6
01:00:00	45.7	40.2
00:00:00	46.1	42.1

DATE 08-16-96

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	46.1	42.1
21:00:00	46.2	42.6
20:00:00	45.9	41.1
19:00:00	45.7	40 2
18:00:00	45.7	40.2
17:00:00	45.8	40.7
16:00:00	45.8	40.7
15:00:00	45.7	40.2
14:00:00	45.9	41.1
13:00:00	46.1	42.1
12:00:00	46.1	42.1
11:00:00	45.9	41.1
10:00:00	45.8	40.7
09:00:00	46.1	42.1
08:00:00	46.0	41.6
07:00:00	45.8	40.7
06:00:00	46.4	43.5
05:00:00	45.8	40.7
04:00:00	45.9	41.1
03:00:00	46.0	41.6
02:00:00	46.2	42.6
01:00:00	45.7	40.2
00:00:00	46.1	42.1

DATE 08-19-96

TIME	LEVEL	FLOW
23:00:00	46 0	41.6
22:00:00	46.2	42.6
21:00:00	45.8	40.7
20:00:00	45.7	40.2
19:00:00	45.8	40.7
18:00:00	46.0	41 6
17:00:00	46.2	42.6
16:00:00	46.1	42.1
15:00:00	45.9	41.1
14:00:00	45.8	40.7
13:00:00	46.1	42.1
12:00:00	45.8	40.7
11:00:00	46.1	42.1
10:00:00	45.8	40.7
09:00:00	46.1	42.1
08:00:00	45.9	41.1
07:00:00	45.8	40.7
06:00:00	45.8	40.7
05:00:00	45.8	40.7
04:00:00	45.9	41.1
03:00.00	45.9	41.1
02:00:00	46.0	41.6
01:00:00	46.1	42.1
00:00:00	46.3	43.0

DATE 08-18-96

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	46.0	41.6
21:00:00	46.1	42.1
20:00:00	46.1	42.1
19:00:00	45.7	40.2
18:00:00	45.8	40.7
17:00:00	45.8	40.7
16:00:00	45.8	40.7
15:00:00	45.9	41.1
14:00:00	45.9	41.1
13:00:00	45.9	41.1
12:00:00	46.1	42.1
11:00:00	46.2	42.6
10:00:00	45.8	40.7
09:00:00	46.3	43.0
08:00:00	45.8	40.7
07:00:00	46.0	41.6
06:00:00	46.0	41.6
05:00:00	46.0	41.6
04:00:00	46.0	41.6
03:00:00	45.9	41.1
02:00:00	45.8	40.7
01:00:00	45.9	41.1
00:00:00	46.2	42.6

DATE 08-21-96

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	46.1	42.1
21:00:00	45.8	40.7
20:00:00	45.7	40.2
19:00:00	45.8	40.7
18:00:00	45.8	40.7
17:00:00	45.9	41.1
16:00:00	45.8	40.7
15:00:00	46.1	42.1
14:00:00	45.8	40.7
13:00:00	45.7	40.2
12:00:00	46.1	42.1
11:00:00	45.9	41.1
10:00:00	45.8	40.7
09:00:00	46.2	42.6
08:00:00	46.2	42.6
07:00:00	46.0	41.6
06:00:00	45.8	40.7
05:00:00	46.3	43.0
04:00:00	45.8	40.7
03:00:00	45.8	40.7
02:00:00	45.9	41.1
01:00:00	45.8	40.7
00:00:00	46.3	43.0

DATE 08-20-96

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	46.1	42.1
21:00:00	45.8	40.7
20:00:00	45.7	40.2
19:00:00	45.8	40.7
18:00:00	46.3	43.0
17:00:00	45.9	41.1
16:00:00	45.7	40.2
15:00:00	45.9	41.1
14:00:00	46.1	42.1
13:00:00	46.2	42.6
12:00:00	45.9	41.1
11:00:00	45.8	40.7
10:00:00	46.1	42.1
09:00:00	45.8	40.7
08:00:00	45.8	40.7
07:00:00	45.7	40.2
06:00:00	45.8	40.7
05:00:00	45.8	40.7
04:00:00	46.0	41.6
03:00:00	46.1	42.1
02:00:00	46.1	42.1
01:00:00	46.0	41.6
00:00:00	46.0	41.6

DATE 08-23-96

TIME	LEVEL	FLOW
23:00:00	46.3	43.0
22:00:00	45.9	41.1
21:00:00	46.3	43.0
20:00:00	46.2	42.6
19:00:00	45.9	41.1
18:00:00	46.2	42.6
17:00:00	45.7	40.2
16:00:00	45.7	40.7
15:00:00	45.8	41.1
14:00:00	45.9	41.6
13:00:00	46.0	41.6
12:00:00	46.0	41.6
11:00:00	46.1	42.1
10:00:00	46.0	41.6
09:00:00	45.9	41.1
08:00:00	45.8	40.7
07:00:00	45.8	40.7
06:00:00	45.9	41.1
05:00:00	45.7	40.2
04:00:00	45.7	40.2
03:00:00	46.0	41.6
02:00:00	46.0	41.6
01:00:00	45.7	40.2
00:00:00	45.7	40.2

DATE 08-22-96

TIME	LEVEL	FLOW
23:00:00	46.0	41.6
22:00:00	45.9	41.1
21:00:00	45.7	40.2
20:00:00	46.0	41.6
19:00:00	45.8	40.7
18:00:00	46.1	42.1
17:00:00	45.7	40.2
16:00:00	45.8	40.7
15:00:00	45.9	41.1
14:00:00	45.9	41.1
13:00:00	45.7	40.2
12:00:00	45.8	40.7
11:00:00	46.0	41.6
10:00:00	45.7	40.2
09:00:00	46.2	42.6
08:00:00	46.0	41.6
07:00:00	45.9	41.1
06:00:00	46.0	41.6
05:00:00	46.0	41.6
04:00:00	46.1	42.1
03:00:00	46.1	42.1
02:00:00	46.0	41.6
01:00:00	46.0	41.6
00:00:00	45.9	41.1

DATE 08-25-96

TIME	LEVEL	FLOW
23:00:00	46.0	41.6
22:00:00	45.8	40.7
21:00:00	45.8	40.7
20:00:00	45.8	40.7
19:00:00	45.8	40.7
18:00:00	45.9	41.1
17:00:00	45.7	40.2
16:00:00	45.8	40.7
15:00:00	46.1	42.1
14:00:00	46.1	42.1
13:00:00	45.8	40.7
12:00:00	45.7	40.2
11:00:00	46.1	42.1
10:00:00	45.8	40.7
09:00:00	46.0	41.6
08:00:00	46.0	41.6
07:00:00	45.8	40.7
06:00:00	46.2	42.6
05:00:00	45.8	40.7
04:00:00	46.3	43.0
03:00:00	46.2	42.6
02:00:00	45.9	41.1
01:00:00	45.8	40.7
00:00:00	46.1	42.1

DATE 08-24-96

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	46.2	42.6
21:00:00	45.9	41.1
20:00:00	45.8	40.7
19:00:00	45.7	40.2
18:00:00	46.0	41.6
17:00:00	45.7	40.2
16:00:00	46.0	41.6
15:00:00	46.2	42.6
14:00:00	45.7	40.2
13:00:00	45.9	41.1
12:00:00	46.1	42.1
11:00:00	46.1	42.1
10:00:00	46.1	42.1
09:00:00	45.9	41.1
08:00:00	45.8	40.7
07:00:00	45.8	40.7
06:00:00	46.0	41.6
05:00:00	45.9	41.1
04:00:00	46.1	42.1
03:00:00	46.1	42.1
02:00:00	46.1	42.1
01:00:00	46.0	41.6
00:00:00	45.8	40.7

DATE 08-27-96

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	46.0	41.6
21:00:00	52.0	73.8
20:00:00	48.3	53.1
19:00:00	45.8	40.7
18:00:00	46.0	41.6
17:00:00	46.1	42.1
16:00:00	46.1	42.1
15:00:00	45.9	41.1
14:00:00	45.9	41.1
13:00:00	46.0	41.6
12:00:00	46.0	41.6
11:00:00	45.9	41.1
10:00:00	45.8	40.7
09:00:00	45.8	40.7
08:00:00	45.8	40.7
07:00:00	45.7	40.2
06:00:00	45.8	40.7
05:00:00	45.7	40.2
04:00:00	45.7	40.2
03:00:00	46.1	42.1
02:00:00	45.7	40.2
01:00:00	46.2	42.6
00:00:00	45.7	40.2

DATE 08-26-96

TIME	LEVEL	FLOW
23:00:00	46.2	42.6
22:00:00	45.8	40.7
21:00:00	46.2	42.6
20:00:00	45.8	40.7
19:00:00	45.7	40.2
18:00:00	45.8	40.7
17:00:00	45.9	41.1
16:00:00	45.9	41.1
15:00:00	45.9	41.1
14:00:00	45.7	40.2
13:00:00	45.7	40.2
12:00:00	45.8	40.7
11:00:00	46.2	42.6
10:00:00	45.7	40.2
09:00:00	45.7	40.2
08:00:00	46.0	41.6
07:00:00	45.7	40.2
06:00:00	45.8	40.7
05:00:00	45.7	40.2
04:00:00	46.1	42.1
03:00:00	45.7	40.2
02:00:00	45.8	40.7
01:00:00	45.9	41.1
00:00:00	45.8	40.7

DATE 08-29-96

TIME	LEVEL	FLOW
23:00:00	46.3	43.0
22:00:00	45.7	40.2
21:00:00	45.7	40.2
20:00:00	45.8	40.7
19:00:00	45.8	40 7
18:00:00	45.8	40.7
17:00:00	46.0	41.6
16:00:00	46.0	41 6
15:00:00	45.8	40.7
14:00:00	45.7	40.2
13:00:00	45.7	40.2
12:00:00	45.9	41.1
11:00:00	45.9	41.1
10:00:00	45 9	41.1
09:00:00	45.8	40.7
08:00:00	45 7	40.2
07:00:00	45.9	41.1
06:00:00	45.8	40.7
05:00:00	45.9	41.1
04:00:00	46.3	43.0
03:00:00	46.0	41.6
02:00:00	46.2	42.6
01:00:00	45.7	40.2
00:00:00	45.8	40.7

DATE 08-28-96

TIME	LEVEL	FLOW
23:00:00	46.0	41.6
22:00:00	45.7	40.2
21:00:00	45.8	40.7
20:00:00	46.0	41 6
19:00:00	45.7	40.2
18:00:00	46.2	42.6
17:00:00	46.1	42.1
16:00:00	46.1	42.1
15:00:00	46.1	42.1
14:00:00	46.1	42.1
13:00:00	45.9	41.1
12:00:00	45.9	41.1
11:00:00	46.0	41.6
10:00:00	45.9	41.1
09:00:00	46.2	42.6
08:00:00	46.0	41.6
07:00:00	45.7	40.2
06:00:00	45.7	40.2
05:00:00	46.1	42.1
04:00:00	46.1	42.1
03:00:00	46.0	41.6
02:00:00	45.8	40.7
01:00:00	45.7	40.2
00:00:00	46.3	43.0

DATE 08-31-96

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	46.2	42.6
21:00:00	45.7	40.2
20:00:00	45.8	40.7
19:00:00	45.7	40.2
18:00:00	45.8	40.7
17:00:00	46.0	41.6
16:00:00	45.8	40.7
15:00:00	45.8	40.7
14:00:00	46.1	42.1
13:00:00	45.7	40.2
12:00:00	45.8	40.7
11:00:00	46.1	42.1
10:00:00	45.8	40.7
09:00:00	46.3	43.0
08:00:00	46.2	42.6
07:00:00	46.0	41.6
06:00:00	45.9	41.1
05:00:00	45.7	40.2
04:00:00	45.9	41.1
03:00:00	46.0	41.6
02:00:00	46.1	42.1
01:00:00	46.0	41.6
00:00:00	46.1	42.1

DATE 08-30-96

TIME	LEVEL	FLOW
23:00:00	46.2	42.6
22:00:00	45.8	40.7
21:00:00	46.0	41.6
20:00:00	45.8	40.7
19:00:00	46.3	43.0
18:00:00	45.8	40.7
17:00:00	45.7	40.2
16:00:00	46.0	41.6
15:00:00	46.0	41.6
14:00:00	45.7	40.2
13:00:00	45.8	40.7
12:00:00	46.2	42.6
11:00:00	45.8	40.7
10:00:00	45.7	40.2
09:00:00	46.1	42.1
08:00:00	45.7	40.2
07:00:00	45.8	40.7
06:00:00	46.0	41.6
05:00:00	45.8	40.7
04:00:00	45.7	40.2
03:00:00	46.1	42.1
02:00:00	45.7	40.2
01:00:00	46.3	43.0
00:00:00	45.7	40.2

CEM COMMERCIAL ENERGY MGMT, INC.
P.O. Box 4518 • Pocatello, Idaho 83205 • Telephone (208) 237-3563 • Fax (208) 237-3563

May 31, 1996
Ref: CEM/1064

RECEIVED
JUN 0 5 1996
Department of Water Resources

Mr. L. GLEN SAXTON
Chief, Water Allocation Bureau
State of Idaho, Department of Water Resources
1301 North Orchard Street
Statehouse Mail
Boise, ID 83720-9000

Subject: Portneuf River Hydroelectric Project
Lava Hot Springs, Idaho
FERC Project No. 7447-002
Permit No. 29-7699

Dear Mr. Saxton:

Attached please find copies of the bypass channel flow records for the period from March 1 to April 30, 1996.

Sincerely,

Maher F. Wissa
President

Attachments: 16 sheets

DATE 04-30-96

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.7	40.2
21:00:00	45.7	40.2
20:00:00	45.9	41.1
19:00:00	45.9	41.1
18:00:00	46.1	42.1
17:00:00	45.8	40.7
16:00:00	45.9	41.1
15:00:00	45.9	41.1
14:00:00	46.0	41.6
13:00:00	45.8	40.7
12:00:00	45.8	40.7
11:00:00	46.1	42.1
10:00:00	46.1	42.1
09:00:00	45.8	40.7
08:00:00	45.7	40.2
07:00:00	45.9	41.1
06:00:00	45.7	40.2
05:00:00	45.7	40.2
04:00:00	45.7	40.2
03:00:00	45.7	40.2
02:00:00	46.1	42.1
01:00:00	45.9	41.1
00:00:00	45.9	41.1

DATE 04-29-96

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.9	41.1
21:00:00	45.7	40.2
20:00:00	45.7	40.2
19:00:00	45.9	41.1
18:00:00	45.7	40.2
17:00:00	45.7	40.2
16:00:00	45.8	40.7
15:00:00	45.8	40.7
14:00:00	45.7	40.2
13:00:00	45.7	40.2
12:00:00	45.7	40.2
11:00:00	45.8	40.7
10:00:00	45.8	40.7
09:00:00	45.8	40.7
08:00:00	45.9	41.1
07:00:00	45.9	41.1
06:00:00	46.1	42.1
05:00:00	45.9	41.1
04:00:00	46.0	41.6
03:00:00	45.7	40.2
02:00:00	45.9	41.1
01:00:00	45.8	40.7
00:00:00	45.7	40.2

DATE 04-28-96

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.7	40.2
21:00:00	45.7	40.2
20:00:00	45.7	40.2
19:00:00	45.7	40.2
18:00:00	45.8	40.7
17:00:00	45.8	40.7
16:00:00	45.8	40.7
15:00:00	45.7	40.2
14:00:00	45.7	40.2
13:00:00	45.8	40.7
12:00:00	45.8	40.7
11:00:00	45.8	40.7
10:00:00	45.8	40.7
09:00:00	45.8	40.7
08:00:00	45.8	40.7
07:00:00	45.9	41.1
06:00:00	45.9	41.1
05:00:00	45.9	41.1
04:00:00	46.0	41.6
03:00:00	45.9	41.1
02:00:00	45.9	41.1
01:00:00	45.8	40.7
00:00:00	45.8	40.7

DATE 04-27-96

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	45.8	40.7
21:00:00	45.9	41.1
20:00:00	45.8	40.7
19:00:00	46.0	41.6
18:00:00	45.7	40.2
17:00:00	45.7	40.2
16:00:00	45.7	40.2
15:00:00	45.8	40.7
14:00:00	45.8	40.7
13:00:00	46.1	42.1
12:00:00	45.9	41.1
11:00:00	46.0	41.6
10:00:00	46.2	42.6
09:00:00	45.7	40.2
08:00:00	45.9	41.1
07:00:00	45.8	40.7
06:00:00	45.8	40.7
05:00:00	45.8	40.7
04:00:00	45.8	40.7
03:00:00	45.7	40.2
02:00:00	45.7	40.2
01:00:00	45.7	40.2
00:00:00	45.7	40.2

DATE 04-26-96

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	45.9	41.1
21:00:00	45.9	41.1
20:00:00	45.8	40.7
19:00:00	46.0	41.6
18:00:00	46.0	41.6
17:00:00	45.8	40.7
16:00:00	45.8	40.7
15:00:00	45.7	40.2
14:00:00	45.7	40.2
13:00:00	45.8	40.7
12:00:00	45.7	40.2
11:00:00	45.9	41.1
10:00:00	45.9	41.1
09:00:00	45.8	40.7
08:00:00	46.0	41.6
07:00:00	45.7	40.2
06:00:00	45.8	40.7
05:00:00	45.9	41.1
04:00:00	45.8	40.7
03:00:00	45.9	41.1
02:00:00	45.9	41.1
01:00:00	46.2	42.6
00:00:00	45.9	41.1

DATE 04-25-96

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.8	40.7
21:00:00	45.9	41.1
20:00:00	46.0	41.6
19:00:00	45.7	40.2
18:00:00	45.7	40.2
17:00:00	45.8	40.7
16:00:00	45.8	40.7
15:00:00	45.8	40.7
14:00:00	45.9	41.1
13:00:00	45.9	41.1
12:00:00	45.9	41.1
11:00:00	45.9	41.1
10:00:00	45.8	40.7
09:00:00	45.7	40.2
08:00:00	45.7	40.2
07:00:00	45.7	40.2
06:00:00	45.7	40.2
05:00:00	45.8	40.7
04:00:00	45.8	40.7
03:00:00	45.8	40.7
02:00:00	45.7	40.2
01:00:00	45.7	40.2
00:00:00	45.8	40.7

DATE 04-24-96

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	45.8	40.7
21:00:00	45.8	40.7
20:00:00	45.7	40.2
19:00:00	45.8	40.7
18:00:00	45.8	40.7
17:00:00	45.8	40.7
16:00:00	45.8	40.7
15:00:00	45.7	40.2
14:00:00	45.7	40.2
13:00:00	46.0	41.6
12:00:00	58.6	215.5
11:00:00	58.5	213.9
10:00:00	55.7	168.8
09:00:00	45.9	41.1
08:00:00	45.8	40.7
07:00:00	45.8	40.7
06:00:00	45.7	40.2
05:00:00	45.8	40.7
04:00:00	45.8	40.7
03:00:00	46.0	41.6
02:00:00	45.9	41.1
01:00:00	46.0	41.6
00:00:00	46.1	42.1

DATE 04-23-96

TIME	LEVEL	FLOW
23:00:00	46.0	41.6
22:00:00	46.0	41.6
21:00:00	46.2	42.6
20:00:00	46.1	42.1
19:00:00	45.9	41.1
18:00:00	45.9	41.1
17:00:00	45.9	41.1
16:00:00	45.9	41.6
15:00:00	46.0	42.1
14:00:00	46.1	42.1
13:00:00	46.1	42.1
12:00:00	46.0	41.6
11:00:00	45.8	40.7
10:00:00	45.7	40.2
09:00:00	45.7	40.2
08:00:00	45.7	40.2
07:00:00	45.7	40.2
06:00:00	45.7	40.2
05:00:00	45.9	41.1
04:00:00	46.0	41.6
03:00:00	46.2	42.6
02:00:00	46.1	42.1
01:00:00	46.0	41.6
00:00:00	46.0	41.6

DATE 04-22-96

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	46.1	42.1
21:00:00	46.0	41.6
20:00:00	46.0	41.6
19:00:00	45.7	40.2
18:00:00	45.7	40.2
17:00:00	45.9	41.1
16:00:00	45.7	40.2
15:00:00	45.8	40.7
14:00:00	45.8	40.7
13:00:00	45.9	41.1
12:00:00	45.8	40.7
11:00:00	45.7	40.2
10:00:00	45.8	40.7
09:00:00	46.1	42.1
08:00:00	46.1	42.1
07:00:00	45.8	40.7
06:00:00	46.0	41.6
05:00:00	46.0	41.6
04:00:00	46.0	41.6
03:00:00	46.0	41.6
02:00:00	46.1	42.1
01:00:00	46.1	42.1
00:00:00	46.2	42.6

DATE 04-21-96

TIME	LEVEL	FLOW
23:00:00	46.1	42.1
22:00:00	46.1	42.1
21:00:00	45.7	40.2
20:00:00	45.8	40.7
19:00:00	45.9	41.1
18:00:00	45.9	41.1
17:00:00	45.8	40.7
16:00:00	45.9	41.1
15:00:00	46.0	41.6
14:00:00	45.8	40.7
13:00:00	45.9	41.1
12:00:00	45.7	40.2
11:00:00	46.0	41.6
10:00:00	45.8	40.7
09:00:00	45.8	40.7
08:00:00	45.9	41.1
07:00:00	45.7	40.2
06:00:00	45.7	40.2
05:00:00	45.8	40.7
04:00:00	45.8	40.7
03:00:00	45.9	41.1
02:00:00	45.9	41.1
01:00:00	45.7	40.2
00:00:00	45.7	40.2

DATE 04-20-96

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.9	41.1
21:00:00	46.0	41.6
20:00:00	45.7	40.2
19:00:00	45.8	40.7
18:00:00	45.9	41.1
17:00:00	45.7	40.2
16:00:00	45.7	40.2
15:00:00	45.7	40.2
14:00:00	45.7	40.2
13:00:00	45.7	40.2
12:00:00	45.7	40.2
11:00:00	45.7	40.2
10:00:00	45.7	40.2
09:00:00	45.8	40.7
08:00:00	45.8	40.7
07:00:00	45.8	40.7
06:00:00	45.8	40.7
05:00:00	45.9	41.1
04:00:00	45.9	41.1
03:00:00	45.9	41.1
02:00:00	45.9	41.1
01:00:00	45.7	40.2
00:00:00	45.7	40.2

DATE 04-19-96

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.8	40.7
21:00:00	45.7	40.2
20:00:00	45.7	40.2
19:00:00	45.8	40.7
18:00:00	45.8	40.7
17:00:00	45.8	40.7
16:00:00	45.8	40.7
15:00:00	45.8	40.7
14:00:00	45.8	40.7
13:00:00	45.8	40.7
12:00:00	45.7	40.2
11:00:00	45.7	40.2
10:00:00	45.8	40.7
09:00:00	45.8	40.7
08:00:00	45.8	40.7
07:00:00	45.8	40.7
06:00:00	45.8	40.7
05:00:00	45.8	40.7
04:00:00	45.8	40.7
03:00:00	46.0	41.6
02:00:00	45.9	41.1
01:00:00	45.9	41.1
00:00:00	46.0	41.6

DATE 04-18-96

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.8	40.7
21:00:00	45.8	40.7
20:00:00	45.9	41.1
19:00:00	45.9	41.1
18:00:00	45.7	40.2
17:00:00	45.7	40.2
16:00:00	45.7	40.2
15:00:00	45.7	40.2
14:00:00	45.7	40.2
13:00:00	45.8	40.7
12:00:00	45.8	40.7
11:00:00	45.8	40.7
10:00:00	45.9	41.1
09:00:00	45.8	40.7
08:00:00	45.9	41.1
07:00:00	45.9	41.1
06:00:00	45.9	41.1
05:00:00	45.7	40.2
04:00:00	45.7	40.2
03:00:00	46.0	41.6
02:00:00	53.1	80.4
01:00:00	45.7	40.2
00:00:00	45.9	41.1

DATE 04-17-96

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	45.7	40.2
21:00:00	45.8	40.7
20:00:00	45.8	40.7
19:00:00	45.9	41.1
18:00:00	45.8	40.7
17:00:00	45.8	40.7
16:00:00	45.7	40.2
15:00:00	45.8	40.7
14:00:00	45.8	40.7
13:00:00	45.7	40.2
12:00:00	45.7	40.2
11:00:00	45.7	40.2
10:00:00	45.8	40.7
09:00:00	45.7	40.2
08:00:00	45.7	40.2
07:00:00	45.7	40.2
06:00:00	45.8	40.7
05:00:00	45.8	40.7
04:00:00	45.8	40.7
03:00:00	45.8	40.7
02:00:00	45.9	41.1
01:00:00	45.9	41.1
00:00:00	45.9	41.1

DATE 04-16-96

TIME	LEVEL	FLOW	
23:00:00	45.7	40.2	
22:00:00	45.8	40.7	
21:00:00	45.9	41.1	
20:00:00	45.7	40.2	
19:00:00	45.7	40.2	
18:00:00	45.7	40.2	
17:00:00	45.7	40.2	
16:00:00	45.7	40.2	
15:00:00	45.8	40.7	
14:00:00	45.9	41.1	
13:00:00	45.9	41.1	
12:00:00	45.8	40.7	
11:00:00	45.8	40.7	
10:00:00	45.9	41.1	
09:00:00	39.2	109.8	Flushing operation ended
08:00:00	33.1	351.2	
07:00:00	33.1	351.2	
06:00:00	33.3	354.3	
05:00:00	33.2	352.7	
04:00:00	33.1	351.2	
03:00:00	33.2	352.7	
02:00:00	33.2	352.7	
01:00:00	33.1	351.2	
00:00:00	33.2	352.7	

DATE 04-15-96

TIME	LEVEL	FLOW
23:00:00	33.1	351.2
22:00:00	33.1	351.2
21:00:00	33.2	352.7
20:00:00	33.1	351.2
19:00:00	33.1	351.2
18:00:00	33.1	351.2
17:00:00	33.1	351.2
16:00:00	33.2	352.7
15:00:00	33.2	352.7
14:00:00	33.1	351.2
13:00:00	33.1	351.2
12:00:00	33.1	351.2
11:00:00	33.2	352.7
10:00:00	33.2	352.7
09:00:00	33.2	352.7
08:00:00	33.2	352.7
07:00:00	33.1	351.2
06:00:00	33.1	351.2
05:00:00	33.1	351.2
04:00:00	33.1	351.2
03:00:00	33.2	352.7
02:00:00	33.2	352.7
01:00:00	33.1	351.2
00:00:00	33.2	352.7

DATE 04-14-96

TIME	LEVEL	FLOW
23:00:00	33.1	351.2
22:00:00	33.1	351.2
21:00:00	33.1	351.2
20:00:00	33.1	351.2
19:00:00	33.1	351.2
18:00:00	33.2	352.7
17:00:00	33.2	352.7
16:00:00	33.2	352.7
15:00:00	33.1	351.2
14:00:00	33.1	351.2
13:00:00	33.1	351.2
12:00:00	33.1	351.2
11:00:00	33.2	352.7
10:00:00	33.2	352.7
09:00:00	33.2	352.7
08:00:00	33.2	352.7
07:00:00	33.1	351.2
06:00:00	33.2	352.7
05:00:00	33.2	352.7
04:00:00	33.1	351.2
03:00:00	33.2	352.7
02:00:00	33.1	351.2
01:00:00	33.1	351.2
00:00:00	33.1	351.2

DATE 04-13-96

TIME	LEVEL	FLOW
23:00:00	33.1	351.2
22:00:00	33.1	351.2
21:00:00	33.1	351.2
20:00:00	33.3	354.3
19:00:00	33.3	354.3
18:00:00	33.2	352.7
17:00:00	33.1	351.2
16:00:00	33.1	351.2
15:00:00	33.1	351.2
14:00:00	33.1	351.2
13:00:00	33.2	352.7
12:00:00	33.1	351.2
11:00:00	33.1	351.2
10:00:00	33.1	351.2
09:00:00	33.1	351.2
08:00:00	33.1	351.2
07:00:00	33.2	352.7
06:00:00	33.2	352.7
05:00:00	33.2	352.7
04:00:00	33.2	352.7
03:00:00	33.2	352.7
02:00:00	33.2	352.7
01:00:00	33.1	351.2
00:00:00	33.1	351.2

DATE 04-12-96

TIME	LEVEL	FLOW
23:00:00	33.1	351.2
22:00:00	33.1	351.2
21:00:00	33.3	354.3
20:00:00	33.2	352.7
19:00:00	33.1	351.2
18:00:00	33.1	351.2
17:00:00	33.1	351.2
16:00:00	33.2	352.7
15:00:00	33.2	352.7
14:00:00	33.2	352.7
13:00:00	33.2	352.7
12:00:00	33.1	351.2
11:00:00	33.1	351.2
10:00:00	33.1	351.2
09:00:00	33.1	351.2
08:00:00	33.1	351.2
07:00:00	33.2	352.7
06:00:00	33.1	351.2
05:00:00	33.3	354.3
04:00:00	33.3	354.3
03:00:00	33.2	352.7
02:00:00	33.1	351.2
01:00:00	33.4	355.9
00:00:00	34.2	368.5

DATE 04-11-96

TIME	LEVEL	FLOW
23:00:00	40.0	454.2
22:00:00	39.9	452.7
21:00:00	39.6	448.4
20:00:00	39.7	449.8
19:00:00	40.1	455.6
18:00:00	40.3	458.5
17:00:00	40.6	462.9
16:00:00	40.6	462.9
15:00:00	40.1	455.6
14:00:00	40.5	461.4
13:00:00	40.5	461.4
12:00:00	40.5	461.4
11:00:00	40.7	464.3
10:00:00	40.6	462.9
09:00:00	41.0	468.7
08:00:00	41.2	471.6
07:00:00	41.5	476.0
06:00:00	41.7	478.9
05:00:00	41.7	478.9
04:00:00	41.6	477.5
03:00:00	41.3	473.1
02:00:00	41.2	471.6
01:00:00	41.2	471.6
00:00:00	40.9	467.2

DATE 04-10-96

TIME	LEVEL	FLOW
23:00:00	40.7	464.3
22:00:00	40.3	458.5
21:00:00	40.2	457.0
20:00:00	39.9	452.7
19:00:00	39.6	448.4
18:00:00	39.5	446.9
17:00:00	39.5	446.9
16:00:00	39.5	446.9
15:00:00	39.4	445.5
14:00:00	39.5	446.9
13:00:00	39.6	448.4
12:00:00	39.6	448.4
11:00:00	39.7	449.8
10:00:00	39.2	442.6
09:00:00	39.2	442.6
08:00:00	39.6	448.4
07:00:00	40.0	454.2
06:00:00	39.9	452.7
05:00:00	39.9	452.7
04:00:00	39.6	448.4
03:00:00	39.5	446.9
02:00:00	39.4	445.5
01:00:00	39.1	441.2
00:00:00	39.1	441.2

DATE 04-09-96

TIME	LEVEL	FLOW
23:00:00	39.0	439.8
22:00:00	38.7	435.5
21:00:00	38.4	431.2
20:00:00	38.0	425.6
19:00:00	37.6	419.9
18:00:00	37.4	417.1
17:00:00	37.2	414.3
16:00:00	37.1	412.9
15:00:00	36.9	410.1
14:00:00	37.0	411.5
13:00:00	37.2	414.3
12:00:00	37.1	412.9
11:00:00	36.9	410.1
10:00:00	36.8	408.7
09:00:00	36.8	408.7
08:00:00	36.4	403.1
07:00:00	35.9	395.9
06:00:00	35.6	391.0
05:00:00	35.4	387.8
04:00:00	35.2	384.6
03:00:00	35.3	386.2
02:00:00	35.2	384.6
01:00:00	35.1	383.0
00:00:00	35.0	381.4

DATE 04-08-96

TIME	LEVEL	FLOW
23:00:00	34.8	378.1
22:00:00	34.6	374.9
21:00:00	34.5	373.3
20:00:00	34.3	370.1
19:00:00	34.1	367.0
18:00:00	34.0	365.4
17:00:00	33.9	363.8
16:00:00	33.7	360.6
15:00:00	33.7	360.6
14:00:00	33.9	363.8
13:00:00	34.0	365.4
12:00:00	34.0	365.4
11:00:00	33.9	363.8
10:00:00	33.9	363.8
09:00:00	33.7	360.6
08:00:00	33.7	360.6
07:00:00	33.6	359.0
06:00:00	33.5	357.5
05:00:00	33.1	351.2
04:00:00	32.8	346.5
03:00:00	32.4	340.3
02:00:00	32.5	341.8
01:00:00	32.0	334.1
00:00:00	31.8	331.0

DATE 04-07-96

TIME	LEVEL	FLOW
23:00:00	31.6	328.0
22:00:00	31.5	326.4
21:00:00	31.4	324.9
20:00:00	31.3	323.4
19:00:00	31.2	321.9
18:00:00	31.2	321.9
17:00:00	31.0	318.8
16:00:00	31.0	318.8
15:00:00	30.9	317.3
14:00:00	30.8	315.8
13:00:00	30.6	312.8
12:00:00	30.5	311.3
11:00:00	30.5	311.3
10:00:00	30.5	311.3
09:00:00	30.5	311.3
08:00:00	30.4	309.8
07:00:00	30.4	309.8
06:00:00	30.3	308.3
05:00:00	30.2	306.8
04:00:00	30.1	305.3
03:00:00	30.0	303.8
02:00:00	29.8	300.8
01:00:00	29.4	294.9
00:00:00	29.4	294.9

DATE 04-06-96

TIME	LEVEL	FLOW	
23:00:00	29.1	290.5	
22:00:00	29.0	289.0	
21:00:00	28.8	286.1	
20:00:00	28.4	280.2	
19:00:00	28.3	278.8	
18:00:00	28.3	278.8	
17:00:00	28.4	280.2	
16:00:00	28.3	278.8	
15:00:00	28.0	274.5	
14:00:00	27.7	270.1	
13:00:00	27.5	267.3	
12:00:00	27.7	270.1	
11:00:00	27.5	267.3	
10:00:00	27.1	245.2	
09:00:00	38.9	101.1	Flushing operation started
08:00:00	45.7	40.2	
07:00:00	45.7	40.2	
06:00:00	45.8	40.7	
05:00:00	45.8	40.7	
04:00:00	45.8	40.7	
03:00:00	45.9	41.1	
02:00:00	45.9	41.1	
01:00:00	45.8	40.7	
00:00:00	45.8	40.7	

DATE 04-05-96

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.8	40.7
21:00:00	45.7	40.2
20:00:00	45.7	40.2
19:00:00	45.7	40.2
18:00:00	45.8	40.7
17:00:00	45.7	40.2
16:00:00	45.8	40.7
15:00:00	45.8	40.7
14:00:00	45.9	41.1
13:00:00	45.8	40.7
12:00:00	45.8	40.7
11:00:00	45.7	40.2
10:00:00	45.7	40.2
09:00:00	45.7	40.2
08:00:00	45.7	40.2
07:00:00	45.7	40.2
06:00:00	45.8	40.7
05:00:00	45.8	40.7
04:00:00	45.8	40.7
03:00:00	46.0	41.6
02:00:00	45.8	40.7
01:00:00	46.2	42.6
00:00:00	45.9	41.1

DATE 04-04-96

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	45.9	41.1
21:00:00	45.8	40.7
20:00:00	45.8	40.7
19:00:00	45.8	40.7
18:00:00	45.8	40.7
17:00:00	45.9	41.1
16:00:00	45.8	40.7
15:00:00	45.7	40.2
14:00:00	45.7	40.2
13:00:00	45.8	40.7
12:00:00	45.7	40.2
11:00:00	45.7	40.2
10:00:00	45.8	40.7
09:00:00	45.7	40.2
08:00:00	46.0	41.6
07:00:00	45.8	40.7
06:00:00	45.7	40.2
05:00:00	45.8	40.7
04:00:00	46.0	41.6
03:00:00	46.1	42.1
02:00:00	45.7	40.2
01:00:00	45.9	41.1
00:00:00	45.9	41.1

DATE 04-03-96

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.9	41.1
21:00:00	45.9	41.1
20:00:00	45.8	40.7
19:00:00	45.8	40.7
18:00:00	45.8	40.7
17:00:00	45.8	40.7
16:00:00	45.7	40.2
15:00:00	45.7	40.2
14:00:00	45.7	40.2
13:00:00	45.7	40.2
12:00:00	45.8	40.7
11:00:00	45.8	40.7
10:00:00	45.9	41.1
09:00:00	46.0	41.6
08:00:00	45.9	41.1
07:00:00	45.9	41.1
06:00:00	45.7	40.2
05:00:00	45.8	40.7
04:00:00	45.8	40.7
03:00:00	45.9	41.1
02:00:00	46.1	42.1
01:00:00	46.0	41.6
00:00:00	45.7	40.2

DATE 04-02-96

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.7	40.2
21:00:00	45.8	40.7
20:00:00	45.8	40.7
19:00:00	46.0	41.6
18:00:00	45.7	40.2
17:00:00	46.1	42.1
16:00:00	45.9	41.1
15:00:00	45.8	40.7
14:00:00	45.7	40.2
13:00:00	45.8	40.7
12:00:00	45.8	40.7
11:00:00	45.8	40.7
10:00:00	45.8	40.7
09:00:00	46.0	41.6
08:00:00	45.9	41.1
07:00:00	46.1	42.1
06:00:00	45.9	41.1
05:00:00	45.7	40.2
04:00:00	45.8	40.7
03:00:00	46.1	42.1
02:00:00	45.7	40.2
01:00:00	46.0	41.6
00:00:00	45.9	41.1

DATE 04-01-96

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	46.1	42.1
21:00:00	46.1	42.1
20:00:00	45.9	41.1
19:00:00	45.8	40.7
18:00:00	45.8	40.7
17:00:00	45.8	40.7
16:00:00	45.9	41.1
15:00:00	45.9	41.1
14:00:00	45.9	41.1
13:00:00	45.9	41.1
12:00:00	45.8	40.7
11:00:00	45.7	40.2
10:00:00	45.8	40.7
09:00:00	45.7	40.2
08:00:00	45.7	40.2
07:00:00	45.7	40.2
06:00:00	45.7	40.2
05:00:00	45.7	40.2
04:00:00	45.8	40.7
03:00:00	45.8	40.7
02:00:00	46.2	42.6
01:00:00	45.7	40.2
00:00:00	46.0	41.6

DATE 03-31-96

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.7	40.2
21:00:00	46.0	41.6
20:00:00	45.7	40.2
19:00:00	45.7	40.2
18:00:00	45.7	40.2
17:00:00	45.7	40.2
16:00:00	45.7	40.2
15:00:00	45.7	40.2
14:00:00	45.8	40.7
13:00:00	45.9	41.1
12:00:00	45.9	41.1
11:00:00	45.8	40.7
10:00:00	45.7	40.2
09:00:00	45.9	41.1
08:00:00	45.9	41.1
07:00:00	46.1	42.1
06:00:00	45.7	40.2
05:00:00	45.8	40.7
04:00:00	46.1	42.1
03:00:00	46.0	41.6
02:00:00	46.0	41.6
01:00:00	46.1	42.1
00:00:00	45.7	40.2

DATE 03-30-96

TIME	LEVEL	FLOW
23:00:00	45.6	39.7
22:00:00	45.7	40.2
21:00:00	45.8	40.7
20:00:00	46.0	41.6
19:00:00	45.8	40.7
18:00:00	46.0	41.6
17:00:00	45.7	40.2
16:00:00	45.7	40.2
15:00:00	45.8	40.7
14:00:00	45.8	40.7
13:00:00	45.8	40.7
12:00:00	45.7	40.2
11:00:00	45.7	40.2
10:00:00	45.8	40.7
09:00:00	45.8	40.7
08:00:00	45.7	40.2
07:00:00	46.0	41.6
06:00:00	45.9	41.1
05:00:00	46.0	41.6
04:00:00	46.0	41.6
03:00:00	46.1	42.1
02:00:00	46.1	42.1
01:00:00	45.9	41.1
00:00:00	45.9	41.1

DATE 03-29-96

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.7	40.2
21:00:00	46.0	41.6
20:00:00	45.8	40.7
19:00:00	45.7	40.2
18:00:00	45.8	40.7
17:00:00	45.7	40.2
16:00:00	45.8	40.7
15:00:00	45.7	40.2
14:00:00	45.7	40.2
13:00:00	45.8	40.7
12:00:00	45.9	41.1
11:00:00	46.0	41.6
10:00:00	46.1	42.1
09:00:00	46.0	41.6
08:00:00	45.7	40.2
07:00:00	45.7	40.2
06:00:00	45.8	40.7
05:00:00	46.1	42.1
04:00:00	45.7	40.2
03:00:00	46.0	41.6
02:00:00	45.9	41.1
01:00:00	45.7	40.2
00:00:00	45.9	41.1

DATE 03-28-96

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.7	40.2
21:00:00	46.0	41.6
20:00:00	46.1	42.1
19:00:00	45.8	40.7
18:00:00	45.7	40.2
17:00:00	45.7	40.2
16:00:00	46.0	41.6
15:00:00	45.7	40.2
14:00:00	45.7	40.2
13:00:00	45.7	40.2
12:00:00	45.7	40.2
11:00:00	45.8	40.7
10:00:00	45.9	41.1
09:00:00	45.8	40.7
08:00:00	45.9	41.1
07:00:00	46.0	41.6
06:00:00	45.8	40.7
05:00:00	46.1	42.1
04:00:00	46.0	41.6
03:00:00	45.7	40.2
02:00:00	45.7	40.2
01:00:00	46.1	42.1
00:00:00	45.7	40.2

DATE 03-27-96

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	45.9	41.1
21:00:00	46.0	41.6
20:00:00	45.9	41.1
19:00:00	45.9	41.1
18:00:00	45.8	40.7
17:00:00	45.9	41.1
16:00:00	45.9	41.1
15:00:00	45.9	41.1
14:00:00	45.9	41.1
13:00:00	45.7	40.2
12:00:00	45.7	40.2
11:00:00	45.7	40.2
10:00:00	45.8	40.7
09:00:00	45.9	41.1
08:00:00	46.0	41.6
07:00:00	46.0	41.6
06:00:00	46.1	42.1
05:00:00	45.7	40.2
04:00:00	46.2	42.6
03:00:00	45.7	40.2
02:00:00	45.9	41.1
01:00:00	45.8	40.7
00:00:00	45.7	40.2

DATE 03-26-96

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.8	40.7
21:00:00	45.9	41.1
20:00:00	45.8	40.7
19:00:00	46.0	41.6
18:00:00	45.8	40.7
17:00:00	45.9	41.1
16:00:00	45.7	40.2
15:00:00	45.7	40.2
14:00:00	45.6	39.7
13:00:00	45.7	40.2
12:00:00	45.8	40.7
11:00:00	45.9	41.1
10:00:00	46.0	41.6
09:00:00	46.0	41.6
08:00:00	45.7	40.2
07:00:00	45.9	41.1
06:00:00	45.9	41.1
05:00:00	45.7	40.2
04:00:00	45.7	40.2
03:00:00	46.1	42.1
02:00:00	46.1	42.1
01:00:00	45.8	40.7
00:00:00	45.7	40.2

DATE 03-25-96

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.9	41.1
21:00:00	45.9	41.1
20:00:00	45.7	40.2
19:00:00	45.8	40.7
18:00:00	46.1	42.1
17:00:00	46.1	42.1
16:00:00	45.9	41.1
15:00:00	45.8	40.7
14:00:00	45.7	40.2
13:00:00	45.9	41.1
12:00:00	46.0	41.6
11:00:00	45.7	40.2
10:00:00	45.7	40.2
09:00:00	46.2	42.6
08:00:00	45.8	40.7
07:00:00	45.8	40.7
06:00:00	45.8	40.7
05:00:00	45.7	40.2
04:00:00	45.7	40.2
03:00:00	45.8	40.7
02:00:00	45.9	41.1
01:00:00	45.7	40.2
00:00:00	45.8	40.7

DATE 03-24-96

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.7	40.2
21:00:00	45.9	41.1
20:00:00	46.0	41.6
19:00:00	46.2	42.6
18:00:00	46.0	41.6
17:00:00	45.7	40.2
16:00:00	46.1	42.1
15:00:00	46.1	42.1
14:00:00	45.8	40.7
13:00:00	45.7	40.2
12:00:00	45.7	215.5
11:00:00	45.7	213.9
10:00:00	45.8	168.8
09:00:00	45.7	40.2
08:00:00	45.8	40.7
07:00:00	45.7	40.2
06:00:00	45.8	40.7
05:00:00	45.7	40.2
04:00:00	46.1	42.1
03:00:00	45.8	40.7
02:00:00	45.7	40.2
01:00:00	46.1	42.1
00:00:00	45.8	40.7

DATE 03-23-96

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	45.7	40.2
21:00:00	45.9	41.1
20:00:00	45.9	41.1
19:00:00	45.8	40.7
18:00:00	45.7	40.2
17:00:00	45.7	40.7
16:00:00	45.8	40.2
15:00:00	45.7	41.1
14:00:00	45.9	40.2
13:00:00	45.7	40.2
12:00:00	45.7	40.2
11:00:00	45.7	40.2
10:00:00	45.8	40.7
09:00:00	45.9	41.1
08:00:00	45.7	40.2
07:00:00	46.0	41.6
06:00:00	46.0	41.6
05:00:00	46.1	42.1
04:00:00	46.1	42.1
03:00:00	46.0	41.6
02:00:00	46.1	42.1
01:00:00	45.9	41.1
00:00:00	45.7	40.2

DATE 03-22-96

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.9	41.1
21:00:00	46.0	41.6
20:00:00	45.7	40.2
19:00:00	46.0	41.6
18:00:00	45.7	40.2
17:00:00	45.7	40.2
16:00:00	45.7	40.2
15:00:00	45.7	40.2
14:00:00	45.7	40.2
13:00:00	45.7	40.2
12:00:00	45.7	40.2
11:00:00	45.7	40.2
10:00:00	45.8	40.7
09:00:00	45.7	40.2
08:00:00	45.7	40.2
07:00:00	45.8	40.7
06:00:00	45.8	40.7
05:00:00	45.8	40.7
04:00:00	45.7	40.2
03:00:00	45.9	41.1
02:00:00	45.9	41.1
01:00:00	45.7	40.2
00:00:00	45.8	40.7

DATE 03-21-96

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	45.7	40.2
21:00:00	46.1	42.1
20:00:00	45.9	41.1
19:00:00	45.7	40.2
18:00:00	45.8	40.7
17:00:00	45.7	40.2
16:00:00	45.8	40.7
15:00:00	45.7	40.2
14:00:00	45.7	40.2
13:00:00	45.7	40.2
12:00:00	45.7	40.2
11:00:00	45.7	40.2
10:00:00	45.8	40.7
09:00:00	45.7	40.2
08:00:00	45.7	40.2
07:00:00	46.1	42.1
06:00:00	46.0	41.6
05:00:00	45.8	40.7
04:00:00	45.7	40.2
03:00:00	46.1	42.1
02:00:00	45.8	40.7
01:00:00	46.0	41.6
00:00:00	45.7	40.2

DATE 03-20-96

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.8	40.7
21:00:00	46.0	41.6
20:00:00	45.8	40.7
19:00:00	45.7	40.2
18:00:00	45.9	41.1
17:00:00	45.9	41.1
16:00:00	45.8	40.7
15:00:00	45.8	40.7
14:00:00	45.9	41.1
13:00:00	45.8	40.7
12:00:00	45.7	40.2
11:00:00	45.7	40.2
10:00:00	45.7	40.2
09:00:00	45.7	40.2
08:00:00	45.7	40.2
07:00:00	45.8	40.7
06:00:00	45.7	40.2
05:00:00	45.7	40.2
04:00:00	45.7	40.2
03:00:00	45.9	41.1
02:00:00	46.0	41.6
01:00:00	46.0	41.6
00:00:00	46.0	41.6

DATE 03-19-96

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	45.8	40.7
21:00:00	45.8	40.7
20:00:00	45.7	40.2
19:00:00	45.7	40.2
18:00:00	46.1	42.1
17:00:00	45.9	41.1
16:00:00	45.8	40.7
15:00:00	45.7	40.2
14:00:00	45.7	40.2
13:00:00	45.7	40.2
12:00:00	45.7	40.2
11:00:00	45.7	40.2
10:00:00	45.7	40.2
09:00:00	45.9	41.1
08:00:00	45.7	40.2
07:00:00	45.9	41.1
06:00:00	46.0	41.6
05:00:00	45.8	40.7
04:00:00	45.7	40.2
03:00:00	46.0	41.6
02:00:00	45.9	41.1
01:00:00	45.7	40.2
00:00:00	45.7	40.2

DATE 03-18-96

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.8	40.7
21:00:00	45.8	40.7
20:00:00	45.9	41.1
19:00:00	45.9	41.1
18:00:00	45.9	41.1
17:00:00	46.0	41.6
16:00:00	45.8	40.7
15:00:00	45.7	40.2
14:00:00	45.7	40.2
13:00:00	45.7	40.2
12:00:00	46.0	41.6
11:00:00	45.9	41.1
10:00:00	45.7	40.2
09:00:00	46.0	41.6
08:00:00	46.0	41.6
07:00:00	45.9	41.1
06:00:00	46.0	41.6
05:00:00	46.1	42.1
04:00:00	45.7	40.2
03:00:00	46.0	41.6
02:00:00	45.8	40.7
01:00:00	45.7	40.2
00:00:00	45.7	40.2

DATE 03-17-96

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.7	40.2
21:00:00	45.8	40.7
20:00:00	45.7	40.2
19:00:00	45.8	40.7
18:00:00	45.9	41.1
17:00:00	45.8	40.7
16:00:00	45.8	40.7
15:00:00	45.7	40.2
14:00:00	45.8	40.7
13:00:00	45.8	40.7
12:00:00	45.7	40.2
11:00:00	46.1	42.1
10:00:00	45.7	40.2
09:00:00	45.8	40.7
08:00:00	45.9	41.1
07:00:00	46.1	42.1
06:00:00	45.7	40.2
05:00:00	46.1	42.1
04:00:00	45.8	40.7
03:00:00	45.7	40.2
02:00:00	46.2	42.6
01:00:00	45.7	40.2
00:00:00	46.0	41.6

DATE 03-16-96

TIME	LEVEL	FLOW
23:00:00	46.0	41.6
22:00:00	45.8	40.7
21:00:00	45.7	40.2
20:00:00	45.7	40.2
19:00:00	45.8	40.7
18:00:00	45.8	40.7
17:00:00	46.0	41.6
16:00:00	45.7	40.2
15:00:00	45.7	40.2
14:00:00	45.7	40.2
13:00:00	45.7	40.2
12:00:00	45.9	41.1
11:00:00	45.7	40.2
10:00:00	46.0	41.6
09:00:00	45.7	40.2
08:00:00	45.8	40.7
07:00:00	46.1	42.1
06:00:00	45.7	40.2
05:00:00	45.9	41.1
04:00:00	45.7	40.2
03:00:00	46.2	42.6
02:00:00	45.7	40.2
01:00:00	45.8	40.7
00:00:00	46.1	42.1

DATE 03-15-96

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.7	40.2
21:00:00	46.1	42.1
20:00:00	45.7	40.2
19:00:00	45.9	41.1
18:00:00	45.9	41.1
17:00:00	46.0	41.6
16:00:00	46.0	41.6
15:00:00	45.9	41.1
14:00:00	45.7	40.2
13:00:00	45.9	41.1
12:00:00	46.1	42.1
11:00:00	46.2	42.6
10:00:00	46.0	41.6
09:00:00	45.7	40.2
08:00:00	45.9	41.1
07:00:00	45.9	41.1
06:00:00	45.8	40.7
05:00:00	46.1	42.1
04:00:00	45.7	40.2
03:00:00	46.2	42.6
02:00:00	45.7	40.2
01:00:00	45.8	40.7
00:00:00	46.1	42.1

DATE 03-14-96

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	46.0	41.6
21:00:00	45.7	40.2
20:00:00	45.9	41.1
19:00:00	46.1	42.1
18:00:00	46.0	41.6
17:00:00	46.1	42.1
16:00:00	46.1	42.1
15:00:00	45.9	41.1
14:00:00	45.9	41.1
13:00:00	45.9	41.1
12:00:00	45.7	40.2
11:00:00	45.7	40.2
10:00:00	45.9	41.1
09:00:00	46.1	42.1
08:00:00	45.8	40.7
07:00:00	45.9	41.1
06:00:00	46.1	42.1
05:00:00	45.7	40.2
04:00:00	46.2	42.6
03:00:00	45.7	40.2
02:00:00	46.0	41.6
01:00:00	45.7	40.2
00:00:00	45.7	40.2

DATE 03-13-96

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	45.9	41.1
21:00:00	45.9	41.1
20:00:00	56.9	104.9
19:00:00	46.4	43.5
18:00:00	45.8	40.7
17:00:00	45.8	40.7
16:00:00	45.7	40.2
15:00:00	45.8	40.7
14:00:00	45.7	40.2
13:00:00	45.7	40.2
12:00:00	45.8	40.7
11:00:00	45.8	40.7
10:00:00	45.8	40.7
09:00:00	45.7	40.2
08:00:00	46.0	41.6
07:00:00	45.8	40.7
06:00:00	46.1	42.1
05:00:00	45.7	40.2
04:00:00	45.8	40.7
03:00:00	46.0	41.6
02:00:00	45.8	40.7
01:00:00	45.7	40.2
00:00:00	45.8	40.7

DATE 03-12-96

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.9	41.1
21:00:00	45.7	40.2
20:00:00	45.7	40.2
19:00:00	45.8	40.7
18:00:00	46.0	41.6
17:00:00	46.2	42.6
16:00:00	45.9	41.1
15:00:00	45.7	40.2
14:00:00	46.2	42.6
13:00:00	46.0	41.6
12:00:00	45.8	40.7
11:00:00	45.7	40.2
10:00:00	46.2	42.6
09:00:00	45.7	40.2
08:00:00	45.8	40.7
07:00:00	45.9	41.1
06:00:00	45.7	40.2
05:00:00	45.7	40.2
04:00:00	45.9	41.1
03:00:00	45.8	40.7
02:00:00	45.7	40.2
01:00:00	46.1	42.1
00:00:00	45.7	40.2

DATE 03-11-96

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.8	40.7
21:00:00	45.8	40.7
20:00:00	45.9	41.1
19:00:00	45.8	40.7
18:00:00	45.7	40.2
17:00:00	45.8	40.7
16:00:00	46.1	42.1
15:00:00	46.1	42.1
14:00:00	46.1	42.1
13:00:00	46.1	42.1
12:00:00	46.1	42.1
11:00:00	46.0	41.6
10:00:00	45.9	41.1
09:00:00	45.7	40.2
08:00:00	46.1	42.1
07:00:00	46.0	41.6
06:00:00	45.9	41.1
05:00:00	45.7	40.2
04:00:00	46.0	41.6
03:00:00	46.1	42.1
02:00:00	45.7	40.2
01:00:00	45.7	40.2
00:00:00	45.7	40.2

DATE 03-10-96

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.7	40.2
21:00:00	45.7	40.2
20:00:00	45.8	40.7
19:00:00	45.8	40.7
18:00:00	45.7	40.2
17:00:00	45.7	40.2
16:00:00	45.7	40.2
15:00:00	45.8	40.7
14:00:00	45.7	40.2
13:00:00	45.8	40.7
12:00:00	45.9	41.1
11:00:00	45.8	40.7
10:00:00	45.8	40.7
09:00:00	45.7	40.2
08:00:00	45.7	40.2
07:00:00	45.7	40.2
06:00:00	45.7	40.2
05:00:00	45.8	40.7
04:00:00	45.7	40.2
03:00:00	45.7	40.2
02:00:00	45.8	40.7
01:00:00	45.9	41.1
00:00:00	45.7	40.2

DATE 03-09-96

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.9	41.1
21:00:00	45.8	40.7
20:00:00	45.7	40.2
19:00:00	45.7	40.2
18:00:00	45.7	40.2
17:00:00	45.8	40.7
16:00:00	45.7	40.2
15:00:00	45.7	40.2
14:00:00	45.8	40.7
13:00:00	45.7	40.2
12:00:00	45.7	40.2
11:00:00	45.7	40.2
10:00:00	45.8	40.7
09:00:00	45.8	40.7
08:00:00	45.7	40.2
07:00:00	45.7	40.2
06:00:00	45.7	40.2
05:00:00	45.8	40.7
04:00:00	45.9	41.1
03:00:00	45.8	40.7
02:00:00	45.8	40.7
01:00:00	45.7	40.2
00:00:00	45.7	40.2

DATE 03-08-96

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.7	40.2
21:00:00	45.8	40.7
20:00:00	45.8	40.7
19:00:00	45.7	40.2
18:00:00	45.7	40.2
17:00:00	45.8	40.7
16:00:00	45.7	40.2
15:00:00	45.7	40.2
14:00:00	45.8	40.7
13:00:00	45.9	41.1
12:00:00	45.8	40.7
11:00:00	45.7	40.2
10:00:00	45.7	40.2
09:00:00	45.7	40.2
08:00:00	45.8	40.7
07:00:00	45.7	40.2
06:00:00	45.7	40.2
05:00:00	45.7	40.2
04:00:00	45.8	40.7
03:00:00	45.8	40.7
02:00:00	45.9	41.1
01:00:00	45.7	40.2
00:00:00	45.7	40.2

DATE 03-07-96

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.8	40.7
21:00:00	45.7	40.2
20:00:00	45.8	40.7
19:00:00	45.8	40.7
18:00:00	45.7	40.2
17:00:00	45.7	40.2
16:00:00	45.7	40.2
15:00:00	45.8	40.7
14:00:00	45.8	40.7
13:00:00	45.9	41.1
12:00:00	45.8	40.7
11:00:00	45.7	40.2
10:00:00	45.7	40.2
09:00:00	45.8	40.7
08:00:00	45.8	40.7
07:00:00	45.7	40.2
06:00:00	45.7	40.2
05:00:00	45.8	40.7
04:00:00	45.8	40.7
03:00:00	45.8	40.7
02:00:00	45.8	40.7
01:00:00	45.7	40.2
00:00:00	45.7	40.2

DATE 03-06-96

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.8	40.7
21:00:00	45.9	41.1
20:00:00	45.9	41.1
19:00:00	45.7	40.2
18:00:00	45.7	40.2
17:00:00	45.7	40.2
16:00:00	45.7	40.2
15:00:00	45.7	40.2
14:00:00	45.7	40.2
13:00:00	45.8	40.7
12:00:00	45.8	40.7
11:00:00	45.7	40.2
10:00:00	45.7	40.2
09:00:00	45.7	40.2
08:00:00	45.7	40.2
07:00:00	45.7	40.2
06:00:00	45.8	40.7
05:00:00	45.8	40.7
04:00:00	45.8	40.7
03:00:00	45.7	40.2
02:00:00	45.8	40.7
01:00:00	45.7	40.2
00:00:00	45.7	40.2

DATE 03-05-96

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.7	40.2
21:00:00	45.7	40.2
20:00:00	45.7	40.2
19:00:00	45.7	40.2
18:00:00	45.7	40.2
17:00:00	45.7	40.2
16:00:00	45.8	40.7
15:00:00	45.8	40.7
14:00:00	45.9	41.1
13:00:00	45.9	41.1
12:00:00	45.8	40.7
11:00:00	45.7	40.2
10:00:00	45.7	40.2
09:00:00	45.7	40.2
08:00:00	45.7	40.2
07:00:00	45.7	40.2
06:00:00	45.7	40.2
05:00:00	45.8	40.7
04:00:00	45.8	40.7
03:00:00	45.8	40.7
02:00:00	45.8	40.7
01:00:00	45.8	40.7
00:00:00	45.7	40.2

DATE 03-04-96

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.7	40.2
21:00:00	45.7	40.2
20:00:00	45.8	40.7
19:00:00	45.8	40.7
18:00:00	45.8	40.7
17:00:00	45.9	41.1
16:00:00	45.9	41.1
15:00:00	45.7	40.2
14:00:00	45.7	40.2
13:00:00	45.8	40.7
12:00:00	45.7	40.2
11:00:00	45.7	40.2
10:00:00	45.7	40.2
09:00:00	45.7	40.2
08:00:00	45.7	40.2
07:00:00	45.7	40.2
06:00:00	45.7	40.2
05:00:00	45.8	40.7
04:00:00	45.8	40.7
03:00:00	45.8	40.7
02:00:00	45.7	40.2
01:00:00	45.7	40.2
00:00:00	45.8	40.7

DATE 03-03-96

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.8	40.7
21:00:00	45.9	41.1
20:00:00	45.8	40.7
19:00:00	45.8	40.7
18:00:00	45.7	40.2
17:00:00	45.7	40.2
16:00:00	45.7	40.2
15:00:00	45.7	40.2
14:00:00	45.8	40.7
13:00:00	45.8	40.7
12:00:00	45.7	40.2
11:00:00	45.7	40.2
10:00:00	45.7	40.2
09:00:00	45.8	40.7
08:00:00	45.7	40.2
07:00:00	45.7	40.2
06:00:00	45.7	40.2
05:00:00	45.8	40.7
04:00:00	45.8	40.7
03:00:00	45.7	40.2
02:00:00	45.7	40.2
01:00:00	45.7	40.2
00:00:00	45.7	40.2

DATE 03-02-96

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.7	40.2
21:00:00	45.8	40.7
20:00:00	45.8	40.7
19:00:00	45.7	40.2
18:00:00	45.8	40.7
17:00:00	45.8	40.7
16:00:00	45.7	40.2
15:00:00	45.8	40.7
14:00:00	45.7	40.2
13:00:00	45.8	40.7
12:00:00	45.8	40.7
11:00:00	45.9	41.1
10:00:00	45.9	41.1
09:00:00	45.8	40.7
08:00:00	45.7	40.2
07:00:00	45.7	40.2
06:00:00	45.7	40.2
05:00:00	45.8	40.7
04:00:00	45.8	40.7
03:00:00	45.7	40.2
02:00:00	45.7	40.2
01:00:00	45.7	40.2
00:00:00	45.7	40.2

DATE 03-01-96

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.8	40.7
21:00:00	45.7	40.2
20:00:00	45.8	40.7
19:00:00	45.8	40.7
18:00:00	45.8	40.7
17:00:00	45.8	40.7
16:00:00	45.7	40.2
15:00:00	45.7	40.2
14:00:00	45.8	40.7
13:00:00	45.8	40.7
12:00:00	45.8	40.7
11:00:00	45.9	41.1
10:00:00	45.8	40.7
09:00:00	45.7	40.2
08:00:00	45.7	40.2
07:00:00	45.7	40.2
06:00:00	45.7	40.2
05:00:00	45.7	40.2
04:00:00	45.7	40.2
03:00:00	45.8	40.7
02:00:00	45.8	40.7
01:00:00	45.7	40.2
00:00:00	45.8	40.7

CEM COMMERCIAL ENERGY MGMT, INC.

P.O. Box 4518 • Pocatello, Idaho 83205 • Telephone (208) 237-3563 • Fax (208) 237-3563

March 27, 1996
Ref: CEM/1060

RECEIVED
APR 1 _ 1996
Department of Water Resources

Mr. L. GLEN SAXTON
Chief, Water Allocation Bureau
State of Idaho, Department of Water Resources
1301 North Orchard Street
Statehouse Mail
Boise, ID 83720-9000

Subject: Portneuf River Hydroelectric Project
Lava Hot Springs, Idaho
FERC Project No. 7447-002
Permit No. 29-7699

Dear Mr. Saxton:

Attached please find copies of the bypass channel flow records for the period from January 1 to February 29, 1996.

Sincerely,

Maher F. Wissa
President

Attachments: 16 sheets

DATE 02-29-96

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.7	40.2
21:00:00	45.7	40.2
20:00:00	45.8	40.7
19:00:00	45.8	40.7
18:00:00	45.7	40.2
17:00:00	45.7	40.2
16:00:00	45.7	40.2
15:00:00	45.7	40.2
14:00:00	45.8	40.7
13:00:00	45.9	41.1
12:00:00	45.8	40.7
11:00:00	45.8	40.7
10:00:00	45.7	40.2
09:00:00	45.7	40.2
08:00:00	45.8	40.7
07:00:00	45.7	40.2
06:00:00	45.7	40.2
05:00:00	45.7	40.2
04:00:00	45.8	40.7
03:00:00	45.7	40.2
02:00:00	45.7	40.2
01:00:00	45.8	40.7
00:00:00	45.7	40.2

DATE 02-28-96

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.7	40.2
21:00:00	45.7	40.2
20:00:00	45.7	40.2
19:00:00	45.8	40.7
18:00:00	45.7	40.2
17:00:00	45.7	40.2
16:00:00	45.7	40.2
15:00:00	45.8	40.7
14:00:00	45.7	40.2
13:00:00	45.7	40.2
12:00:00	45.8	40.7
11:00:00	45.7	40.2
10:00:00	45.7	40.2
09:00:00	45.7	40.2
08:00:00	45.8	40.7
07:00:00	45.8	40.7
06:00:00	45.7	40.2
05:00:00	45.8	40.7
04:00:00	45.7	40.2
03:00:00	45.8	40.7
02:00:00	45.7	40.2
01:00:00	45.7	40.2
00:00:00	45.7	40.2

DATE 02-27-96

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.8	40.7
21:00:00	45.7	40.2
20:00:00	45.7	40.2
19:00:00	45.7	40.2
18:00:00	45.8	40.7
17:00:00	45.7	40.2
16:00:00	45.7	40.2
15:00:00	45.7	40.2
14:00:00	45.8	40.7
13:00:00	45.7	40.2
12:00:00	45.7	40.2
11:00:00	45.7	40.2
10:00:00	45.7	40.2
09:00:00	45.7	40.2
08:00:00	45.8	40.7
07:00:00	45.7	40.2
06:00:00	45.7	40.2
05:00:00	45.8	40.7
04:00:00	45.7	40.2
03:00:00	45.7	40.2
02:00:00	45.8	40.7
01:00:00	45.8	40.7
00:00:00	45.7	40.2

DATE 02-26-96

TIME	LEVEL	FLOW	
23:00:00	45.8	40.7	
22:00:00	46.0	41.6↑	Turbine resumed
21:00:00	46.3	43.0	
20:00:00	46.3	43.0	
19:00:00	46.5	44.0↓	Turbine stopped, bypass valve opened
18:00:00	45.8	40.7	
17:00:00	45.8	40.7	
16:00:00	45.7	40.2	
15:00:00	45.8	40.7	
14:00:00	45.7	40.2	
13:00:00	45.7	40.2	
12:00:00	45.7	40.2	
11:00:00	45.8	40.7	
10:00:00	45.8	40.7	
09:00:00	45.7	40.2	
08:00:00	45.7	40.2	
07:00:00	45.9	41.1	
06:00:00	45.8	40.7	
05:00:00	45.7	40.2	
04:00:00	45.7	40.2	
03:00:00	45.7	40.2	
02:00:00	45.9	41.1	
01:00:00	45.8	40.7	
00:00:00	45.7	40.2	

DATE 02-25-96

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.8	40.7
21:00:00	45.8	40.7
20:00:00	45.7	40.2
19:00:00	45.7	40.2
18:00:00	45.8	40.7
17:00:00	45.7	40.2
16:00:00	45.8	40.7
15:00:00	45.7	40.2
14:00:00	45.7	40.2
13:00:00	45.8	40.7
12:00:00	45.7	40.2
11:00:00	45.8	40.7
10:00:00	45.8	40.7
09:00:00	45.7	40.2
08:00:00	45.7	40.2
07:00:00	45.7	40.2
06:00:00	45.7	40.2
05:00:00	45.8	40.7
04:00:00	45.7	40.2
03:00:00	45.8	40.7
02:00:00	45.7	40.2
01:00:00	45.8	40.7
00:00:00	45.7	40.2

DATE 02-24-96

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.9	41.1
21:00:00	45.7	40.2
20:00:00	45.8	40.7
19:00:00	45.7	40.2
18:00:00	45.7	40.2
17:00:00	45.7	40.2
16:00:00	45.6	39.7
15:00:00	45.7	40.2
14:00:00	45.7	40.2
13:00:00	45.8	40.7
12:00:00	45.7	40.2
11:00:00	45.7	40.2
10:00:00	45.8	40.7
09:00:00	45.7	40.2
08:00:00	45.7	40.2
07:00:00	45.7	40.2
06:00:00	45.8	40.7
05:00:00	45.7	40.2
04:00:00	45.7	40.2
03:00:00	45.8	40.7
02:00:00	45.7	40.2
01:00:00	45.7	40.2
00:00:00	45.7	40.2

DATE 02-23-96

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.7	40.2
21:00:00	45.8	40.7
20:00:00	45.8	40.7
19:00:00	45.7	40.2
18:00:00	45.7	40.2
17:00:00	45.7	40.2
16:00:00	45.7	40.2
15:00:00	45.7	40.2
14:00:00	45.7	40.2
13:00:00	45.7	40.2
12:00:00	45.7	40.2
11:00:00	45.8	40.7
10:00:00	45.8	40.7
09:00:00	45.9	41.1
08:00:00	45.7	40.2
07:00:00	45.7	40.2
06:00:00	45.8	40.7
05:00:00	45.7	40.2
04:00:00	45.8	40.7
03:00:00	45.7	40.2
02:00:00	45.7	40.2
01:00:00	45.7	40.2
00:00:00	45.7	40.2

DATE 02-22-96

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.7	40.2
21:00:00	45.7	40.2
20:00:00	45.7	40.2
19:00:00	45.6	39.7
18:00:00	45.6	39.7
17:00:00	45.7	40.2
16:00:00	45.7	40.2
15:00:00	45.7	40.2
14:00:00	45.7	40.2
13:00:00	45.8	40.7
12:00:00	45.7	40.2
11:00:00	45.8	40.7
10:00:00	45.8	40.7
09:00:00	45.7	40.2
08:00:00	45.7	40.2
07:00:00	45.6	39.7
06:00:00	45.6	39.7
05:00:00	45.7	40.2
04:00:00	45.8	40.7
03:00:00	45.9	41.1
02:00:00	45.7	40.2
01:00:00	45.8	40.7
00:00:00	45.7	40.2

DATE 02-21-96

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.7	40.2
21:00:00	45.6	39.7
20:00:00	45.6	39.7
19:00:00	45.7	40.2
18:00:00	45.7	40.2
17:00:00	45.7	40.2
16:00:00	45.8	40.7
15:00:00	45.8	40.7
14:00:00	45.7	40.2
13:00:00	45.8	40.7
12:00:00	45.8	40.7
11:00:00	45.7	40.2
10:00:00	45.7	40.2
09:00:00	45.8	40.7
08:00:00	45.8	40.7
07:00:00	45.7	40.2
06:00:00	45.7	40.2
05:00:00	45.7	40.2
04:00:00	45.7	40.2
03:00:00	45.6	39.7
02:00:00	45.7	40.2
01:00:00	45.7	40.2
00:00:00	45.8	40.7

DATE 02-20-96

TIME	LEVEL	FLOW
23:00:00	45.6	39.7
22:00:00	45.7	40.2
21:00:00	45.7	40.2
20:00:00	45.7	40.2
19:00:00	45.7	40.2
18:00:00	45.7	40.2
17:00:00	45.7	40.2
16:00:00	45.8	40.7
15:00:00	45.8	40.7
14:00:00	45.7	40.2
13:00:00	45.6	39.7
12:00:00	45.7	40.2
11:00:00	45.6	39.7
10:00:00	45.7	40.2
09:00:00	45.7	40.2
08:00:00	45.7	40.2
07:00:00	45.8	40.7
06:00:00	45.6	39.7
05:00:00	45.7	40.2
04:00:00	45.7	40.2
03:00:00	45.7	40.2
02:00:00	45.7	40.2
01:00:00	45.8	40.7
00:00:00	45.8	40.7

DATE 02-19-96

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.7	40.2
21:00:00	45.7	40.2
20:00:00	45.7	40.2
19:00:00	45.7	40.2
18:00:00	45.7	40.2
17:00:00	45.7	40.2
16:00:00	45.6	39.7
15:00:00	45.7	40.2
14:00:00	45.8	40.7
13:00:00	45.7	40.2
12:00:00	45.7	40.2
11:00:00	45.6	39.7
10:00:00	45.6	39.7
09:00:00	45.7	40.2
08:00:00	45.7	40.2
07:00:00	45.7	40.2
06:00:00	45.8	40.7
05:00:00	45.7	40.2
04:00:00	45.7	40.2
03:00:00	45.6	39.7
02:00:00	45.7	40.2
01:00:00	45.8	40.7
00:00:00	45.8	40.7

DATE 02-18-96

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.8	40.7
21:00:00	45.8	40.7
20:00:00	45.9	41.1
19:00:00	45.7	40.2
18:00:00	45.7	40.2
17:00:00	45.7	40.2
16:00:00	45.7	40.2
15:00:00	45.7	40.2
14:00:00	45.7	40.2
13:00:00	45.7	40.2
12:00:00	45.6	39.7
11:00:00	45.7	40.2
10:00:00	45.8	40.7
09:00:00	45.7	40.2
08:00:00	45.7	40.2
07:00:00	45.6	39.7
06:00:00	45.7	40.2
05:00:00	45.9	41.1
04:00:00	45.7	40.2
03:00:00	45.7	40.2
02:00:00	45.8	40.7
01:00:00	45.8	40.7
00:00:00	45.8	40.7

DATE 02-17-96

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.7	40.2
21:00:00	45.7	40.2
20:00:00	45.7	40.2
19:00:00	45.7	40.2
18:00:00	45.7	40.2
17:00:00	45.7	40.2
16:00:00	45.7	40.2
15:00:00	45.7	40.2
14:00:00	45.6	39.7
13:00:00	45.8	40.7
12:00:00	45.7	40.2
11:00:00	45.7	40.2
10:00:00	45.7	40.2
09:00:00	45.7	40.2
08:00:00	45.7	40.2
07:00:00	45.7	40.2
06:00:00	45.7	40.2
05:00:00	45.8	40.7
04:00:00	45.7	40.2
03:00:00	45.7	40.2
02:00:00	45.9	41.1
01:00:00	45.8	40.7
00:00:00	45.8	40.7

DATE 02-16-96

TIME	LEVEL	FLOW	
23:00:00	45.8	40.7	
22:00:00	45.6	39.7	
21:00:00	45.8	40.7	
20:00:00	45.8	40.7	
19:00:00	45.7	40.2	
18:00:00	45.7	40.2	
17:00:00	45.7	40.2	
16:00:00	45.7	40.2	
15:00:00	45.7	40.2	
14:00:00	45.7	40.2	
13:00:00	45.7	40.2	
12:00:00	45.7	40.2	
11:00:00	45.7	40.2	
10:00:00	45.7	40.2	
09:00:00	45.7	40.2	
08:00:00	45.7	40.2	
07:00:00	45.7	40.2	
06:00:00	45.7	40.2	
05:00:00	45.7	40.2	↑ Turbine restarted
04:00:00	45.9	41.1	
03:00:00	46.1	42.1	↑ Turbine stopped, bypass valve opened
02:00:00	45.8	40.7	
01:00:00	45.8	40.7	
00:00:00	45.9	41.1	

DATE 02-15-96

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.8	40.7
21:00:00	45.7	40.2
20:00:00	45.7	40.2
19:00:00	45.7	40.2
18:00:00	45.7	40.2
17:00:00	45.7	40.2
16:00:00	45.7	40.2
15:00:00	45.7	40.2
14:00:00	45.8	40.7
13:00:00	45.6	39.7
12:00:00	45.7	40.2
11:00:00	45.6	39.7
10:00:00	45.7	40.2
09:00:00	45.7	40.2
08:00:00	45.8	40.7
07:00:00	45.7	40.2
06:00:00	45.7	40.2
05:00:00	45.7	40.2
04:00:00	45.7	40.2
03:00:00	45.8	40.7
02:00:00	45.9	41.1
01:00:00	45.7	40.2
00:00:00	45.7	40.2

DATE 02-14-96

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.8	40.7
21:00:00	45.7	40.2
20:00:00	45.7	40.2
19:00:00	45.7	40.2
18:00:00	45.7	40.2
17:00:00	45.7	40.2
16:00:00	45.8	40.7
15:00:00	45.9	41.1
14:00:00	45.7	40.2
13:00:00	45.7	40.2
12:00:00	45.7	40.2
11:00:00	45.7	40.2
10:00:00	45.7	40.2
09:00:00	45.7	40.2
08:00:00	45.7	40.2
07:00:00	45.7	40.2
06:00:00	45.7	40.2
05:00:00	45.7	40.2
04:00:00	45.7	40.2
03:00:00	45.8	40.7
02:00:00	45.8	40.7
01:00:00	45.7	40.2
00:00:00	45.7	40.2

DATE 02-13-96

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.7	40.2
21:00:00	45.8	40.7
20:00:00	45.9	41.1
19:00:00	45.7	40.2
18:00:00	45.8	40.7
17:00:00	45.7	40.2
16:00:00	45.7	40.2
15:00:00	45.8	40.7
14:00:00	45.9	41.1
13:00:00	45.7	40.2
12:00:00	45.7	40.2
11:00:00	45.7	40.2
10:00:00	45.7	40.2
09:00:00	45.7	40.2
08:00:00	45.6	39.7
07:00:00	45.7	40.2
06:00:00	45.8	40.7
05:00:00	45.7	40.2
04:00:00	45.6	39.7
03:00:00	45.6	39.7
02:00:00	45.8	40.7
01:00:00	45.8	40.7
00:00:00	45.8	40.7

DATE 02-12-96

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.7	40.2
21:00:00	45.7	40.2
20:00:00	45.7	40.2
19:00:00	45.7	40.2
18:00:00	45.7	40.2
17:00:00	45.6	39.7
16:00:00	45.7	40.2
15:00:00	45.7	40.2
14:00:00	45.7	40.2
13:00:00	45.8	40.7
12:00:00	45.8	40.7
11:00:00	45.7	40.2
10:00:00	45.7	40.2
09:00:00	45.8	40.7
08:00:00	45.7	40.2
07:00:00	45.9	41.1
06:00:00	45.7	40.2
05:00:00	45.7	40.2
04:00:00	45.7	40.2
03:00:00	45.8	40.7
02:00:00	45.8	40.7
01:00:00	45.9	41.1
00:00:00	45.7	40.2

DATE 02-11-96

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.8	40.7
21:00:00	45.7	40.2
20:00:00	45.7	40.2
19:00:00	45.7	40.2
18:00:00	45.7	40.2
17:00:00	45.7	40.2
16:00:00	45.7	40.2
15:00:00	45.8	40.7
14:00:00	45.8	40.7
13:00:00	45.7	40.2
12:00:00	45.7	40.2
11:00:00	45.7	40.2
10:00:00	45.7	40.2
09:00:00	45.6	39.7
08:00:00	45.8	40.7
07:00:00	45.7	40.2
06:00:00	45.7	40.2
05:00:00	45.7	40.2
04:00:00	45.6	39.7
03:00:00	45.7	40.2
02:00:00	45.7	40.2
01:00:00	45.8	40.7
00:00:00	45.8	40.7

DATE 02-10-96

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.7	40.2
21:00:00	45.7	40.2
20:00:00	45.8	40.7
19:00:00	45.8	40.7
18:00:00	45.7	40.2
17:00:00	45.7	40.2
16:00:00	45.7	40.2
15:00:00	45.6	39.7
14:00:00	45.6	39.7
13:00:00	45.8	40.7
12:00:00	45.9	41.1
11:00:00	45.8	40.7
10:00:00	45.8	40.7
09:00:00	45.7	40.2
08:00:00	45.7	40.2
07:00:00	45.7	40.2
06:00:00	45.7	40.2
05:00:00	45.6	39.7
04:00:00	45.7	40.2
03:00:00	45.7	40.2
02:00:00	45.8	40.7
01:00:00	45.9	41.1
00:00:00	45.7	40.2

DATE 02-09-96

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.8	40.7
21:00:00	45.8	40.7
20:00:00	45.7	40.2
19:00:00	45.7	40.2
18:00:00	45.7	40.2
17:00:00	45.7	40.2
16:00:00	45.7	40.2
15:00:00	45.7	40.2
14:00:00	45.8	40.7
13:00:00	45.7	40.2
12:00:00	45.7	40.2
11:00:00	45.7	40.2
10:00:00	45.8	40.7
09:00:00	45.7	40.2
08:00:00	45.7	40.2
07:00:00	45.7	40.2
06:00:00	45.7	40.2
05:00:00	45.8	40.7
04:00:00	45.9	41.1
03:00:00	45.8	40.7
02:00:00	45.8	40.7
01:00:00	45.7	40.2
00:00:00	45.7	40.2

DATE 02-08-96

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.7	40.2
21:00:00	45.8	40.7
20:00:00	45.8	40.7
19:00:00	45.7	40.2
18:00:00	45.7	40.2
17:00:00	45.7	40.2
16:00:00	45.7	40.2
15:00:00	45.7	40.2
14:00:00	45.6	39.7
13:00:00	45.7	40.2
12:00:00	45.8	40.7
11:00:00	45.7	40.2
10:00:00	45.6	39.7
09:00:00	45.7	40.2
08:00:00	45.7	40.2
07:00:00	45.7	40.2
06:00:00	45.7	40.2
05:00:00	45.7	40.2
04:00:00	45.7	40.2
03:00:00	45.8	40.7
02:00:00	45.8	40.7
01:00:00	45.7	40.2
00:00:00	45.7	40.2

DATE 02-07-96

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.7	40.2
21:00:00	45.7	40.2
20:00:00	45.6	39.7
19:00:00	45.8	40.7
18:00:00	45.7	40.2
17:00:00	45.7	40.2
16:00:00	45.7	40.2
15:00:00	45.7	40.2
14:00:00	45.7	40.2
13:00:00	45.7	40.2
12:00:00	45.7	40.2
11:00:00	45.7	40.2
10:00:00	45.7	40.2
09:00:00	45.8	40.7
08:00:00	45.8	40.7
07:00:00	45.7	40.2
06:00:00	45.7	40.2
05:00:00	45.7	40.2
04:00:00	45.7	40.2
03:00:00	45.7	40.2
02:00:00	45.8	40.7
01:00:00	45.7	40.2
00:00:00	45.6	39.7

DATE 02-06-96

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.8	40.7
21:00:00	45.8	40.7
20:00:00	45.7	40.2
19:00:00	45.7	40.2
18:00:00	45.7	40.2
17:00:00	45.6	39.7
16:00:00	45.7	40.2
15:00:00	45.7	40.2
14:00:00	45.7	40.2
13:00:00	45.9	41.1
12:00:00	45.8	40.7
11:00:00	45.7	40.2
10:00:00	45.7	40.2
09:00:00	45.7	40.2
08:00:00	45.6	39.7
07:00:00	45.7	40.2
06:00:00	45.7	40.2
05:00:00	45.7	40.2
04:00:00	45.8	40.7
03:00:00	45.9	41.1
02:00:00	45.9	41.1
01:00:00	45.8	40.7
00:00:00	45.7	40.2

DATE 02-05-96

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.7	40.2
21:00:00	45.8	40.7
20:00:00	45.7	40.2
19:00:00	45.7	40.2
18:00:00	45.7	40.2
17:00:00	45.7	40.2
16:00:00	45.8	40.7
15:00:00	45.7	40.2
14:00:00	45.6	39.7
13:00:00	45.7	40.2
12:00:00	45.7	40.2
11:00:00	45.7	40.2
10:00:00	45.6	39.7
09:00:00	45.7	40.2
08:00:00	45.7	40.2
07:00:00	45.7	40.2
06:00:00	45.7	40.2
05:00:00	45.7	40.2
04:00:00	45.7	40.2
03:00:00	45.9	41.1
02:00:00	45.8	40.7
01:00:00	45.8	40.7
00:00:00	45.7	40.2

DATE 02-04-96

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.7	40.2
21:00:00	45.7	40.2
20:00:00	45.8	40.7
19:00:00	45.8	40.7
18:00:00	45.9	41.1
17:00:00	45.7	40.2
16:00:00	45.7	40.2
15:00:00	45.7	40.2
14:00:00	45.7	40.2
13:00:00	45.7	40.2
12:00:00	45.7	40.2
11:00:00	45.7	40.2
10:00:00	45.7	40.2
09:00:00	45.7	40.2
08:00:00	45.7	40.2
07:00:00	45.7	40.2
06:00:00	45.7	40.2
05:00:00	45.8	40.7
04:00:00	45.8	40.7
03:00:00	45.8	40.7
02:00:00	45.7	40.2
01:00:00	45.7	40.2
00:00:00	45.7	40.2

DATE 02-03-96

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.8	40.7
21:00:00	45.7	40.2
20:00:00	45.8	40.7
19:00:00	45.8	40.7
18:00:00	45.9	41.1
17:00:00	45.7	40.2
16:00:00	45.7	40.2
15:00:00	45.7	40.2
14:00:00	45.8	40.7
13:00:00	45.7	40.2
12:00:00	45.7	40.2
11:00:00	45.7	40.2
10:00:00	45.7	40.2
09:00:00	45.7	40.2
08:00:00	45.7	40.2
07:00:00	45.7	40.2
06:00:00	45.7	40.2
05:00:00	45.8	40.7
04:00:00	45.8	40.7
03:00:00	45.8	40.7
02:00:00	45.7	40.2
01:00:00	45.7	40.2
00:00:00	45.7	40.2

DATE 02-02-96

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.7	40.2
21:00:00	45.7	40.2
20:00:00	45.7	40.2
19:00:00	45.8	40.7
18:00:00	45.8	40.7
17:00:00	45.8	40.7
16:00:00	45.7	40.2
15:00:00	45.7	40.2
14:00:00	45.6	39.7
13:00:00	45.7	40.2
12:00:00	45.7	40.2
11:00:00	45.8	40.7
10:00:00	45.8	40.7
09:00:00	45.9	41.1
08:00:00	45.7	40.2
07:00:00	45.7	40.2
06:00:00	45.7	40.2
05:00:00	45.8	40.7
04:00:00	45.8	40.7
03:00:00	45.9	41.1
02:00:00	45.7	40.2
01:00:00	45.7	40.2
00:00:00	45.7	40.2

DATE 02-01-96

TIME	LEVEL	FLOW	
23:00:00	45.7	40.2	
22:00:00	45.8	40.7	
21:00:00	45.7	40.2	
20:00:00	45.7	40.2	
19:00:00	45.7	40.2	
18:00:00	45.7	40.2	
17:00:00	45.8	40.7	
16:00:00	45.7	40.2	
15:00:00	45.7	40.2	
14:00:00	45.8	40.7	
13:00:00	51.0	68.0↑	Turbine restarted
12:00:00	54.8	91.1	
11:00:00	54.8	91.1	
10:00:00	54.8	91.1	
09:00:00	54.7	90.5	
08:00:00	54.7	90.5	
07:00:00	54.7	90.5	
06:00:00	54.7	90.5	
05:00:00	53.6	83.5	
04:00:00	52.4	76.2	— valve was closed
03:00:00	42.1	24.9↑	Turbine Stopped, bypass valve opened
02:00:00	45.7	40.2	
01:00:00	45.7	40.2	
00:00:00	45.7	40.2	

DATE 01-31-96

TIME	LEVEL	FLOW	
23:00:00	45.9	41.1	
22:00:00	45.9	41.1	
21:00:00	45.9	41.1	
20:00:00	45.8	40.7	
19:00:00	45.8	40.7	
18:00:00	45.7	40.2	
17:00:00	45.7	40.2	
16:00:00	45.7	40.2	
15:00:00	45.6	39.7	
14:00:00	45.7	40.2	
13:00:00	45.8	40.7	
12:00:00	45.7	40.2	
11:00:00	45.9	41.1	
10:00:00	46.1	42.1↑	Turbine restarted
09:00:00	40.3	18.5	
08:00:00	41.6	23.0↑	Turbine stopped, bypass valve opened
07:00:00	45.8	40.7	
06:00:00	45.7	40.2	
05:00:00	45.7	40.2	
04:00:00	45.8	40.7	
03:00:00	45.8	40.7	
02:00:00	45.7	40.2	
01:00:00	45.7	40.2	
00:00:00	45.7	40.2	

DATE 01-30-96

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.8	40.7
21:00:00	45.7	40.2
20:00:00	45.8	40.7
19:00:00	45.7	40.2
18:00:00	45.7	40.2
17:00:00	45.7	40.2
16:00:00	45.7	40.2
15:00:00	45.7	40.2
14:00:00	45.8	40.7
13:00:00	45.8	40.7
12:00:00	45.8	40.7
11:00:00	45.8	40.7
10:00:00	45.8	40.7
09:00:00	45.7	40.2
08:00:00	45.7	40.2
07:00:00	45.7	40.2
06:00:00	45.7	40.2
05:00:00	45.7	40.2
04:00:00	45.7	40.2
03:00:00	45.7	40.2
02:00:00	45.7	40.2
01:00:00	45.8	40.7
00:00:00	45.7	40.2

DATE 01-29-96

TIME	LEVEL	FLOW	
23:00:00	45.7	40.2	
22:00:00	45.7	40.2	
21:00:00	45.8	40.7	
20:00:00	45.8	40.7	
19:00:00	45.7	40.2	
18:00:00	45.8	40.7	
17:00:00	45.7	40.2	
16:00:00	45.7	40.2	
15:00:00	45.8	40.7	
14:00:00	45.8	40.7	
13:00:00	45.9	41.1	
12:00:00	45.9	41.1	
11:00:00	45.7	40.2	
10:00:00	47.2	47.5↑	Turbine restarted
09:00:00	55.5	95.6	
08:00:00	55.5	95.6	
07:00:00	55.5	95.6	
06:00:00	55.4	95.0	
05:00:00	55.3	94.3	
04:00:00	54.1	86.7	
03:00:00	52.9	79.2	— valve closed
02:00:00	42.6	26.8↑	Turbine stopped, bypass valve opened
01:00:00	45.7	40.2	
00:00:00	45.7	40.2	

DATE 01-28-96

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.8	40.7
21:00:00	45.8	40.7
20:00:00	45.7	40.2
19:00:00	45.7	40.2
18:00:00	45.8	40.7
17:00:00	45.7	40.2
16:00:00	45.7	40.2
15:00:00	45.8	40.7
14:00:00	45.7	40.2
13:00:00	45.7	40.2
12:00:00	45.6	39.7
11:00:00	45.7	40.2
10:00:00	45.7	40.2
09:00:00	45.7	40.2
08:00:00	45.8	40.7
07:00:00	45.6	39.7
06:00:00	45.7	40.2
05:00:00	45.7	40.2
04:00:00	45.7	40.2
03:00:00	45.8	40.7
02:00:00	45.8	40.7
01:00:00	45.7	40.2
00:00:00	45.8	40.7

DATE 01-27-96

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.7	40.2
21:00:00	45.7	40.2
20:00:00	45.7	40.2
19:00:00	45.7	40.2
18:00:00	45.8	40.7
17:00:00	45.9	41.1
16:00:00	45.8	40.7
15:00:00	45.8	40.7
14:00:00	45.8	40.7
13:00:00	45.7	40.2
12:00:00	45.7	40.2
11:00:00	45.7	40.2
10:00:00	45.8	40.7
09:00:00	45.7	40.2
08:00:00	45.8	40.7
07:00:00	45.7	40.2
06:00:00	45.7	40.2
05:00:00	45.8	40.7
04:00:00	45.8	40.7
03:00:00	45.7	40.2
02:00:00	45.8	40.7
01:00:00	46.2	42.6 — Turbine restarted
00:00:00	49.9	61.7 — Turbine stopped, bypass valve opened

DATE 01-26-96

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.7	40.2
21:00:00	45.7	40.2
20:00:00	45.8	40.7
19:00:00	45.8	40.7
18:00:00	45.8	40.7
17:00:00	45.8	40.7
16:00:00	45.9	41.1
15:00:00	45.9	41.1
14:00:00	45.9	41.1
13:00:00	45.8	40.7
12:00:00	45.7	40.2
11:00:00	45.8	40.7
10:00:00	45.8	40.7
09:00:00	45.7	40.2
08:00:00	45.7	40.2
07:00:00	45.8	40.7
06:00:00	45.8	40.7
05:00:00	45.9	41.1
04:00:00	45.9	41.1
03:00:00	45.9	41.1
02:00:00	45.8	40.7
01:00:00	45.8	40.7
00:00:00	45.8	40.7

DATE 01-25-96

TIME	LEVEL	FLOW	
23:00:00	45.8	40.7	
22:00:00	45.8	40.7	
21:00:00	45.8	40.7	
20:00:00	45.7	40.2	
19:00:00	45.7	40.2	
18:00:00	45.8	40.7	
17:00:00	45.8	40.7	
16:00:00	45.7	40.2	
15:00:00	45.7	40.2	
14:00:00	45.7	40.2	
13:00:00	45.8	40.7	
12:00:00	45.7	40.2	
11:00:00	45.7	40.2	
10:00:00	45.8	40.7	
09:00:00	45.7	40.2	
08:00:00	45.8	40.7	
07:00:00	45.8	40.7	
06:00:00	48.0	51.5	↑ Turbine restarted
05:00:00	50.3	64.0	
04:00:00	50.1	62.9	
03:00:00	48.9	56.3	↑ Turbine stopped, bypass valve opened
02:00:00	45.7	40.2	
01:00:00	45.7	40.2	
00:00:00	45.8	40.7	

DATE 01-24-96

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.8	40.7
21:00:00	45.8	40.7
20:00:00	45.8	40.7
19:00:00	45.8	40.7
18:00:00	45.7	40.2
17:00:00	45.8	40.7
16:00:00	45.7	40.2
15:00:00	45.7	40.2
14:00:00	45.7	40.2
13:00:00	45.7	40.2
12:00:00	45.8	40.7
11:00:00	45.8	40.7
10:00:00	45.9	41.1
09:00:00	45.9	41.1
08:00:00	45.8	40.7
07:00:00	45.7	40.2
06:00:00	45.8	40.7
05:00:00	45.7	40.2
04:00:00	45.7	40.2
03:00:00	45.8	40.7
02:00:00	45.7	40.2
01:00:00	45.8	40.7
00:00:00	45.7	40.2

DATE 01-23-96

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.7	40.2
21:00:00	45.7	40.2
20:00:00	45.7	40.2
19:00:00	45.7	40.2
18:00:00	45.7	40.2
17:00:00	45.8	40.7
16:00:00	45.8	40.7
15:00:00	45.8	40.7
14:00:00	45.7	40.2
13:00:00	45.8	40.7
12:00:00	45.9	41.1
11:00:00	45.9	41.1
10:00:00	45.9	41.1
09:00:00	45.9	41.1
08:00:00	45.8	40.7
07:00:00	45.8	40.7
06:00:00	45.8	40.7
05:00:00	45.7	40.2
04:00:00	45.8	40.7
03:00:00	45.7	40.2
02:00:00	45.8	40.7
01:00:00	45.7	40.2
00:00:00	45.7	40.2

DATE 01-22-96

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.8	40.7
21:00:00	45.8	40.7
20:00:00	45.7	40.2
19:00:00	45.8	40.7
18:00:00	45.8	40.7
17:00:00	45.7	40.2
16:00:00	45.6	39.7
15:00:00	45.7	40.2
14:00:00	45.8	40.7
13:00:00	45.8	40.7
12:00:00	45.7	40.2
11:00:00	45.7	40.2
10:00:00	45.8	40.7
09:00:00	45.8	40.7
08:00:00	45.9	41.1
07:00:00	45.8	40.7
06:00:00	45.7	40.2
05:00:00	45.7	40.2
04:00:00	45.7	40.2
03:00:00	45.8	40.7
02:00:00	45.8	40.7
01:00:00	45.7	40.2
00:00:00	45.8	40.7

DATE 01-21-96

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.8	40.7
21:00:00	45.9	41.1
20:00:00	45.9	41.1
19:00:00	45.8	40.7
18:00:00	45.8	40.7
17:00:00	45.9	41.1
16:00:00	45.9	41.1
15:00:00	45.8	40.7
14:00:00	45.7	40.2
13:00:00	45.7	40.2
12:00:00	45.6	39.7
11:00:00	45.7	40.2
10:00:00	45.7	40.2
09:00:00	45.8	40.7
08:00:00	45.8	40.7
07:00:00	45.7	40.2
06:00:00	45.7	40.2
05:00:00	45.8	40.7
04:00:00	45.7	40.2
03:00:00	45.8	40.7
02:00:00	45.7	40.2
01:00:00	45.8	40.7
00:00:00	45.8	40.7

DATE 01-20-96

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.7	40.2
21:00:00	45.8	40.7
20:00:00	45.8	40.7
19:00:00	45.9	41.1
18:00:00	45.9	41.1
17:00:00	45.9	41.1
16:00:00	45.9	41.1
15:00:00	45.8	40.7
14:00:00	45.7	40.2
13:00:00	45.8	40.7
12:00:00	45.8	40.7
11:00:00	45.7	40.2
10:00:00	45.8	40.7
09:00:00	45.8	40.7
08:00:00	45.7	40.2
07:00:00	45.8	40.7
06:00:00	45.8	40.7
05:00:00	45.7	40.2
04:00:00	45.7	40.2
03:00:00	45.6	39.7
02:00:00	45.7	40.2
01:00:00	45.7	40.2
00:00:00	45.7	40.2

DATE 01-19-96

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.7	40.2
21:00:00	45.8	40.7
20:00:00	45.7	40.2
19:00:00	45.7	40.2
18:00:00	45.8	40.7
17:00:00	45.8	40.7
16:00:00	45.9	41.1
15:00:00	45.8	40.7
14:00:00	45.8	40.7
13:00:00	45.7	40.2
12:00:00	45.8	40.7
11:00:00	45.9	41.1
10:00:00	45.9	41.1
09:00:00	45.9	41.1
08:00:00	45.9	41.1
07:00:00	45.8	40.7
06:00:00	45.8	40.7
05:00:00	45.7	40.2
04:00:00	45.8	40.7
03:00:00	45.8	40.7
02:00:00	45.7	40.2
01:00:00	45.8	40.7
00:00:00	45.8	40.7

DATE 01-18-96

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.8	40.7
21:00:00	45.7	40.2
20:00:00	45.7	40.2
19:00:00	45.7	40.2
18:00:00	45.8	40.7
17:00:00	45.8	40.7
16:00:00	45.8	40.7
15:00:00	45.8	40.7
14:00:00	45.7	40.2
13:00:00	45.7	40.2
12:00:00	45.8	40.7
11:00:00	45.7	40.2
10:00:00	45.8	40.7
09:00:00	45.8	40.7
08:00:00	45.7	40.2
07:00:00	45.7	40.2
06:00:00	45.7	40.2
05:00:00	45.7	40.2
04:00:00	45.7	40.2
03:00:00	45.8	40.7
02:00:00	45.8	40.7
01:00:00	45.8	40.7
00:00:00	45.7	40.2

DATE 01-17-96

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.7	40.2
21:00:00	45.8	40.7
20:00:00	45.7	40.2
19:00:00	45.7	40.2
18:00:00	45.7	40.2
17:00:00	45.7	40.2
16:00:00	45.8	40.7
15:00:00	45.8	40.7
14:00:00	45.9	41.1
13:00:00	45.9	41.1
12:00:00	45.9	41.1
11:00:00	45.9	41.1
10:00:00	45.8	40.7
09:00:00	45.8	40.7
08:00:00	45.7	40.2
07:00:00	45.7	40.2
06:00:00	45.7	40.2
05:00:00	45.7	40.2
04:00:00	45.7	40.2
03:00:00	45.8	40.7
02:00:00	45.8	40.7
01:00:00	45.8	40.7
00:00:00	45.8	40.7

DATE 01-16-96

TIME	LEVEL	FLOW	
23:00:00	45.7	40.2	
22:00:00	45.8	40.7	
21:00:00	45.7	40.2	
20:00:00	45.9	41.1	
19:00:00	50.1	62.9 ↑	Turbine restarted
18:00:00	54.3	87.9	
17:00:00	54.3	87.9	
16:00:00	54.3	87.9	
15:00:00	54.2	87.3	
14:00:00	54.2	87.3	
13:00:00	54.2	87.3	
12:00:00	54.1	86.7	
11:00:00	53.5	82.9	
10:00:00	52.8	78.6 ↑	Bypass valve was closed
09:00:00	47.5	49.0	
08:00:00	41.1	21.2 ↑	Turbine stopped, bypass valve opened
07:00:00	45.7	40.2	
06:00:00	45.7	40.2	
05:00:00	45.7	40.2	
04:00:00	45.7	40.2	
03:00:00	45.8	40.7	
02:00:00	45.8	40.7	
01:00:00	45.7	40.2	
00:00:00	45.7	40.2	

DATE 01-15-96

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.8	40.7
21:00:00	45.8	40.7
20:00:00	45.8	40.7
19:00:00	45.8	40.7
18:00:00	45.8	40.7
17:00:00	45.7	40.2
16:00:00	45.8	40.7
15:00:00	45.8	40.7
14:00:00	45.8	40.7
13:00:00	45.9	41.1
12:00:00	45.9	41.1
11:00:00	45.8	40.7
10:00:00	45.8	40.7
09:00:00	45.8	40.7
08:00:00	45.7	40.2
07:00:00	45.7	40.2
06:00:00	45.7	40.2
05:00:00	45.7	40.2
04:00:00	45.7	40.2
03:00:00	45.8	40.7
02:00:00	45.7	40.2
01:00:00	45.8	40.7
00:00:00	45.8	40.7

DATE 01-14-96

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.7	40.2
21:00:00	45.8	40.7
20:00:00	45.8	40.7
19:00:00	45.7	40.2
18:00:00	45.7	40.2
17:00:00	45.7	40.2
16:00:00	45.8	40.7
15:00:00	45.8	40.7
14:00:00	45.8	40.7
13:00:00	45.7	40.2
12:00:00	45.7	40.2
11:00:00	45.7	40.2
10:00:00	45.8	40.7
09:00:00	45.7	40.2
08:00:00	45.7	40.2
07:00:00	45.7	40.2
06:00:00	45.7	40.2
05:00:00	45.8	40.7
04:00:00	45.8	40.7
03:00:00	45.7	40.2
02:00:00	45.7	40.2
01:00:00	45.7	40.2
00:00:00	45.7	40.2

DATE 01-13-96

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.7	40.2
21:00:00	45.7	40.2
20:00:00	45.8	40.7
19:00:00	45.7	40.2
18:00:00	45.8	40.7
17:00:00	45.9	41.1
16:00:00	45.8	40.7
15:00:00	45.9	41.1
14:00:00	45.8	40.7
13:00:00	45.7	40.2
12:00:00	45.7	40.2
11:00:00	45.7	40.2
10:00:00	45.8	40.7
09:00:00	45.7	40.2
08:00:00	45.7	40.2
07:00:00	45.7	40.2
06:00:00	45.7	40.2
05:00:00	45.8	40.7
04:00:00	45.8	40.7
03:00:00	45.8	40.7
02:00:00	45.7	40.2
01:00:00	45.7	40.2
00:00:00	45.7	40.2

DATE 01-12-96

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.7	40.2
21:00:00	45.8	40.7
20:00:00	46.0	41.6 ↑ Resumed operation
19:00:00	53.8	84.8
18:00:00	53.8	84.8
17:00:00	53.8	84.8
16:00:00	53.6	83.5
15:00:00	53.6	83.5
14:00:00	53.6	83.5
13:00:00	53.4	82.3
12:00:00	53.0	79.8
11:00:00	53.1	80.4
10:00:00	53.0	79.8
09:00:00	52.8	78.6
08:00:00	52.7	78.0
07:00:00	52.7	78.0
06:00:00	52.7	78.0
05:00:00	52.7	78.0
04:00:00	52.8	78.6
03:00:00	52.8	78.6
02:00:00	52.8	78.6
01:00:00	52.7	78.0
00:00:00	52.6	77.4

DATE 01-11-96

TIME	LEVEL	FLOW
23:00:00	52.5	76.8
22:00:00	52.5	76.8
21:00:00	52.3	75.6
20:00:00	52.2	75.0
19:00:00	51.9	73.2
18:00:00	51.9	73.2
17:00:00	52.0	73.8
16:00:00	52.1	74.4
15:00:00	52.0	73.8
14:00:00	51.7	72.0
13:00:00	51.6	71.4
12:00:00	51.4	70.3
11:00:00	51.4	70.3
10:00:00	51.3	69.7
09:00:00	51.3	69.7
08:00:00	51.1	68.5
07:00:00	51.1	68.5
06:00:00	51.1	68.5
05:00:00	51.1	68.5
04:00:00	51.0	68.0
03:00:00	51.0	68.0
02:00:00	51.0	68.0
01:00:00	51.0	68.0
00:00:00	51.0	68.0

DATE 01-10-96

TIME	LEVEL	FLOW
23:00:00	51.0	68.0
22:00:00	51.0	68.0
21:00:00	51.0	68.0
20:00:00	51.0	68.0
19:00:00	51.0	68.0
18:00:00	51.0	68.0
17:00:00	51.1	68.5
16:00:00	51.1	68.5
15:00:00	51.0	68.0
14:00:00	51.0	68.0
13:00:00	51.0	68.0
12:00:00	49.9	61.7
11:00:00	49.9	61.7
10:00:00	49.9	61.7
09:00:00	49.9	61.7
08:00:00	49.9	61.7
07:00:00	49.8	61.2
06:00:00	49.8	61.2
05:00:00	49.8	61.2
04:00:00	49.8	61.2
03:00:00	49.8	61.2
02:00:00	49.8	61.2
01:00:00	49.8	61.2
00:00:00	49.8	61.2

DATE 01-09-96

TIME	LEVEL	FLOW
23:00:00	49.8	61.2
22:00:00	49.8	61.2
21:00:00	49.8	61.2
20:00:00	49.8	61.2
19:00:00	49.8	61.2
18:00:00	49.8	61.2
17:00:00	49.8	61.2
16:00:00	49.8	61.2
15:00:00	49.8	61.2
14:00:00	49.8	61.2
13:00:00	49.8	61.2
12:00:00	49.8	61.2
11:00:00	49.7	60.6
10:00:00	49.5	59.5
09:00:00	48.2	52.6 ↑ Turbine stopped, Low flow
08:00:00	45.6	39.7
07:00:00	45.7	40.2
06:00:00	45.7	40.2
05:00:00	45.6	39.7
04:00:00	45.7	40.2
03:00:00	45.7	40.2
02:00:00	45.7	40.2
01:00:00	45.7	40.2
00:00:00	45.6	39.7

DATE 01-08-96

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.7	40.2
21:00:00	45.7	40.2
20:00:00	45.8	40.7
19:00:00	45.8	40.7
18:00:00	45.7	40.2
17:00:00	45.7	40.2
16:00:00	45.7	40.2
15:00:00	45.8	40.7
14:00:00	45.8	40.7
13:00:00	45.8	40.7
12:00:00	45.7	40.2
11:00:00	45.7	40.2
10:00:00	45.7	40.2
09:00:00	45.7	40.2
08:00:00	45.7	40.2
07:00:00	45.8	40.7
06:00:00	45.8	40.7
05:00:00	45.8	40.7
04:00:00	45.8	40.7
03:00:00	45.9	41.1
02:00:00	45.9	41.1
01:00:00	45.7	40.2
00:00:00	45.6	39.7

DATE 01-07-96

TIME	LEVEL	FLOW
23:00:00	45.6	39.7
22:00:00	45.6	39.7
21:00:00	45.6	39.7
20:00:00	45.7	40.2
19:00:00	45.7	40.2
18:00:00	45.8	40.7
17:00:00	45.7	40.2
16:00:00	45.7	40.2
15:00:00	45.7	40.2
14:00:00	45.7	40.2
13:00:00	45.7	40.2
12:00:00	45.7	40.2
11:00:00	45.7	40.2
10:00:00	45.7	40.2
09:00:00	45.8	40.7
08:00:00	45.7	40.2
07:00:00	45.7	40.2
06:00:00	45.7	40.2
05:00:00	45.7	40.2
04:00:00	45.8	40.7
03:00:00	45.7	40.2
02:00:00	45.7	40.2
01:00:00	45.7	40.2
00:00:00	45.7	40.2

DATE 01-06-96

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.7	40.2
21:00:00	45.7	40.2
20:00:00	45.8	40.7
19:00:00	45.8	40.7
18:00:00	45.7	40.2
17:00:00	45.7	40.2
16:00:00	45.7	40.2
15:00:00	45.8	40.7
14:00:00	45.7	40.2
13:00:00	45.7	40.2
12:00:00	45.6	39.7
11:00:00	45.7	40.2
10:00:00	45.7	40.2
09:00:00	45.8	40.7
08:00:00	45.7	40.2
07:00:00	45.7	40.2
06:00:00	45.7	40.2
05:00:00	45.7	40.2
04:00:00	45.8	40.7
03:00:00	45.7	40.2
02:00:00	45.7	40.2
01:00:00	45.7	40.2
00:00:00	45.6	39.7

DATE 01-05-96

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.7	40.2
21:00:00	45.8	40.7
20:00:00	45.7	40.2
19:00:00	45.7	40.2
18:00:00	45.7	40.2
17:00:00	45.7	40.2
16:00:00	45.7	40.2
15:00:00	45.7	40.2
14:00:00	45.7	40.2
13:00:00	45.7	40.2
12:00:00	45.7	40.2
11:00:00	45.7	40.2
10:00:00	45.7	40.2
09:00:00	45.7	40.2
08:00:00	45.7	40.2
07:00:00	45.8	40.7
06:00:00	45.8	40.7
05:00:00	45.8	40.7
04:00:00	45.8	40.7
03:00:00	45.9	41.1
02:00:00	45.9	41.1
01:00:00	45.7	40.2
00:00:00	45.7	40.2

DATE 01-04-96

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.8	40.7
21:00:00	45.7	40.2
20:00:00	45.7	40.2
19:00:00	45.8	40.7
18:00:00	45.8	40.7
17:00:00	45.8	40.7
16:00:00	45.8	40.7
15:00:00	45.9	41.1
14:00:00	45.7	40.2
13:00:00	45.7	40.2
12:00:00	45.7	40.2
11:00:00	45.7	40.2
10:00:00	45.6	39.7
09:00:00	45.7	40.2
08:00:00	45.7	40.2
07:00:00	45.7	40.2
06:00:00	45.7	40.2
05:00:00	45.8	40.7
04:00:00	45.8	40.7
03:00:00	45.7	40.2
02:00:00	45.7	40.2
01:00:00	45.8	40.7
00:00:00	45.8	40.7

DATE 01-03-96

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.8	40.7
21:00:00	45.8	40.7
20:00:00	45.7	40.2
19:00:00	45.6	39.7
18:00:00	45.7	40.2
17:00:00	45.7	40.2
16:00:00	45.7	40.2
15:00:00	45.8	40.7
14:00:00	45.9	41.1
13:00:00	45.8	40.7
12:00:00	45.8	40.7
11:00:00	45.7	40.2
10:00:00	45.8	40.7
09:00:00	45.7	40.2
08:00:00	45.7	40.2
07:00:00	45.7	40.2
06:00:00	45.8	40.7
05:00:00	45.7	40.2
04:00:00	45.7	40.2
03:00:00	45.7	40.2
02:00:00	45.6	39.7
01:00:00	45.7	40.2
00:00:00	45.7	40.2

DATE 01-02-96

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.7	40.2
21:00:00	45.8	40.7
20:00:00	45.7	40.2
19:00:00	45.7	40.2
18:00:00	45.8	40.7
17:00:00	45.9	41.1
16:00:00	45.9	41.1
15:00:00	45.9	41.1
14:00:00	45.8	40.7
13:00:00	45.8	40.7
12:00:00	45.6	39.7
11:00:00	45.7	40.2
10:00:00	45.8	40.7
09:00:00	45.8	40.7
08:00:00	45.8	40.7
07:00:00	45.8	40.7
06:00:00	45.8	40.7
05:00:00	45.8	40.7
04:00:00	45.8	40.7
03:00:00	45.9	41.1
02:00:00	45.7	40.2
01:00:00	45.7	40.2
00:00:00	45.7	40.2

DATE 01-01-96

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	45.9	41.1
21:00:00	45.9	41.1
20:00:00	45.8	40.7
19:00:00	45.8	40.7
18:00:00	45.7	40.2
17:00:00	45.7	40.2
16:00:00	45.7	40.2
15:00:00	45.7	40.2
14:00:00	45.8	40.7
13:00:00	45.7	40.2
12:00:00	45.7	40.2
11:00:00	45.7	40.2
10:00:00	45.7	40.2
09:00:00	45.7	40.2
08:00:00	45.7	40.2
07:00:00	45.7	40.2
06:00:00	45.8	40.7
05:00:00	45.8	40.7
04:00:00	45.8	40.7
03:00:00	45.7	40.2
02:00:00	45.7	40.2
01:00:00	45.7	40.2
00:00:00	45.9	41.1

CEM COMMERCIAL ENERGY MGMT, INC.
P.O. Box 4518 • Pocatello, Idaho 83205 • Telephone (208) 237-3563 • Fax (208) 237-3563

January 8, 1996
Ref: CEM/1056

Mr. L. GLEN SAXTON
Chief, Water Allocation Bureau
State of Idaho, Department of Water Resources
1301 North Orchard Street
Statehouse Mail
Boise, ID 83720-9000

RECEIVED
JAN 11 1996
Department of Water Resources

Subject: Portneuf River Hydroelectric Project
Lava Hot Springs, Idaho
FERC Project No. 7447-002
Permit No. 29-7699

Dear Mr. Saxton:

Attached please find copies of the bypass channel flow records for the period from September 1 to December 31, 1995.

Sincerely,

Maher F. Wissa
President

Attachments: 62 sheets

DATE 12-31-95

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.7	40.2
21:00:00	45.7	40.2
20:00:00	45.8	40.7
19:00:00	45.8	40.7
18:00:00	45.9	41.1
17:00:00	45.8	40.7
16:00:00	45.7	40.2
15:00:00	45.8	40.7
14:00:00	45.7	40.2
13:00:00	45.7	40.2
12:00:00	45.7	40.2
11:00:00	45.7	40.2
10:00:00	45.7	40.2
09:00:00	45.8	40.7
08:00:00	45.8	40.7
07:00:00	45.8	40.7
06:00:00	45.7	40.2
05:00:00	45.7	40.2
04:00:00	45.7	40.2
03:00:00	45.8	40.7
02:00:00	45.8	40.7
01:00:00	45.9	41.1
00:00:00	45.8	40.7

DATE 12-30-95

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.9	41.1
21:00:00	45.8	40.7
20:00:00	45.8	40.7
19:00:00	45.7	40.2
18:00:00	45.8	40.7
17:00:00	45.8	40.7
16:00:00	45.8	40.7
15:00:00	45.7	40.2
14:00:00	46.0	41.6
13:00:00	42.4	26.0 ↑
12:00:00	45.7	40.2
11:00:00	45.7	40.2
10:00:00	45.8	40.7
09:00:00	45.8	40.7
08:00:00	45.8	40.7
07:00:00	45.8	40.7
06:00:00	45.8	40.7
05:00:00	45.7	40.2
04:00:00	45.7	40.2
03:00:00	45.7	40.2
02:00:00	45.7	40.2
01:00:00	45.8	40.7
00:00:00	45.7	40.2

↑ offline à 12:07 ... online à 12:27, bypass valve opened.

DATE 12-29-95

TIME	LEVEL	FLOW
23:00:00	45.6	39.7
22:00:00	45.7	40.2
21:00:00	45.7	40.2
20:00:00	45.8	40.7
19:00:00	45.8	40.7
18:00:00	45.8	40.7
17:00:00	45.7	40.2
16:00:00	45.7	40.2
15:00:00	45.7	40.2
14:00:00	45.8	40.7
13:00:00	45.9	41.1
12:00:00	45.8	40.7
11:00:00	45.8	40.7
10:00:00	45.7	40.2
09:00:00	45.7	40.2
08:00:00	45.7	40.2
07:00:00	45.8	40.7
06:00:00	45.7	40.2
05:00:00	45.7	40.2
04:00:00	45.9	41.1
03:00:00	45.8	40.7
02:00:00	45.7	40.2
01:00:00	45.8	40.7
00:00:00	45.8	40.7

DATE 12-28-95

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.7	40.2
21:00:00	45.7	40.2
20:00:00	45.7	40.2
19:00:00	45.7	40.2
18:00:00	45.6	39.7
17:00:00	45.7	40.2
16:00:00	45.7	40.2
15:00:00	45.8	40.7
14:00:00	45.7	40.2
13:00:00	45.7	40.2
12:00:00	45.8	40.7
11:00:00	45.7	40.2
10:00:00	45.7	40.2
09:00:00	45.7	40.2
08:00:00	45.8	40.7
07:00:00	45.9	41.1
06:00:00	45.7	40.2
05:00:00	45.7	40.2
04:00:00	45.7	40.2
03:00:00	45.8	40.7
02:00:00	45.8	40.7
01:00:00	45.7	40.2
00:00:00	45.7	40.2

DATE 12-27-95

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.8	40.7
21:00:00	45.7	40.2
20:00:00	45.7	40.2
19:00:00	45.7	40.2
18:00:00	45.8	40.7
17:00:00	45.9	41.1
16:00:00	45.8	40.7
15:00:00	45.9	41.1
14:00:00	45.8	40.7
13:00:00	45.7	40.2
12:00:00	45.7	40.2
11:00:00	45.7	40.2
10:00:00	45.7	40.2
09:00:00	45.7	40.2
08:00:00	45.8	40.7
07:00:00	45.7	40.2
06:00:00	45.7	40.2
05:00:00	45.7	40.2
04:00:00	45.7	40.2
03:00:00	45.7	40.2
02:00:00	45.7	40.2
01:00:00	45.8	40.7
00:00:00	45.8	40.7

DATE 12-26-95

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	45.9	41.1
21:00:00	45.8	40.7
20:00:00	45.8	40.7
19:00:00	45.8	40.7
18:00:00	45.7	40.2
17:00:00	45.7	40.2
16:00:00	45.9	41.1
15:00:00	45.7	40.2
14:00:00	45.7	40.2
13:00:00	45.7	40.2
12:00:00	45.7	40.2
11:00:00	45.8	40.7
10:00:00	45.8	40.7
09:00:00	45.7	40.2
08:00:00	45.7	40.2
07:00:00	45.8	40.7
06:00:00	45.8	40.7
05:00:00	45.9	41.1
04:00:00	45.8	40.7
03:00:00	45.7	40.2
02:00:00	45.7	40.2
01:00:00	45.8	40.7
00:00:00	45.7	40.2

DATE 12-25-95

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.7	40.2
21:00:00	45.6	39.7
20:00:00	45.7	40.2
19:00:00	45.7	40.2
18:00:00	45.8	40.7
17:00:00	45.7	40.2
16:00:00	45.7	40.2
15:00:00	45.7	40.2
14:00:00	45.8	40.7
13:00:00	45.8	40.7
12:00:00	45.7	40.2
11:00:00	45.6	39.7
10:00:00	45.8	40.7
09:00:00	45.7	40.2
08:00:00	45.7	40.2
07:00:00	45.7	40.2
06:00:00	45.9	41.1
05:00:00	45.9	41.1
04:00:00	45.8	40.7
03:00:00	45.7	40.2
02:00:00	45.7	40.2
01:00:00	45.7	40.2
00:00:00	45.7	40.2

DATE 12-24-95

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.7	40.2
21:00:00	45.7	40.2
20:00:00	45.7	40.2
19:00:00	45.7	40.2
18:00:00	45.7	40.2
17:00:00	45.6	39.7
16:00:00	45.6	39.7
15:00:00	45.8	40.7
14:00:00	45.8	40.7
13:00:00	45.7	40.2
12:00:00	45.8	40.7
11:00:00	45.8	40.7
10:00:00	45.8	40.7
09:00:00	45.8	40.7
08:00:00	45.7	40.2
07:00:00	45.7	40.2
06:00:00	45.8	40.7
05:00:00	45.7	40.2
04:00:00	45.7	40.2
03:00:00	45.7	40.2
02:00:00	45.7	40.2
01:00:00	45.8	40.7
00:00:00	45.7	40.2

DATE 12-23-95

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.7	40.2
21:00:00	45.7	40.2
20:00:00	45.8	40.7
19:00:00	45.7	40.2
18:00:00	45.7	40.2
17:00:00	45.7	40.2
16:00:00	45.7	40.2
15:00:00	45.8	40.7
14:00:00	45.7	40.2
13:00:00	45.8	40.7
12:00:00	45.9	41.1
11:00:00	45.8	40.7
10:00:00	45.8	40.7
09:00:00	45.7	40.2
08:00:00	45.7	40.2
07:00:00	45.7	40.2
06:00:00	45.7	40.2
05:00:00	45.7	40.2
04:00:00	45.8	40.7
03:00:00	45.7	40.2
02:00:00	45.8	40.7
01:00:00	45.7	40.2
00:00:00	45.7	40.2

DATE 12-22-95

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.8	40.7
21:00:00	45.8	40.7
20:00:00	45.7	40.2
19:00:00	45.8	40.7
18:00:00	45.8	40.7
17:00:00	45.7	40.2
16:00:00	45.6	39.7
15:00:00	45.7	40.2
14:00:00	45.8	40.7
13:00:00	45.8	40.7
12:00:00	45.7	40.2
11:00:00	45.7	40.2
10:00:00	45.7	40.2
09:00:00	45.7	40.2
08:00:00	45.8	40.7
07:00:00	45.8	40.7
06:00:00	45.7	40.2
05:00:00	45.7	40.2
04:00:00	45.7	40.2
03:00:00	45.8	40.7
02:00:00	45.8	40.7
01:00:00	45.7	40.2
00:00:00	45.7	40.2

DATE 12-21-95

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.8	40.7
21:00:00	45.7	40.2
20:00:00	45.7	40.2
19:00:00	45.7	40.2
18:00:00	45.8	40.7
17:00:00	45.8	40.7
16:00:00	45.9	41.1
15:00:00	45.8	40.7
14:00:00	45.7	40.2
13:00:00	45.7	40.2
12:00:00	45.8	40.7
11:00:00	45.8	40.7
10:00:00	45.7	40.2
09:00:00	45.8	40.7
08:00:00	45.8	40.7
07:00:00	45.7	40.2
06:00:00	45.7	40.2
05:00:00	45.7	40.2
04:00:00	45.7	40.2
03:00:00	45.8	40.7
02:00:00	45.7	40.2
01:00:00	45.8	40.7
00:00:00	45.8	40.7

DATE 12-20-95

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.7	40.2
21:00:00	45.8	40.7
20:00:00	45.8	40.7
19:00:00	45.7	40.2
18:00:00	45.7	40.2
17:00:00	45.8	40.7
16:00:00	45.8	40.7
15:00:00	45.8	40.7
14:00:00	45.7	40.2
13:00:00	45.7	40.2
12:00:00	45.8	40.7
11:00:00	45.7	40.2
10:00:00	45.8	40.7
09:00:00	45.8	40.7
08:00:00	45.8	40.7
07:00:00	45.8	40.7
06:00:00	45.8	40.7
05:00:00	45.7	40.2
04:00:00	45.7	40.2
03:00:00	45.6	39.7
02:00:00	45.7	40.2
01:00:00	45.7	40.2
00:00:00	45.8	40.7

DATE 12-19-95

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.7	40.2
21:00:00	45.7	40.2
20:00:00	45.6	39.7
19:00:00	45.7	40.2
18:00:00	45.7	40.2
17:00:00	45.8	40.7
16:00:00	45.9	41.1
15:00:00	45.8	40.7
14:00:00	45.7	40.2
13:00:00	45.7	40.2
12:00:00	45.8	40.7
11:00:00	45.7	40.2
10:00:00	45.7	40.2
09:00:00	45.7	40.2
08:00:00	45.7	40.2
07:00:00	45.7	40.2
06:00:00	45.8	40.7
05:00:00	45.7	40.2
04:00:00	45.8	40.7
03:00:00	45.8	40.7
02:00:00	45.7	40.2
01:00:00	45.8	40.7
00:00:00	45.7	40.2

DATE 12-18-95

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.7	40.2
21:00:00	45.7	40.2
20:00:00	45.7	40.2
19:00:00	45.7	40.2
18:00:00	45.8	40.7
17:00:00	45.8	40.7
16:00:00	45.8	40.7
15:00:00	45.8	40.7
14:00:00	45.9	41.1
13:00:00	45.9	41.1
12:00:00	45.8	40.7
11:00:00	45.7	40.2
10:00:00	45.8	40.7
09:00:00	45.8	40.7
08:00:00	45.7	40.2
07:00:00	45.7	40.2
06:00:00	45.7	40.2
05:00:00	45.7	40.2
04:00:00	45.7	40.2
03:00:00	45.6	39.7
02:00:00	45.7	40.2
01:00:00	45.7	40.2
00:00:00	45.7	40.2

DATE 12-17-95

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.8	40.7
21:00:00	45.8	40.7
20:00:00	45.7	40.2
19:00:00	45.7	40.2
18:00:00	45.7	40.2
17:00:00	45.7	40.2
16:00:00	45.8	40.7
15:00:00	45.8	40.7
14:00:00	45.7	40.2
13:00:00	45.7	40.2
12:00:00	45.8	40.7
11:00:00	45.8	40.7
10:00:00	45.8	40.7
09:00:00	45.8	40.7
08:00:00	45.7	40.2
07:00:00	45.7	40.2
06:00:00	45.7	40.2
05:00:00	45.7	40.2
04:00:00	45.7	40.2
03:00:00	45.8	40.7
02:00:00	45.7	40.2
01:00:00	45.7	40.2
00:00:00	45.7	40.2

DATE 12-16-95

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.7	40.2
21:00:00	45.7	40.2
20:00:00	45.7	40.2
19:00:00	45.7	40.2
18:00:00	45.7	40.2
17:00:00	45.7	40.2
16:00:00	45.6	39.7
15:00:00	45.6	39.7
14:00:00	45.7	40.2
13:00:00	45.7	40.2
12:00:00	45.7	40.2
11:00:00	45.7	40.2
10:00:00	45.7	40.2
09:00:00	45.8	40.7
08:00:00	45.8	40.7
07:00:00	45.7	40.2
06:00:00	45.7	40.2
05:00:00	45.7	40.2
04:00:00	45.7	40.2
03:00:00	45.8	40.7
02:00:00	45.8	40.7
01:00:00	45.8	40.7
00:00:00	45.7	40.2

DATE 12-15-95

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.8	40.7
21:00:00	45.7	40.2
20:00:00	45.6	39.7
19:00:00	45.7	40.2
18:00:00	45.7	40.2
17:00:00	45.7	40.2
16:00:00	45.8	40.7
15:00:00	45.8	40.7
14:00:00	45.8	40.7
13:00:00	45.7	40.2
12:00:00	45.7	40.2
11:00:00	45.7	40.2
10:00:00	45.7	40.2
09:00:00	45.7	40.2
08:00:00	45.7	40.2
07:00:00	45.7	40.2
06:00:00	45.7	40.2
05:00:00	45.7	40.2
04:00:00	45.7	40.2
03:00:00	45.8	40.7
02:00:00	45.9	41.1
01:00:00	45.8	40.7
00:00:00	45.8	40.7

DATE 12-14-95

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.8	40.7
21:00:00	45.8	40.7
20:00:00	45.8	40.7
19:00:00	45.7	40.2
18:00:00	45.7	40.2
17:00:00	45.7	40.2
16:00:00	45.7	40.2
15:00:00	45.8	40.7
14:00:00	45.8	40.7
13:00:00	45.7	40.2
12:00:00	45.7	40.2
11:00:00	45.7	40.2
10:00:00	45.6	39.7
09:00:00	45.7	40.2
08:00:00	45.7	40.2
07:00:00	45.7	40.2
06:00:00	45.7	40.2
05:00:00	45.8	40.7
04:00:00	45.8	40.7
03:00:00	45.7	40.2
02:00:00	45.7	40.2
01:00:00	45.7	40.2
00:00:00	45.7	40.2

DATE 12-13-95

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.7	40.2
21:00:00	45.8	40.7
20:00:00	45.8	40.7
19:00:00	45.7	40.2
18:00:00	45.7	40.2
17:00:00	45.9	41.1
16:00:00	45.8	40.7
15:00:00	45.8	40.7
14:00:00	45.8	40.7
13:00:00	45.7	40.2
12:00:00	45.7	40.2
11:00:00	45.7	40.2
10:00:00	45.8	40.7
09:00:00	45.7	40.2
08:00:00	45.7	40.2
07:00:00	45.7	40.2
06:00:00	45.7	40.2
05:00:00	45.8	40.7
04:00:00	45.8	40.7
03:00:00	45.8	40.7
02:00:00	45.7	40.2
01:00:00	45.8	40.7
00:00:00	45.8	40.7

DATE 12-12-95

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	45.9	41.1
21:00:00	45.8	40.7
20:00:00	45.8	40.7
19:00:00	45.8	40.7
18:00:00	45.7	40.2
17:00:00	45.6	39.7
16:00:00	45.6	39.7
15:00:00	45.7	40.2
14:00:00	45.8	40.7
13:00:00	45.8	40.7
12:00:00	45.8	40.7
11:00:00	45.7	40.2
10:00:00	45.8	40.7
09:00:00	45.7	40.2
08:00:00	45.7	40.2
07:00:00	45.7	40.2
06:00:00	45.7	40.2
05:00:00	45.8	40.7
04:00:00	45.7	40.2
03:00:00	45.8	40.7
02:00:00	45.7	40.2
01:00:00	45.7	40.2
00:00:00	45.7	40.2

DATE 12-11-95

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.7	40.2
21:00:00	45.7	40.2
20:00:00	45.8	40.7
19:00:00	45.7	40.2
18:00:00	45.7	40.2
17:00:00	45.7	40.2
16:00:00	45.7	40.2
15:00:00	45.8	40.7
14:00:00	45.8	40.7
13:00:00	45.9	41.1
12:00:00	45.8	40.7
11:00:00	45.7	40.2
10:00:00	45.7	40.2
09:00:00	45.7	40.2
08:00:00	45.7	40.2
07:00:00	45.7	40.2
06:00:00	45.7	40.2
05:00:00	45.7	40.2
04:00:00	45.7	40.2
03:00:00	45.6	39.7
02:00:00	45.6	39.7
01:00:00	45.7	40.2
00:00:00	45.7	40.2

DATE 12-10-95

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.7	40.2
21:00:00	45.7	40.2
20:00:00	45.7	40.2
19:00:00	45.7	40.2
18:00:00	45.7	40.2
17:00:00	45.7	40.2
16:00:00	45.7	40.2
15:00:00	45.8	40.7
14:00:00	45.8	40.7
13:00:00	45.7	40.2
12:00:00	45.7	40.2
11:00:00	45.7	40.2
10:00:00	45.7	40.2
09:00:00	45.8	40.7
08:00:00	45.7	40.2
07:00:00	45.7	40.2
06:00:00	45.7	40.2
05:00:00	45.7	40.2
04:00:00	45.7	40.2
03:00:00	45.9	41.1
02:00:00	45.9	41.1
01:00:00	45.9	41.1
00:00:00	45.8	40.7

DATE 12-09-95

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.7	40.2
21:00:00	45.7	40.2
20:00:00	45.8	40.7
19:00:00	45.7	40.2
18:00:00	45.7	40.2
17:00:00	45.7	40.2
16:00:00	45.7	40.2
15:00:00	45.8	40.7
14:00:00	45.8	40.7
13:00:00	45.8	40.7
12:00:00	45.7	40.2
11:00:00	45.7	40.2
10:00:00	45.7	40.2
09:00:00	45.8	40.7
08:00:00	45.8	40.7
07:00:00	45.8	40.7
06:00:00	45.7	40.2
05:00:00	45.7	40.2
04:00:00	45.8	40.7
03:00:00	45.9	41.1
02:00:00	45.9	41.1
01:00:00	45.7	40.2
00:00:00	45.7	40.2

DATE 12-08-95

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.7	40.2
21:00:00	45.7	40.2
20:00:00	45.8	40.7
19:00:00	45.8	40.7
18:00:00	45.7	40.2
17:00:00	45.7	40.2
16:00:00	45.7	40.2
15:00:00	45.8	40.7
14:00:00	45.8	40.7
13:00:00	45.8	40.7
12:00:00	45.7	40.2
11:00:00	45.7	40.2
10:00:00	45.7	40.2
09:00:00	45.7	40.2
08:00:00	45.7	40.2
07:00:00	45.8	40.7
06:00:00	45.8	40.7
05:00:00	45.8	40.7
04:00:00	45.8	40.7
03:00:00	45.9	41.1
02:00:00	45.9	41.1
01:00:00	45.7	40.2
00:00:00	45.6	39.7

DATE 12-07-95

TIME	LEVEL	FLOW
23:00:00	45.6	39.7
22:00:00	45.6	39.7
21:00:00	45.6	39.7
20:00:00	45.7	40.2
19:00:00	45.7	40.2
18:00:00	45.7	40.2
17:00:00	45.8	40.7
16:00:00	46.2	42.6 ↑ offline 15:06 – 15:21, bypass valve kept closed
15:00:00	47.8	50.5
14:00:00	51.6	105.0 — offline 14:20 – 14:52, bypass valve kept closed
13:00:00	50.3	85.4
12:00:00	47.9	51.0 ↑ control maintenance & Testing –
11:00:00	45.7	40.2 11:18 — 13:55, bypass valve kept closed
10:00:00	45.7	40.2
09:00:00	45.8	40.7
08:00:00	45.7	40.2
07:00:00	45.7	40.2
06:00:00	45.7	40.2
05:00:00	45.7	40.2
04:00:00	45.8	40.7
03:00:00	45.7	40.2
02:00:00	45.7	40.2
01:00:00	45.7	40.2
00:00:00	45.7	40.2

DATE 12-06-95

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.7	40.2
21:00:00	45.7	40.2
20:00:00	45.8	40.7
19:00:00	45.8	40.7
18:00:00	45.7	40.2
17:00:00	45.7	40.2
16:00:00	45.7	40.2
15:00:00	45.8	40.7
14:00:00	45.7	40.2
13:00:00	45.7	40.2
12:00:00	45.6	39.7
11:00:00	45.7	40.2
10:00:00	45.7	40.2
09:00:00	45.8	40.7
08:00:00	45.7	40.2
07:00:00	45.7	40.2
06:00:00	45.7	40.2
05:00:00	45.7	40.2
04:00:00	45.8	40.7
03:00:00	45.7	40.2
02:00:00	45.6	39.7
01:00:00	45.6	39.7
00:00:00	45.7	40.2

DATE 12-05-95

TIME	LEVEL	FLOW	
23:00:00	45.8	40.7	
22:00:00	45.7	40.2	
21:00:00	45.8	40.7	
20:00:00	45.6	39.7	
19:00:00	45.1	37.4	
18:00:00	44.2	33.4	
17:00:00	43.0	28.4	– Online, reservoir in filling process.
16:00:00	40.4	18.8	
15:00:00	40.2	18.2	
14:00:00	40.6	19.5	offline 13:27 – 16:24, bypass valve opened
13:00:00	43.0	28.4	
12:00:00	42.1	24.9	
11:00:00	40.1	17.9	
10:00:00	40.0	17.6	
09:00:00	40.2	18.2	offline 8.31 → 11:38, bypass valve opened
08:00:00	45.7	40.2	
07:00:00	45.8	40.7	
06:00:00	45.8	40.7	
05:00:00	45.8	40.7	
04:00:00	45.8	40.7	
03:00:00	45.9	41.1	
02:00:00	45.9	41.1	
01:00:00	45.7	40.2	
00:00:00	45.6	39.7	

DATE 12-04-95

TIME	LEVEL	FLOW	
23:00:00	45.8	40.7	
22:00:00	45.8	40.7	
21:00:00	45.7	40.2	
20:00:00	45.7	40.2	
19:00:00	45.8	40.7	
18:00:00	45.8	40.7	
17:00:00	45.8	40.7	
16:00:00	45.8	40.7	
15:00:00	45.9	41.1	
14:00:00	43.0	28.4	– online, reservoir in filling process
13:00:00	40.1	17.9	
12:00:00	40.0	17.6	
11:00:00	40.2	18.2	offline 10:33 → 13:51, bypass valve opened
10:00:00	45.6	39.7	
09:00:00	45.7	40.2	
08:00:00	45.7	40.2	
07:00:00	45.7	40.2	
06:00:00	45.7	40.2	
05:00:00	45.8	40.7	
04:00:00	45.8	40.7	
03:00:00	45.7	40.2	
02:00:00	45.7	40.2	
01:00:00	45.8	40.7	
00:00:00	45.8	40.7	

DATE 12-03-95

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.8	40.7
21:00:00	45.8	40.7
20:00:00	45.7	40.2
19:00:00	45.6	39.7
18:00:00	45.7	40.2
17:00:00	45.7	40.2
16:00:00	45.7	40.2
15:00:00	45.8	40.7
14:00:00	45.9	41.1
13:00:00	45.8	40.7
12:00:00	45.8	40.7
11:00:00	45.8	40.7
10:00:00	45.8	40.7
09:00:00	45.7	40.2
08:00:00	45.7	40.2
07:00:00	45.7	40.2
06:00:00	45.8	40.7
05:00:00	45.7	40.2
04:00:00	45.8	40.7
03:00:00	45.7	40.2
02:00:00	45.6	39.7
01:00:00	45.7	40.2
00:00:00	45.7	40.2

DATE 12-02-95

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.7	40.2
21:00:00	45.8	40.7
20:00:00	45.7	40.2
19:00:00	45.7	40.2
18:00:00	45.8	40.7
17:00:00	45.9	41.1
16:00:00	45.9	41.1
15:00:00	45.9	41.1
14:00:00	45.8	40.7
13:00:00	45.8	40.7
12:00:00	45.7	40.2
11:00:00	45.7	40.2
10:00:00	45.7	40.2
09:00:00	45.6	39.7
08:00:00	45.7	40.2
07:00:00	45.7	40.2
06:00:00	45.7	40.2
05:00:00	45.7	40.2
04:00:00	45.8	40.7
03:00:00	45.7	40.2
02:00:00	45.7	40.2
01:00:00	45.8	40.7
00:00:00	45.8	40.7

DATE 12-01-95

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	45.9	41.1
21:00:00	45.9	41.1
20:00:00	45.8	40.7
19:00:00	45.8	40.7
18:00:00	45.7	40.2
17:00:00	45.7	40.2
16:00:00	45.7	40.2
15:00:00	45.7	40.2
14:00:00	45.8	40.7
13:00:00	45.7	40.2
12:00:00	45.7	40.2
11:00:00	45.7	40.2
10:00:00	45.7	40.2
09:00:00	45.6	39.7
08:00:00	45.6	39.7
07:00:00	45.6	39.7
06:00:00	45.6	39.7
05:00:00	45.7	40.2
04:00:00	45.7	40.2
03:00:00	45.7	40.2
02:00:00	45.7	40.2
01:00:00	45.7	40.2
00:00:00	45.7	40.2

DATE 11-30-95

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.8	40.7
21:00:00	45.8	40.7
20:00:00	45.7	40.2
19:00:00	45.7	40.2
18:00:00	45.8	40.7
17:00:00	45.8	40.7
16:00:00	45.7	40.2
15:00:00	45.8	40.7
14:00:00	45.7	40.2
13:00:00	45.8	40.7
12:00:00	45.7	40.2
11:00:00	45.7	40.2
10:00:00	45.8	40.7
09:00:00	45.8	40.7
08:00:00	45.8	40.7
07:00:00	45.8	40.7
06:00:00	45.8	40.7
05:00:00	45.7	40.2
04:00:00	45.7	40.2
03:00:00	45.7	40.2
02:00:00	45.8	40.7
01:00:00	45.8	40.7
00:00:00	45.7	40.2

DATE 11-29-95

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.7	40.2
21:00:00	45.7	40.2
20:00:00	45.8	40.7
19:00:00	45.7	40.2
18:00:00	45.7	40.2
17:00:00	45.7	40.2
16:00:00	45.8	40.7
15:00:00	45.8	40.7
14:00:00	45.8	40.7
13:00:00	45.8	40.7
12:00:00	45.7	40.2
11:00:00	45.8	40.7
10:00:00	45.7	40.2
09:00:00	45.7	40.2
08:00:00	45.7	40.2
07:00:00	45.8	40.7
06:00:00	45.7	40.2
05:00:00	45.7	40.2
04:00:00	45.9	41.1
03:00:00	45.8	40.7
02:00:00	45.7	40.2
01:00:00	45.7	40.2
00:00:00	45.7	40.2

DATE 11-28-95

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.7	40.2
21:00:00	45.7	40.2
20:00:00	45.8	40.7
19:00:00	45.7	40.2
18:00:00	45.8	40.7
17:00:00	45.7	40.2
16:00:00	45.7	40.2
15:00:00	45.6	39.7
14:00:00	45.7	40.2
13:00:00	45.7	40.2
12:00:00	45.8	40.7
11:00:00	45.7	40.2
10:00:00	45.7	40.2
09:00:00	45.9	41.1
08:00:00	45.8	40.7
07:00:00	45.8	40.7
06:00:00	45.7	40.2
05:00:00	45.7	40.2
04:00:00	45.7	40.2
03:00:00	45.8	40.7
02:00:00	45.8	40.7
01:00:00	45.7	40.2
00:00:00	45.7	40.2

DATE 11-27-95

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.7	40.2
21:00:00	45.8	40.7
20:00:00	45.8	40.7
19:00:00	45.7	40.2
18:00:00	45.7	40.2
17:00:00	45.8	40.7
16:00:00	45.7	40.2
15:00:00	45.9	41.1
14:00:00	45.8	40.7
13:00:00	45.7	40.2
12:00:00	45.8	40.7
11:00:00	45.8	40.7
10:00:00	45.7	40.2
09:00:00	45.7	40.2
08:00:00	46.7	45.0
07:00:00	45.7	40.2
06:00:00	45.6	39.7
05:00:00	45.7	40.2
04:00:00	45.7	40.2
03:00:00	45.7	40.2
02:00:00	45.7	40.2
01:00:00	45.7	40.2
00:00:00	45.8	40.7

DATE 11-26-95

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.7	40.2
21:00:00	45.7	40.2
20:00:00	45.7	40.2
19:00:00	45.8	40.7
18:00:00	45.7	40.2
17:00:00	45.7	40.2
16:00:00	45.8	40.7
15:00:00	45.7	40.2
14:00:00	45.7	40.2
13:00:00	45.7	40.2
12:00:00	45.7	40.2
11:00:00	45.8	40.7
10:00:00	45.8	40.7
09:00:00	45.7	40.2
08:00:00	45.7	40.2
07:00:00	45.8	40.7
06:00:00	45.9	41.1
05:00:00	45.8	40.7
04:00:00	45.8	40.7
03:00:00	45.7	40.2
02:00:00	45.7	40.2
01:00:00	45.7	40.2
00:00:00	45.7	40.2

DATE 11-25-95

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.7	40.2
21:00:00	45.7	40.2
20:00:00	45.8	40.7
19:00:00	45.8	40.7
18:00:00	45.8	40.7
17:00:00	45.6	39.7
16:00:00	45.7	40.2
15:00:00	45.7	40.2
14:00:00	45.8	40.7
13:00:00	45.8	40.7
12:00:00	45.9	41.1
11:00:00	45.8	40.7
10:00:00	45.8	40.7
09:00:00	45.7	40.2
08:00:00	45.8	40.7
07:00:00	45.7	40.2
06:00:00	45.7	40.2
05:00:00	45.8	40.7
04:00:00	45.7	40.2
03:00:00	45.7	40.2
02:00:00	45.7	40.2
01:00:00	45.7	40.2
00:00:00	45.7	40.2

DATE 11-24-95

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.7	40.2
21:00:00	45.7	40.2
20:00:00	45.7	40.2
19:00:00	45.7	40.2
18:00:00	45.7	40.2
17:00:00	45.8	40.7
16:00:00	45.8	40.7
15:00:00	45.9	41.1
14:00:00	45.8	40.7
13:00:00	45.7	40.2
12:00:00	45.8	40.7
11:00:00	45.9	41.1
10:00:00	45.7	40.2
09:00:00	45.8	40.7
08:00:00	45.7	40.2
07:00:00	45.7	40.2
06:00:00	45.7	40.2
05:00:00	45.6	39.7
04:00:00	45.7	40.2
03:00:00	45.7	40.2
02:00:00	45.7	40.2
01:00:00	45.8	40.7
00:00:00	45.8	40.7

DATE 11-23-95

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.8	40.7
21:00:00	45.9	41.1
20:00:00	45.8	40.7
19:00:00	45.7	40.2
18:00:00	45.7	40.2
17:00:00	45.7	40.2
16:00:00	45.7	40.2
15:00:00	45.8	40.7
14:00:00	45.8	40.7
13:00:00	45.8	40.7
12:00:00	45.8	40.7
11:00:00	45.9	41.1
10:00:00	45.8	40.7
09:00:00	45.7	40.2
08:00:00	45.8	40.7
07:00:00	45.7	40.2
06:00:00	45.7	40.2
05:00:00	45.7	40.2
04:00:00	45.8	40.7
03:00:00	45.7	40.2
02:00:00	45.7	40.2
01:00:00	45.7	40.2
00:00:00	45.7	40.2

DATE 11-22-95

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.7	40.2
21:00:00	45.7	40.2
20:00:00	45.7	40.2
19:00:00	45.6	39.7
18:00:00	45.7	40.2
17:00:00	45.7	40.2
16:00:00	45.8	40.7
15:00:00	45.8	40.7
14:00:00	45.9	41.1
13:00:00	45.8	40.7
12:00:00	45.9	41.1
11:00:00	45.8	40.7
10:00:00	45.8	40.7
09:00:00	45.9	41.1
08:00:00	45.8	40.7
07:00:00	45.8	40.7
06:00:00	45.7	40.2
05:00:00	45.7	40.2
04:00:00	45.7	40.2
03:00:00	45.7	40.2
02:00:00	45.7	40.2
01:00:00	45.7	40.2
00:00:00	45.7	40.2

DATE 11-21-95

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.7	40.2
21:00:00	45.8	40.7
20:00:00	45.7	40.2
19:00:00	45.7	40.2
18:00:00	45.6	39.7
17:00:00	45.6	39.7
16:00:00	42.9	28.0
15:00:00	40.2	18.2
14:00:00	40.1	17.9
13:00:00	40.1	17.9
12:00:00	40.2	18.2
11:00:00	40.6	19.5
10:00:00	45.8	40.7
09:00:00	45.8	40.7
08:00:00	45.8	40.7
07:00:00	45.7	40.2
06:00:00	45.7	40.2
05:00:00	45.7	40.2
04:00:00	45.7	40.2
03:00:00	45.9	41.1
02:00:00	45.9	41.1
01:00:00	45.8	40.7
00:00:00	45.7	40.2

16:00:00 — Online - bypass closed, reservoir in filling process

11:00:00 — offline 10:21 — 15:50, bypass opened.

DATE 11-20-95

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.6	39.7
21:00:00	45.7	40.2
20:00:00	45.7	40.2
19:00:00	45.7	40.2
18:00:00	45.7	40.2
17:00:00	45.8	40.7
16:00:00	45.8	40.7
15:00:00	45.8	40.7
14:00:00	45.7	40.2
13:00:00	45.7	40.2
12:00:00	45.7	40.2
11:00:00	45.7	40.2
10:00:00	45.8	40.7
09:00:00	45.9	41.1
08:00:00	45.9	41.1
07:00:00	45.8	40.7
06:00:00	45.8	40.7
05:00:00	45.7	40.2
04:00:00	45.7	40.2
03:00:00	45.7	40.2
02:00:00	45.7	40.2
01:00:00	45.7	40.2
00:00:00	45.8	40.7

DATE 11-19-95

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.8	40.7
21:00:00	45.7	40.2
20:00:00	45.7	40.2
19:00:00	45.7	40.2
18:00:00	45.7	40.2
17:00:00	45.8	40.7
16:00:00	45.8	40.7
15:00:00	45.8	40.7
14:00:00	45.7	40.2
13:00:00	45.7	40.2
12:00:00	45.8	40.7
11:00:00	45.7	40.2
10:00:00	45.7	40.2
09:00:00	45.7	40.2
08:00:00	45.7	40.2
07:00:00	45.8	40.7
06:00:00	45.8	40.7
05:00:00	45.9	41.1
04:00:00	45.8	40.7
03:00:00	45.8	40.7
02:00:00	45.7	40.2
01:00:00	45.7	40.2
00:00:00	45.7	40.2

DATE 11-18-95

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.7	40.2
21:00:00	45.6	39.7
20:00:00	45.7	40.2
19:00:00	45.7	40.2
18:00:00	45.7	40.2
17:00:00	45.7	40.2
16:00:00	45.8	40.7
15:00:00	45.8	40.7
14:00:00	45.7	40.2
13:00:00	45.7	40.2
12:00:00	45.7	40.2
11:00:00	45.7	40.2
10:00:00	45.8	40.7
09:00:00	45.7	40.2
08:00:00	45.7	40.2
07:00:00	45.7	40.2
06:00:00	45.7	40.2
05:00:00	45.8	40.7
04:00:00	45.7	40.2
03:00:00	45.7	40.2
02:00:00	45.7	40.2
01:00:00	45.7	40.2
00:00:00	45.7	40.2

DATE 11-17-95

TIME	LEVEL	FLOW
23:00:00	45.6	39.7
22:00:00	45.7	40.2
21:00:00	45.7	40.2
20:00:00	45.7	40.2
19:00:00	45.7	40.2
18:00:00	45.7	40.2
17:00:00	45.7	40.2
16:00:00	45.7	40.2
15:00:00	45.8	40.7
14:00:00	45.8	40.7
13:00:00	45.9	41.1
12:00:00	45.8	40.7
11:00:00	45.7	40.2
10:00:00	45.7	40.2
09:00:00	45.8	40.7
08:00:00	45.8	40.7
07:00:00	45.8	40.7
06:00:00	45.7	40.2
05:00:00	45.7	40.2
04:00:00	45.7	40.2
03:00:00	45.8	40.7
02:00:00	45.8	40.7
01:00:00	45.8	40.7
00:00:00	45.7	40.2

DATE 11-16-95

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.7	40.2
21:00:00	45.7	40.2
20:00:00	45.8	40.7
19:00:00	45.7	40.2
18:00:00	45.8	40.7
17:00:00	45.8	40.7
16:00:00	45.7	40.2
15:00:00	45.8	40.7
14:00:00	45.8	40.7
13:00:00	45.8	40.7
12:00:00	45.7	40.2
11:00:00	45.7	40.2
10:00:00	45.8	40.7
09:00:00	45.8	40.7
08:00:00	45.9	41.1
07:00:00	45.9	41.1
06:00:00	45.8	40.7
05:00:00	45.8	40.7
04:00:00	45.8	40.7
03:00:00	45.7	40.2
02:00:00	45.7	40.2
01:00:00	45.7	40.2
00:00:00	45.7	40.2

DATE 11-15-95

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.7	40.2
21:00:00	45.7	40.2
20:00:00	45.7	40.2
19:00:00	45.7	40.2
18:00:00	45.7	40.2
17:00:00	45.8	40.7
16:00:00	45.8	40.7
15:00:00	45.7	40.2
14:00:00	45.8	40.7
13:00:00	45.8	40.7
12:00:00	45.7	40.2
11:00:00	45.7	40.2
10:00:00	45.7	40.2
09:00:00	45.8	40.7
08:00:00	45.9	41.1
07:00:00	45.8	40.7
06:00:00	45.8	40.7
05:00:00	45.7	40.2
04:00:00	45.7	40.2
03:00:00	45.6	39.7
02:00:00	45.7	40.2
01:00:00	45.7	40.2
00:00:00	45.7	40.2

DATE 11-14-95

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.7	40.2
21:00:00	45.7	40.2
20:00:00	45.8	40.7
19:00:00	45.8	40.7
18:00:00	45.9	41.1
17:00:00	45.9	41.1
16:00:00	45.9	41.1
15:00:00	45.8	40.7
14:00:00	45.8	40.7
13:00:00	45.8	40.7
12:00:00	45.8	40.7
11:00:00	45.7	40.2
10:00:00	45.7	40.2
09:00:00	45.7	40.2
08:00:00	45.7	40.2
07:00:00	45.8	40.7
06:00:00	45.7	40.2
05:00:00	45.7	40.2
04:00:00	45.7	40.2
03:00:00	45.8	40.7
02:00:00	45.8	40.7
01:00:00	45.7	40.2
00:00:00	45.8	40.7

DATE 11-13-95

TIME	LEVEL	FLOW
23:00:00	45.6	39.7
22:00:00	45.6	39.7
21:00:00	45.7	40.2
20:00:00	45.7	40.2
19:00:00	45.7	40.2
18:00:00	45.7	40.2
17:00:00	45.7	40.2
16:00:00	45.7	40.2
15:00:00	45.7	40.2
14:00:00	45.9	41.1
13:00:00	45.7	40.2
12:00:00	45.7	40.2
11:00:00	45.8	40.7
10:00:00	45.8	40.7
09:00:00	45.9	41.1
08:00:00	45.8	40.7
07:00:00	45.8	40.7
06:00:00	45.8	40.7
05:00:00	45.7	40.2
04:00:00	45.7	40.2
03:00:00	45.7	40.2
02:00:00	45.7	40.2
01:00:00	45.7	40.2
00:00:00	45.7	40.2

DATE 11-12-95

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.7	40.2
21:00:00	45.7	40.2
20:00:00	45.7	40.2
19:00:00	45.8	40.7
18:00:00	45.8	40.7
17:00:00	45.8	40.7
16:00:00	45.8	40.7
15:00:00	45.9	41.1
14:00:00	45.9	41.1
13:00:00	45.7	40.2
12:00:00	45.7	40.2
11:00:00	45.8	40.7
10:00:00	45.8	40.7
09:00:00	45.7	40.2
08:00:00	45.7	40.2
07:00:00	45.7	40.2
06:00:00	45.8	40.7
05:00:00	45.7	40.2
04:00:00	45.7	40.2
03:00:00	45.8	40.7
02:00:00	45.7	40.2
01:00:00	45.7	40.2
00:00:00	45.7	40.2

DATE 11-11-95

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.8	40.7
21:00:00	45.8	40.7
20:00:00	45.7	40.2
19:00:00	45.7	40.2
18:00:00	45.7	40.2
17:00:00	45.7	40.2
16:00:00	45.7	40.2
15:00:00	45.7	40.2
14:00:00	45.8	40.7
13:00:00	45.7	40.2
12:00:00	45.7	40.2
11:00:00	45.8	40.7
10:00:00	45.8	40.7
09:00:00	45.7	40.2
08:00:00	45.8	40.7
07:00:00	45.8	40.7
06:00:00	45.9	41.1
05:00:00	45.8	40.7
04:00:00	45.7	40.2
03:00:00	45.7	40.2
02:00:00	45.7	40.2
01:00:00	45.7	40.2
00:00:00	45.8	40.7

DATE 11-10-95

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.8	40.7
21:00:00	45.8	40.7
20:00:00	45.7	40.2
19:00:00	45.7	40.2
18:00:00	45.8	40.7
17:00:00	45.7	40.2
16:00:00	45.7	40.2
15:00:00	45.8	40.7
14:00:00	45.8	40.7
13:00:00	45.7	40.2
12:00:00	45.7	40.2
11:00:00	45.8	40.7
10:00:00	45.8	40.7
09:00:00	45.9	41.1
08:00:00	45.8	40.7
07:00:00	45.8	40.7
06:00:00	45.9	41.1
05:00:00	45.8	40.7
04:00:00	45.7	40.2
03:00:00	45.7	40.2
02:00:00	45.7	40.2
01:00:00	45.7	40.2
00:00:00	45.7	40.2

DATE 11-09-95

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.8	40.7
21:00:00	45.8	40.7
20:00:00	45.7	40.2
19:00:00	45.7	40.2
18:00:00	45.7	40.2
17:00:00	45.7	40.2
16:00:00	45.7	40.2
15:00:00	45.8	40.7
14:00:00	45.8	40.7
13:00:00	45.7	40.2
12:00:00	45.7	40.2
11:00:00	45.8	40.7
10:00:00	45.8	40.7
09:00:00	45.8	40.7
08:00:00	45.7	40.2
07:00:00	45.8	40.7
06:00:00	45.9	41.1
05:00:00	45.8	40.7
04:00:00	45.7	40.2
03:00:00	45.7	40.2
02:00:00	45.8	40.7
01:00:00	45.8	40.7
00:00:00	45.8	40.7

DATE 11-08-95

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.7	40.2
21:00:00	45.7	40.2
20:00:00	45.7	40.2
19:00:00	45.7	40.2
18:00:00	45.8	40.7
17:00:00	45.8	40.7
16:00:00	45.7	40.2
15:00:00	45.8	40.7
14:00:00	45.9	41.1
13:00:00	45.8	40.7
12:00:00	45.7	40.2
11:00:00	45.7	40.2
10:00:00	45.7	40.2
09:00:00	45.8	40.7
08:00:00	45.7	40.2
07:00:00	45.8	40.7
06:00:00	45.8	40.7
05:00:00	45.8	40.7
04:00:00	45.7	40.2
03:00:00	45.7	40.2
02:00:00	45.7	40.2
01:00:00	45.8	40.7
00:00:00	45.8	40.7

DATE 11-07-95

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	45.8	40.7
21:00:00	45.8	40.7
20:00:00	45.7	40.2
19:00:00	45.7	40.2
18:00:00	45.8	40.7
17:00:00	45.7	40.2
16:00:00	45.8	40.7
15:00:00	45.8	40.7
14:00:00	45.9	41.1
13:00:00	45.8	40.7
12:00:00	45.7	40.2
11:00:00	45.7	40.2
10:00:00	45.8	40.7
09:00:00	45.8	40.7
08:00:00	45.7	40.2
07:00:00	45.8	40.7
06:00:00	45.9	41.1
05:00:00	45.8	40.7
04:00:00	45.8	40.7
03:00:00	45.7	40.2
02:00:00	45.6	39.7
01:00:00	45.6	39.7
00:00:00	42.3	25.6 — online 23:50, bypass closed, reservoir is in filling process

DATE 11-06-95

TIME	LEVEL	FLOW
23:00:00	40.0	17.6
22:00:00	40.1	17.9
21:00:00	42.2	25.2
20:00:00	45.6	39.7
19:00:00	45.7	40.2
18:00:00	45.8	40.7
17:00:00	45.8	40.7
16:00:00	45.8	40.7
15:00:00	45.9	41.1
14:00:00	45.9	41.1
13:00:00	45.8	40.7
12:00:00	45.8	40.7
11:00:00	45.7	40.2
10:00:00	45.7	40.2
09:00:00	45.8	40.7
08:00:00	45.7	40.2
07:00:00	45.7	40.2
06:00:00	45.7	40.2
05:00:00	45.7	40.2
04:00:00	45.8	40.7
03:00:00	45.7	40.2
02:00:00	45.7	40.2
01:00:00	45.7	40.2
00:00:00	45.7	40.2

offline 20:45 – 23:50, bypass opened.

DATE 11-05-95

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.7	40.2
21:00:00	45.7	40.2
20:00:00	45.7	40.2
19:00:00	45.7	40.2
18:00:00	45.7	40.2
17:00:00	45.7	40.2
16:00:00	45.8	40.7
15:00:00	45.8	40.7
14:00:00	45.8	40.7
13:00:00	45.7	40.2
12:00:00	45.7	40.2
11:00:00	45.7	40.2
10:00:00	45.7	40.2
09:00:00	45.6	39.7
08:00:00	45.7	40.2
07:00:00	45.7	40.2
06:00:00	45.7	40.2
05:00:00	45.7	40.2
04:00:00	45.7	40.2
03:00:00	45.7	40.2
02:00:00	45.8	40.7
01:00:00	45.8	40.7
00:00:00	45.9	41.1

DATE 11-04-95

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	45.9	41.1
21:00:00	45.9	41.1
20:00:00	45.8	40.7
19:00:00	45.8	40.7
18:00:00	45.8	40.7
17:00:00	45.7	40.2
16:00:00	45.7	40.2
15:00:00	45.7	40.2
14:00:00	45.7	40.2
13:00:00	45.7	40.2
12:00:00	45.7	40.2
11:00:00	45.7	40.2
10:00:00	45.8	40.7
09:00:00	45.8	40.7
08:00:00	45.8	40.7
07:00:00	45.8	40.7
06:00:00	45.7	40.2
05:00:00	45.7	40.2
04:00:00	45.7	40.2
03:00:00	45.7	40.2
02:00:00	45.7	40.2
01:00:00	45.7	40.2
00:00:00	45.7	40.2

DATE 11-03-95

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.7	40.2
21:00:00	45.7	40.2
20:00:00	45.6	39.7
19:00:00	45.6	39.7
18:00:00	45.6	39.7
17:00:00	45.7	40.2
16:00:00	45.7	40.2
15:00:00	45.7	40.2
14:00:00	45.8	40.7
13:00:00	45.8	40.7
12:00:00	45.7	40.2
11:00:00	45.7	40.2
10:00:00	45.8	40.7
09:00:00	45.8	40.7
08:00:00	45.8	40.7
07:00:00	45.8	40.7
06:00:00	45.7	40.2
05:00:00	45.7	40.2
04:00:00	45.8	40.7
03:00:00	45.8	40.7
02:00:00	45.9	41.1
01:00:00	45.8	40.7
00:00:00	45.7	40.2

DATE 11-02-95

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.9	41.1
21:00:00	45.8	40.7
20:00:00	45.8	40.7
19:00:00	45.7	40.2
18:00:00	45.7	40.2
17:00:00	45.7	40.2
16:00:00	45.7	40.2
15:00:00	45.7	40.2
14:00:00	45.8	40.7
13:00:00	45.8	40.7
12:00:00	45.8	40.7
11:00:00	45.7	40.2
10:00:00	45.8	40.7
09:00:00	45.7	40.2
08:00:00	45.8	40.7
07:00:00	45.8	40.7
06:00:00	45.7	40.2
05:00:00	45.7	40.2
04:00:00	45.8	40.7
03:00:00	45.8	40.7
02:00:00	45.7	40.2
01:00:00	45.7	40.2
00:00:00	45.7	40.2

DATE 11-01-95

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.7	40.2
21:00:00	45.7	40.2
20:00:00	45.7	40.2
19:00:00	45.7	40.2
18:00:00	45.7	40.2
17:00:00	45.8	40.7
16:00:00	45.7	40.2
15:00:00	45.7	40.2
14:00:00	45.7	40.2
13:00:00	45.8	40.7
12:00:00	45.9	41.1
11:00:00	45.8	40.7
10:00:00	45.8	40.7
09:00:00	45.7	40.2
08:00:00	45.7	40.2
07:00:00	45.7	40.2
06:00:00	45.7	40.2
05:00:00	45.7	40.2
04:00:00	45.8	40.7
03:00:00	45.8	40.7
02:00:00	45.7	40.2
01:00:00	45.8	40.7
00:00:00	45.8	40.7

DATE 10-31-95

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.7	40.2
21:00:00	45.7	40.2
20:00:00	45.8	40.7
19:00:00	45.9	41.1
18:00:00	45.9	41.1
17:00:00	45.8	40.7
16:00:00	45.9	41.1
15:00:00	45.8	40.7
14:00:00	45.7	40.2
13:00:00	45.7	40.2
12:00:00	45.8	40.7
11:00:00	45.8	40.7
10:00:00	45.8	40.7
09:00:00	45.8	40.7
08:00:00	45.8	40.7
07:00:00	45.8	40.7
06:00:00	45.7	40.2
05:00:00	45.7	40.2
04:00:00	45.7	40.2
03:00:00	45.7	40.2
02:00:00	45.8	40.7
01:00:00	45.9	41.1
00:00:00	45.7	40.2

DATE 10-30-95

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.7	40.2
21:00:00	45.8	40.7
20:00:00	45.7	40.2
19:00:00	45.7	40.2
18:00:00	45.8	40.7
17:00:00	45.8	40.7
16:00:00	45.8	40.7
15:00:00	45.8	40.7
14:00:00	45.7	40.2
13:00:00	45.7	40.2
12:00:00	45.7	40.2
11:00:00	45.7	40.2
10:00:00	45.8	40.7
09:00:00	45.8	40.7
08:00:00	45.8	40.7
07:00:00	45.8	40.7
06:00:00	45.8	40.7
05:00:00	45.9	41.1
04:00:00	45.9	41.1
03:00:00	45.7	40.2
02:00:00	45.9	41.1
01:00:00	45.8	40.7
00:00:00	45.7	40.2

DATE 10-27-95

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.7	40.2
21:00:00	45.7	40.2
20:00:00	45.7	40.2
19:00:00	45.7	40.2
18:00:00	45.6	39.7
17:00:00	45.8	40.7
16:00:00	45.9	41.1
15:00:00	45.9	41.1
14:00:00	45.8	40.7
13:00:00	45.7	40.2
12:00:00	45.8	40.7
11:00:00	45.9	41.1
10:00:00	45.7	40.2
09:00:00	45.7	40.2
08:00:00	46.7	45.0
07:00:00	45.7	40.2
06:00:00	45.7	40.2
05:00:00	45.7	40.2
04:00:00	45.7	40.2
03:00:00	45.7	40.2
02:00:00	45.7	40.2
01:00:00	45.7	40.2
00:00:00	45.8	40.7

DATE 10-26-95

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.8	40.7
21:00:00	45.8	40.7
20:00:00	45.7	40.2
19:00:00	45.8	40.7
18:00:00	45.7	40.2
17:00:00	45.7	40.2
16:00:00	45.9	41.1
15:00:00	45.7	40.2
14:00:00	45.6	39.7
13:00:00	45.7	40.2
12:00:00	45.7	40.2
11:00:00	45.8	40.7
10:00:00	45.8	40.7
09:00:00	45.9	41.1
08:00:00	45.7	40.2
07:00:00	45.8	40.7
06:00:00	45.8	40.7
05:00:00	45.8	40.7
04:00:00	45.8	40.7
03:00:00	45.7	40.2
02:00:00	45.7	40.2
01:00:00	45.7	40.2
00:00:00	45.7	40.2

DATE 10-25-95

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.7	40.2
21:00:00	45.7	40.2
20:00:00	45.7	40.2
19:00:00	45.7	40.2
18:00:00	45.8	40.7
17:00:00	45.6	39.7
16:00:00	45.7	40.2
15:00:00	45.6	39.7
14:00:00	45.8	40.7
13:00:00	45.8	40.7
12:00:00	45.8	40.7
11:00:00	45.8	40.7
10:00:00	45.8	40.7
09:00:00	45.7	40.2
08:00:00	45.8	40.7
07:00:00	45.7	40.2
06:00:00	45.9	41.1
05:00:00	45.9	41.1
04:00:00	45.7	40.2
03:00:00	45.7	40.2
02:00:00	45.7	40.2
01:00:00	45.7	40.2
00:00:00	45.7	40.2

DATE 10-24-95

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.7	40.2
21:00:00	45.7	40.2
20:00:00	45.7	40.2
19:00:00	45.7	40.2
18:00:00	45.7	40.2
17:00:00	45.8	40.7
16:00:00	45.8	40.7
15:00:00	45.8	40.7
14:00:00	45.8	40.7
13:00:00	45.7	40.2
12:00:00	45.8	40.7
11:00:00	45.9	41.1
10:00:00	45.7	40.2
09:00:00	45.8	40.7
08:00:00	45.7	40.2
07:00:00	45.7	40.2
06:00:00	45.6	39.7
05:00:00	45.7	40.2
04:00:00	45.7	40.2
03:00:00	45.7	40.2
02:00:00	45.7	40.2
01:00:00	45.8	40.7
00:00:00	45.8	40.7

DATE 10-23-95

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.8	40.7
21:00:00	45.8	40.7
20:00:00	45.8	40.7
19:00:00	45.7	40.2
18:00:00	45.7	40.2
17:00:00	45.7	40.2
16:00:00	45.7	40.2
15:00:00	45.8	40.7
14:00:00	45.7	40.2
13:00:00	45.8	40.7
12:00:00	45.8	40.7
11:00:00	45.8	40.7
10:00:00	45.8	40.7
09:00:00	45.7	40.2
08:00:00	45.8	40.7
07:00:00	45.7	40.2
06:00:00	45.7	40.2
05:00:00	45.7	40.2
04:00:00	45.8	40.7
03:00:00	45.7	40.2
02:00:00	45.8	40.7
01:00:00	45.8	40.7
00:00:00	45.6	39.7

DATE 10-22-95

TIME	LEVEL	FLOW
23:00:00	45.3	38.3
22:00:00	41.1	21.2
21:00:00	37.8	11.5
20:00:00	45.6	39.7
19:00:00	45.6	39.7
18:00:00	45.7	40.2
17:00:00	45.8	40.7
16:00:00	45.8	40.7
15:00:00	45.7	40.2
14:00:00	45.9	41.1
13:00:00	45.8	40.7
12:00:00	45.7	40.2
11:00:00	45.8	40.7
10:00:00	45.8	40.7
09:00:00	45.9	41.1
08:00:00	45.8	40.7
07:00:00	45.8	40.7
06:00:00	45.7	40.2
05:00:00	45.7	40.2
04:00:00	45.7	40.2
03:00:00	45.8	40.7
02:00:00	45.7	40.2
01:00:00	45.7	40.2
00:00:00	45.7	40.2

↑ Offline 20:17 – 21:34, bypass valve opened

DATE 10-21-95

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.8	40.7
21:00:00	45.7	40.2
20:00:00	45.7	40.2
19:00:00	45.8	40.7
18:00:00	45.8	40.7
17:00:00	45.8	40.7
16:00:00	45.7	40.2
15:00:00	45.7	40.2
14:00:00	45.7	40.2
13:00:00	45.7	40.2
12:00:00	45.8	40.7
11:00:00	45.8	40.7
10:00:00	45.7	40.2
09:00:00	45.8	40.7
08:00:00	45.8	40.7
07:00:00	45.7	40.2
06:00:00	45.7	40.2
05:00:00	45.7	40.2
04:00:00	45.7	40.2
03:00:00	45.9	41.1
02:00:00	45.9	41.1
01:00:00	45.8	40.7
00:00:00	45.8	40.7

DATE 10-20-95

TIME	LEVEL	FLOW	
23:00:00	45.7	40.2	
22:00:00	45.7	40.2	
21:00:00	45.7	40.2	
20:00:00	45.6	39.7	
19:00:00	45.2	37.9	
18:00:00	44.1	33.0	
17:00:00	42.3	25.6	offline 17:22 – 17:41
16:00:00	38.1	12.2	offline 15:39
15:00:00	38.0	12.0	
14:00:00	38.2	12.5	offline 13:56
13:00:00	46.1	42.1	online
12:00:00	38.4	13.0	
11:00:00	38.5	13.2	offline 10:36, 10:42, 11:20, 12:34, bypass valve opened.
10:00:00	45.7	40.2	
09:00:00	45.7	40.2	
08:00:00	45.7	40.2	
07:00:00	45.8	40.7	
06:00:00	45.8	40.7	
05:00:00	45.7	40.2	
04:00:00	45.7	40.2	
03:00:00	45.7	40.2	
02:00:00	45.7	40.2	
01:00:00	45.7	40.2	
00:00:00	45.7	40.2	

DATE 10-19-95

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.7	40.2
21:00:00	45.7	40.2
20:00:00	45.8	40.7
19:00:00	45.7	40.2
18:00:00	45.7	40.2
17:00:00	45.8	40.7
16:00:00	45.8	40.7
15:00:00	45.8	40.7
14:00:00	45.7	40.2
13:00:00	45.7	40.2
12:00:00	45.8	40.7
11:00:00	45.7	40.2
10:00:00	45.7	40.2
09:00:00	45.7	40.2
08:00:00	45.7	40.2
07:00:00	45.7	40.2
06:00:00	45.8	40.7
05:00:00	45.9	41.1
04:00:00	45.8	40.7
03:00:00	45.8	40.7
02:00:00	45.7	40.2
01:00:00	45.7	40.2
00:00:00	45.7	40.2

DATE 10-18-95

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.7	40.2
21:00:00	45.7	40.2
20:00:00	45.6	39.7
19:00:00	45.7	40.2
18:00:00	45.7	40.2
17:00:00	45.8	40.7
16:00:00	45.8	40.7
15:00:00	45.9	41.1
14:00:00	46.0	41.6
13:00:00	52.3	75.6
12:00:00	52.3	75.6
11:00:00	52.2	75.0
10:00:00	52.3	75.6
09:00:00	52.0	73.8
08:00:00	51.5	70.9
07:00:00	51.2	69.1
06:00:00	51.0	68.0
05:00:00	49.8	61.2
04:00:00	49.7	60.6
03:00:00	49.7	60.6
02:00:00	49.5	59.5
01:00:00	49.5	59.5
00:00:00	49.5	59.5

Resumed power generation

DATE 10-17-95

TIME	LEVEL	FLOW
23:00:00	49.5	59.5
22:00:00	49.5	59.5
21:00:00	49.6	60.1
20:00:00	49.5	59.5
19:00:00	49.5	59.5
18:00:00	49.5	59.5
17:00:00	49.0	56.8
16:00:00	48.7	55.2
15:00:00	48.7	55.2
14:00:00	48.2	52.6
13:00:00	48.2	52.6
12:00:00	48.2	52.6
11:00:00	48.1	52.1
10:00:00	48.1	52.1
09:00:00	48.1	52.1
08:00:00	48.0	51.5
07:00:00	48.1	52.1
06:00:00	48.1	52.1
05:00:00	48.1	52.1
04:00:00	48.0	51.5
03:00:00	48.0	51.5
02:00:00	48.0	51.5
01:00:00	47.9	51.0
00:00:00	47.9	51.0

DATE 10-16-95

TIME	LEVEL	FLOW
23:00:00	48.0	51.5
22:00:00	48.0	51.5
21:00:00	48.0	51.5
20:00:00	48.0	51.5
19:00:00	47.8	50.5
18:00:00	47.9	51.0
17:00:00	47.9	51.0
16:00:00	47.9	51.0
15:00:00	47.9	51.0
14:00:00	47.9	51.0
13:00:00	47.8	50.5
12:00:00	47.8	50.5
11:00:00	47.8	50.5
10:00:00	47.8	50.5
09:00:00	47.8	50.5
08:00:00	47.8	50.5
07:00:00	47.8	50.5
06:00:00	47.9	51.0
05:00:00	47.9	51.0
04:00:00	48.1	52.1
03:00:00	48.1	52.1
02:00:00	48.0	51.5
01:00:00	47.9	51.0
00:00:00	47.9	51.0

DATE 10-15-95

TIME	LEVEL	FLOW
23:00:00	47.9	51.0
22:00:00	47.9	51.0
21:00:00	47.9	51.0
20:00:00	47.7	50.0
19:00:00	47.7	50.0
18:00:00	47.8	50.5
17:00:00	47.7	50.0
16:00:00	47.7	50.0
15:00:00	47.7	50.0
14:00:00	47.6	49.5
13:00:00	47.6	49.5
12:00:00	47.6	49.5
11:00:00	47.6	49.5
10:00:00	47.6	49.5
09:00:00	47.6	49.5
08:00:00	47.6	49.5
07:00:00	47.6	49.5
06:00:00	47.7	50.0
05:00:00	47.6	49.5
04:00:00	47.6	49.5
03:00:00	47.6	49.5
02:00:00	47.6	49.5
01:00:00	47.6	49.5
00:00:00	47.8	50.5

DATE 10-14-95

TIME	LEVEL	FLOW
23:00:00	47.8	50.5
22:00:00	47.8	50.5
21:00:00	47.8	50.5
20:00:00	47.8	50.5
19:00:00	47.8	50.5
18:00:00	47.8	50.5
17:00:00	47.6	49.5
16:00:00	47.6	49.5
15:00:00	47.6	49.5
14:00:00	47.6	49.5
13:00:00	47.6	49.5
12:00:00	47.6	49.5
11:00:00	47.5	49.0
10:00:00	47.5	49.0
09:00:00	47.5	49.0
08:00:00	47.5	49.0
07:00:00	47.5	49.0
06:00:00	47.6	49.5
05:00:00	47.6	49.5
04:00:00	47.8	50.5
03:00:00	47.8	50.5
02:00:00	47.9	51.0
01:00:00	47.8	50.5
00:00:00	47.6	49.5

DATE 10-13-95

TIME	LEVEL	FLOW
23:00:00	47.6	49.5
22:00:00	47.6	49.5
21:00:00	47.6	49.5
20:00:00	47.6	49.5
19:00:00	47.6	49.5
18:00:00	47.8	50.5
17:00:00	47.8	50.5
16:00:00	47.8	50.5
15:00:00	47.8	50.5
14:00:00	47.6	49.5
13:00:00	47.6	49.5
12:00:00	47.6	49.5
11:00:00	47.5	49.0
10:00:00	47.5	49.0
09:00:00	47.5	49.0
08:00:00	47.5	49.0
07:00:00	47.6	49.5
06:00:00	47.6	49.5
05:00:00	47.8	50.5
04:00:00	47.8	50.5
03:00:00	47.9	51.0
02:00:00	48.0	51.5
01:00:00	48.0	51.5
00:00:00	47.8	50.5

DATE 10-12-95

TIME	LEVEL	FLOW
23:00:00	47.8	50.5
22:00:00	47.8	50.5
21:00:00	47.8	50.5
20:00:00	47.8	50.5
19:00:00	47.8	50.5
18:00:00	47.8	50.5
17:00:00	47.8	50.5
16:00:00	47.8	50.5
15:00:00	47.8	50.5
14:00:00	47.7	50.0
13:00:00	47.6	49.5
12:00:00	47.6	49.5
11:00:00	47.6	49.5
10:00:00	47.6	49.5
09:00:00	47.6	49.5
08:00:00	47.6	49.5
07:00:00	47.6	49.5
06:00:00	47.6	49.5
05:00:00	47.6	49.5
04:00:00	47.7	50.0
03:00:00	47.8	50.5
02:00:00	47.8	50.5
01:00:00	47.6	49.5
00:00:00	47.6	49.5

DATE 10-11-95

TIME	LEVEL	FLOW
23:00:00	47.6	49.5
22:00:00	47.6	49.5
21:00:00	47.6	49.5
20:00:00	47.6	49.5
19:00:00	47.2	47.5
18:00:00	47.2	47.5
17:00:00	47.2	47.5
16:00:00	47.0	46.5
15:00:00	47.0	46.5
14:00:00	47.0	46.5
13:00:00	46.9	46.0
12:00:00	46.9	46.0
11:00:00	46.9	46.0
10:00:00	47.0	46.5
09:00:00	47.0	46.5
08:00:00	47.0	46.5
07:00:00	47.0	46.5
06:00:00	47.0	46.5
05:00:00	47.0	46.5
04:00:00	47.0	46.5
03:00:00	47.3	48.0
02:00:00	47.3	48.0
01:00:00	47.3	48.0
00:00:00	46.9	46.0

DATE 10-10-95

TIME	LEVEL	FLOW
23:00:00	46.9	46.0
22:00:00	47.0	46.5
21:00:00	47.0	46.5
20:00:00	47.0	46.5
19:00:00	47.0	46.5
18:00:00	47.1	47.0
17:00:00	47.1	47.0
16:00:00	47.1	47.0
15:00:00	47.1	47.0
14:00:00	47.0	46.5
13:00:00	47.0	46.5
12:00:00	46.9	46.0
11:00:00	46.9	46.0
10:00:00	46.9	46.0
09:00:00	47.0	46.5
08:00:00	47.0	46.5
07:00:00	47.0	46.5
06:00:00	46.9	46.0
05:00:00	47.0	46.5
04:00:00	47.0	46.5
03:00:00	47.0	46.5
02:00:00	47.2	47.5
01:00:00	47.2	47.5
00:00:00	47.0	46.5

DATE 10-09-95

TIME	LEVEL	FLOW
23:00:00	47.0	46.5
22:00:00	46.8	45.5
21:00:00	46.8	45.5
20:00:00	46.8	45.5
19:00:00	46.8	45.5
18:00:00	46.8	45.5
17:00:00	46.7	45.0
16:00:00	46.8	45.5
15:00:00	46.8	45.5
14:00:00	46.8	45.5
13:00:00	46.8	45.5
12:00:00	46.9	46.0
11:00:00	46.9	46.0
10:00:00	46.9	46.0
09:00:00	46.9	46.0
08:00:00	46.9	46.0
07:00:00	46.9	46.0
06:00:00	46.8	45.5
05:00:00	46.8	45.5
04:00:00	47.1	47.0
03:00:00	47.1	47.0
02:00:00	47.1	47.0
01:00:00	46.8	45.5
00:00:00	46.8	45.5

DATE 10-08-95

TIME	LEVEL	FLOW
23:00:00	46.7	45.0
22:00:00	46.7	45.0
21:00:00	46.7	45.0
20:00:00	46.7	45.0
19:00:00	46.7	45.0
18:00:00	46.7	45.0
17:00:00	46.8	45.5
16:00:00	46.8	45.5
15:00:00	46.8	45.5
14:00:00	46.8	45.5
13:00:00	46.8	45.5
12:00:00	46.7	45.0
11:00:00	46.7	45.0
10:00:00	46.7	45.0
09:00:00	46.7	45.0
08:00:00	46.7	45.0
07:00:00	46.7	45.0
06:00:00	46.7	45.0
05:00:00	46.8	45.5
04:00:00	46.8	45.5
03:00:00	46.8	45.5
02:00:00	46.8	45.5
01:00:00	46.7	45.0
00:00:00	46.7	45.0

DATE 10-07-95

TIME	LEVEL	FLOW
23:00:00	46.7	45.0
22:00:00	46.7	45.0
21:00:00	46.8	45.5
20:00:00	46.8	45.5
19:00:00	46.8	45.5
18:00:00	46.8	45.5
17:00:00	46.8	45.5
16:00:00	46.8	45.5
15:00:00	46.6	44.5
14:00:00	46.6	44.5
13:00:00	46.6	44.5
12:00:00	46.6	44.5
11:00:00	46.6	44.5
10:00:00	46.6	44.5
09:00:00	46.4	43.5
08:00:00	46.4	43.5
07:00:00	46.4	43.5
06:00:00	46.4	43.5
05:00:00	46.4	43.5
04:00:00	46.4	43.5
03:00:00	46.7	45.0
02:00:00	46.7	45.0
01:00:00	46.4	43.5
00:00:00	46.4	43.5

DATE 10-06-95

TIME	LEVEL	FLOW
23:00:00	46.4	43.5
22:00:00	46.4	43.5
21:00:00	46.4	43.5
20:00:00	46.2	42.6
19:00:00	46.2	42.6
18:00:00	46.2	42.6
17:00:00	46.2	42.6
16:00:00	46.2	42.6
15:00:00	46.2	42.6
14:00:00	46.2	42.6
13:00:00	46.3	43.0
12:00:00	46.2	42.6
11:00:00	46.2	42.6
10:00:00	46.2	42.6
09:00:00	46.2	42.6
08:00:00	46.2	42.6
07:00:00	46.2	42.6
06:00:00	46.2	42.6
05:00:00	46.4	43.5
04:00:00	46.4	43.5
03:00:00	46.4	43.5
02:00:00	46.4	43.5
01:00:00	46.2	42.6
00:00:00	46.2	42.6

DATE 10-05-95

TIME	LEVEL	FLOW
23:00:00	46.2	42.6
22:00:00	45.7	40.2
21:00:00	46.2	42.6
20:00:00	46.0	41.6
19:00:00	45.7	40.2
18:00:00	46.0	41.6
17:00:00	46.0	41.6
16:00:00	45.9	41.1
15:00:00	45.8	40.7
14:00:00	45.8	40.7
13:00:00	45.7	40.2
12:00:00	45.7	40.2
11:00:00	45.8	40.7
10:00:00	45.8	40.7
09:00:00	45.7	40.2
08:00:00	45.9	41.1
07:00:00	46.0	41.6
06:00:00	46.1	42.1
05:00:00	46.1	42.1
04:00:00	45.8	40.7
03:00:00	46.0	41.6
02:00:00	45.9	41.1
01:00:00	45.8	40.7
00:00:00	45.8	40.7

DATE 10-04-95

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.8	40.7
21:00:00	45.7	40.2
20:00:00	45.7	40.2
19:00:00	45.3	38.3
18:00:00	45.3	38.3
17:00:00	45.3	38.3
16:00:00	45.3	38.3
15:00:00	45.3	38.3
14:00:00	45.4	38.8
13:00:00	45.4	38.8
12:00:00	45.4	38.8
11:00:00	45.4	38.8
10:00:00	45.3	38.3
09:00:00	45.3	38.3
08:00:00	45.3	38.3
07:00:00	45.3	38.3
06:00:00	45.2	37.9
05:00:00	45.1	37.4
04:00:00	45.1	37.4
03:00:00	45.1	37.4
02:00:00	45.1	37.4
01:00:00	44.9	36.5
00:00:00	44.9	36.5

DATE 10-03-95

TIME	LEVEL	FLOW
23:00:00	44.9	36.5
22:00:00	44.9	36.5
21:00:00	44.9	36.5
20:00:00	44.7	35.6
19:00:00	44.7	35.6
18:00:00	44.7	35.6
17:00:00	44.7	35.6
16:00:00	44.7	35.6
15:00:00	44.7	35.6
14:00:00	44.8	36.1
13:00:00	44.6	35.2
12:00:00	44.6	35.2
11:00:00	44.6	35.2
10:00:00	44.6	35.2
09:00:00	44.5	34.7
08:00:00	44.5	34.7
07:00:00	44.5	34.7
06:00:00	44.6	35.2
05:00:00	44.7	35.6
04:00:00	44.7	35.6
03:00:00	44.7	35.6
02:00:00	44.7	35.6
01:00:00	44.5	34.7
00:00:00	44.4	34.3

DATE 10-02-95

TIME	LEVEL	FLOW
23:00:00	44.4	34.3
22:00:00	44.4	34.3
21:00:00	44.3	33.8
20:00:00	44.4	34.3
19:00:00	44.4	34.3
18:00:00	44.4	34.3
17:00:00	44.3	33.8
16:00:00	44.2	33.4
15:00:00	44.2	33.4
14:00:00	44.2	33.4
13:00:00	44.2	33.4
12:00:00	44.2	33.4
11:00:00	44.2	33.4
10:00:00	44.2	33.4
09:00:00	44.1	33.0
08:00:00	44.1	33.0
07:00:00	44.1	33.0
06:00:00	44.1	33.0
05:00:00	44.2	33.4
04:00:00	44.2	33.4
03:00:00	44.2	33.4
02:00:00	44.2	33.4
01:00:00	44.2	33.4
00:00:00	44.0	32.6

DATE 10-01-95

TIME	LEVEL	FLOW
23:00:00	44.0	32.6
22:00:00	44.0	32.6
21:00:00	44.0	32.6
20:00:00	44.0	32.6
19:00:00	44.0	32.6
18:00:00	43.8	31.7
17:00:00	43.8	31.7
16:00:00	43.8	31.7
15:00:00	43.7	31.3
14:00:00	43.7	31.3
13:00:00	43.7	31.3
12:00:00	43.7	31.3
11:00:00	43.7	31.3
10:00:00	43.6	30.9
09:00:00	43.6	30.9
08:00:00	43.7	31.3
07:00:00	43.7	31.3
06:00:00	43.7	31.3
05:00:00	43.7	31.3
04:00:00	43.7	31.3
03:00:00	43.6	30.9
02:00:00	43.6	30.9
01:00:00	43.5	30.4
00:00:00	43.4	30.0

Note: Plant operation stopped due to Low flow.

DATE 9-30-95

TIME	LEVEL	FLOW
23:00:00	43.4	30.0
22:00:00	43.4	30.0
21:00:00	43.4	30.0
20:00:00	43.2	29.2
19:00:00	43.1	28.8
18:00:00	43.4	30.0
17:00:00	43.5	30.4
16:00:00	43.5	30.4
15:00:00	43.4	30.0
14:00:00	43.4	30.0
13:00:00	43.4	30.0
12:00:00	43.3	29.6
11:00:00	43.3	29.6
10:00:00	43.3	29.6
09:00:00	43.3	29.6
08:00:00	43.2	29.2
07:00:00	43.1	28.8
06:00:00	43.2	29.2
05:00:00	43.2	29.2
04:00:00	43.2	29.2
03:00:00	43.0	28.4
02:00:00	43.1	28.8
01:00:00	43.0	28.4
00:00:00	43.0	28.4

DATE 9-29-95

TIME	LEVEL	FLOW
23:00:00	43.3	29.6
22:00:00	43.3	29.6
21:00:00	43.3	29.6
20:00:00	43.3	29.6
19:00:00	43.3	29.6
18:00:00	43.3	29.6
17:00:00	43.3	29.6
16:00:00	43.3	29.6
15:00:00	43.4	30.0
14:00:00	43.4	30.0
13:00:00	43.4	30.0
12:00:00	43.3	29.6
11:00:00	43.3	29.6
10:00:00	43.3	29.6
09:00:00	43.3	29.6
08:00:00	43.2	29.2
07:00:00	43.2	29.2
06:00:00	43.2	29.2
05:00:00	43.2	29.2
04:00:00	43.2	29.2
03:00:00	43.2	29.2
02:00:00	43.1	28.8
01:00:00	43.0	28.4
00:00:00	43.0	28.4

Note: Plant operation stopped due to low river flow and opening two upstream canals (Damsey and Fish Creeks) on 19/16/1995.

DATE 9-28-95

TIME	LEVEL	FLOW
23:00:00	43.7	31.4
22:00:00	43.7	31.4
21:00:00	43.7	31.4
20:00:00	43.7	31.4
19:00:00	43.7	31.4
18:00:00	43.7	31.4
17:00:00	43.8	31.7
16:00:00	43.8	31.7
15:00:00	43.8	31.7
14:00:00	43.8	31.7
13:00:00	43.8	31.7
12:00:00	43.9	32.1
11:00:00	44.0	32.6
10:00:00	44.0	32.6
09:00:00	44.0	32.6
08:00:00	44.0	32.6
07:00:00	44.0	32.6
06:00:00	44.0	32.6
05:00:00	44.1	33.0
04:00:00	44.1	33.0
03:00:00	44.3	33.8
02:00:00	44.3	33.8
01:00:00	44.3	33.8
00:00:00	44.3	33.8

DATE 9-27-95

TIME	LEVEL	FLOW
23:00:00	44.3	33.8
22:00:00	44.3	33.8
21:00:00	44.3	33.8
20:00:00	44.3	33.8
19:00:00	44.5	34.7
18:00:00	44.5	34.7
17:00:00	44.5	34.7
16:00:00	44.5	34.7
15:00:00	44.4	34.3
14:00:00	44.4	34.3
13:00:00	44.4	34.3
12:00:00	44.6	35.2
11:00:00	44.6	35.2
10:00:00	44.5	34.7
09:00:00	44.5	34.7
08:00:00	44.5	34.7
07:00:00	44.5	34.7
06:00:00	44.7	35.6
05:00:00	44.7	35.6
04:00:00	44.7	35.6
03:00:00	44.7	35.6
02:00:00	44.7	35.6
01:00:00	44.7	35.6
00:00:00	44.7	35.6

DATE 9-26-95

TIME	LEVEL	FLOW
23:00:00	44.7	35.6
22:00:00	44.7	35.6
21:00:00	44.7	35.6
20:00:00	44.6	35.2
19:00:00	44.7	35.6
18:00:00	44.7	35.6
17:00:00	44.7	35.6
16:00:00	44.8	36.1
15:00:00	44.8	36.1
14:00:00	44.8	36.1
13:00:00	45.1	37.4
12:00:00	45.0	37.0
11:00:00	45.1	37.4
10:00:00	45.1	37.4
09:00:00	45.0	37.0
08:00:00	45.0	37.0
07:00:00	45.0	37.0
06:00:00	45.0	37.0
05:00:00	45.0	37.0
04:00:00	45.0	37.0
03:00:00	45.0	37.0
02:00:00	45.0	37.0
01:00:00	45.0	37.0
00:00:00	45.0	37.0

DATE 9-25-95

TIME	LEVEL	FLOW
23:00:00	44.9	36.5
22:00:00	44.9	36.5
21:00:00	44.9	36.5
20:00:00	44.9	36.5
19:00:00	45.1	37.4
18:00:00	45.1	37.4
17:00:00	45.1	37.4
16:00:00	45.2	37.9
15:00:00	45.2	37.9
14:00:00	45.2	37.9
13:00:00	45.2	37.9
12:00:00	45.2	37.9
11:00:00	45.1	37.4
10:00:00	45.1	37.4
09:00:00	45.1	37.4
08:00:00	45.0	37.0
07:00:00	45.0	37.0
06:00:00	45.2	37.9
05:00:00	45.2	37.9
04:00:00	45.2	37.9
03:00:00	45.2	37.9
02:00:00	45.2	37.9
01:00:00	45.3	38.3
00:00:00	45.3	38.3

DATE 9-24-95

TIME	LEVEL	FLOW
23:00:00	45.3	38.3
22:00:00	45.3	38.3
21:00:00	45.3	38.3
20:00:00	45.3	38.3
19:00:00	45.3	38.3
18:00:00	45.1	37.4
17:00:00	45.1	37.4
16:00:00	45.1	37.4
15:00:00	45.1	37.4
14:00:00	45.1	37.4
13:00:00	45.1	37.4
12:00:00	45.0	37.0
11:00:00	45.1	37.4
10:00:00	45.1	37.4
09:00:00	45.0	37.0
08:00:00	45.0	37.0
07:00:00	45.0	37.0
06:00:00	45.0	37.0
05:00:00	45.0	37.0
04:00:00	45.2	37.9
03:00:00	45.2	37.9
02:00:00	45.2	37.9
01:00:00	45.0	37.0
00:00:00	45.0	37.0

DATE 9-23-95

TIME	LEVEL	FLOW
23:00:00	44.9	36.5
22:00:00	45.1	37.4
21:00:00	45.1	37.4
20:00:00	44.9	36.5
19:00:00	45.1	37.4
18:00:00	45.1	37.4
17:00:00	45.1	37.4
16:00:00	45.2	37.9
15:00:00	45.2	37.9
14:00:00	45.2	37.9
13:00:00	45.2	37.9
12:00:00	45.2	37.9
11:00:00	45.0	37.0
10:00:00	45.1	37.4
09:00:00	45.1	37.4
08:00:00	45.0	37.0
07:00:00	45.0	37.0
06:00:00	45.2	37.9
05:00:00	45.2	37.9
04:00:00	45.2	37.9
03:00:00	45.3	38.3
02:00:00	45.2	37.9
01:00:00	45.3	38.3
00:00:00	45.3	38.3

DATE 9-22-95

TIME	LEVEL	FLOW
23:00:00	45.1	37.4
22:00:00	45.1	37.4
21:00:00	45.1	37.4
20:00:00	45.1	37.4
19:00:00	45.1	37.4
18:00:00	45.1	37.4
17:00:00	45.1	37.4
16:00:00	45.1	37.4
15:00:00	45.1	37.4
14:00:00	45.1	37.4
13:00:00	45.1	37.4
12:00:00	45.0	37.0
11:00:00	45.1	37.4
10:00:00	45.1	37.4
09:00:00	45.0	37.0
08:00:00	45.0	37.0
07:00:00	45.0	37.0
06:00:00	45.0	37.0
05:00:00	45.0	37.0
04:00:00	45.2	37.9
03:00:00	45.2	37.9
02:00:00	45.2	37.9
01:00:00	45.1	37.4
00:00:00	45.1	37.4

DATE 9-21-95

TIME	LEVEL	FLOW
23:00:00	44.9	36.5
22:00:00	45.1	37.4
21:00:00	45.1	37.4
20:00:00	44.9	36.5
19:00:00	45.1	37.4
18:00:00	45.1	37.4
17:00:00	45.1	37.4
16:00:00	45.2	37.9
15:00:00	45.2	37.9
14:00:00	45.1	37.4
13:00:00	45.2	37.9
12:00:00	45.2	37.9
11:00:00	45.0	37.0
10:00:00	44.8	36.1
09:00:00	44.8	36.1
08:00:00	44.8	36.1
07:00:00	44.6	35.2
06:00:00	44.6	35.2
05:00:00	44.6	35.2
04:00:00	44.3	33.8
03:00:00	44.3	33.8
02:00:00	44.3	33.8
01:00:00	44.0	32.6
00:00:00	43.9	32.1

DATE 9-20-95

TIME	LEVEL	FLOW
23:00:00	43.4	30.0
22:00:00	43.4	30.0
21:00:00	43.4	30.0
20:00:00	43.4	30.0
19:00:00	43.1	28.8
18:00:00	43.1	28.8
17:00:00	43.1	28.8
16:00:00	43.1	28.8
15:00:00	43.1	28.8
14:00:00	42.9	28.0
13:00:00	42.9	28.0
12:00:00	42.9	28.0
11:00:00	42.9	28.0
10:00:00	43.0	28.4
09:00:00	43.0	28.4
08:00:00	43.8	31.7
07:00:00	43.8	31.7
06:00:00	43.8	31.7
05:00:00	43.8	31.7
04:00:00	43.6	30.9
03:00:00	43.6	30.9
02:00:00	43.6	30.9
01:00:00	43.2	29.2
00:00:00	43.2	29.2

DATE 9-19-95

TIME	LEVEL	FLOW
23:00:00	43.2	29.2
22:00:00	43.0	28.4
21:00:00	43.0	28.4
20:00:00	43.0	28.4
19:00:00	43.0	28.4
18:00:00	42.9	28.0
17:00:00	42.9	28.0
16:00:00	42.9	28.0
15:00:00	42.9	28.0
14:00:00	42.9	28.0
13:00:00	42.9	28.0
12:00:00	42.9	28.0
11:00:00	42.9	28.0
10:00:00	42.9	28.0
09:00:00	42.9	28.0
08:00:00	42.9	28.0
07:00:00	42.9	28.0
06:00:00	42.8	27.6
05:00:00	42.6	26.8
04:00:00	42.8	27.6
03:00:00	42.6	26.8
02:00:00	42.3	25.6
01:00:00	42.1	24.9
00:00:00	42.0	24.5

DATE 9-18-95

TIME	LEVEL	FLOW
23:00:00	42.0	24.5
22:00:00	42.0	24.5
21:00:00	42.0	24.5
20:00:00	42.0	24.5
19:00:00	42.0	24.5
18:00:00	42.1	24.9
17:00:00	42.1	24.9
16:00:00	42.1	24.9
15:00:00	42.0	24.5
14:00:00	42.0	24.5
13:00:00	42.0	24.5
12:00:00	42.0	24.5
11:00:00	42.0	24.5
10:00:00	42.0	24.5
09:00:00	42.0	24.5
08:00:00	42.0	24.5
07:00:00	42.0	24.5
06:00:00	42.0	24.5
05:00:00	42.0	24.5
04:00:00	42.0	24.5
03:00:00	41.9	24.1
02:00:00	41.7	23.4
01:00:00	41.7	23.4
00:00:00	41.7	23.4

DATE 9-17-95

TIME	LEVEL	FLOW
23:00:00	41.6	23.0
22:00:00	41.6	23.0
21:00:00	41.6	23.0
20:00:00	41.6	23.0
19:00:00	41.7	23.4
18:00:00	41.8	23.7
17:00:00	41.8	23.7
16:00:00	41.7	23.4
15:00:00	41.7	23.4
14:00:00	41.7	23.4
13:00:00	41.7	23.4
12:00:00	41.7	23.4
11:00:00	41.7	23.4
10:00:00	41.7	23.4
09:00:00	41.6	23.0
08:00:00	41.8	23.7
07:00:00	42.0	24.5
06:00:00	42.0	24.5
05:00:00	42.0	24.5
04:00:00	42.0	24.5
03:00:00	42.0	24.5
02:00:00	42.0	24.5
01:00:00	42.1	24.9
00:00:00	42.0	24.5

DATE 9-16-95

TIME	LEVEL	FLOW
23:00:00	42.0	24.5
22:00:00	41.8	23.7
21:00:00	41.8	23.7
20:00:00	41.8	23.7
19:00:00	41.8	23.7
18:00:00	41.8	23.7
17:00:00	42.0	24.5
16:00:00	42.1	24.9
15:00:00	42.0	24.5
14:00:00	42.0	24.5
13:00:00	41.9	24.1
12:00:00	41.9	24.1
11:00:00	41.9	24.1
10:00:00	41.9	24.1
09:00:00	41.9	24.1
08:00:00	45.8	40.7
07:00:00	45.7	40.2
06:00:00	45.9	41.1
05:00:00	45.7	40.2
04:00:00	45.7	40.2
03:00:00	45.7	40.2
02:00:00	45.8	40.7
01:00:00	45.8	40.7
00:00:00	45.7	40.2

Plant operation stopped due to low river flow and opening two upstream canals (Dempsey Creek and Fish Creek)

DATE 9-15-95

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.7	40.2
21:00:00	45.7	40.2
20:00:00	45.8	40.7
19:00:00	45.7	40.2
18:00:00	45.8	40.7
17:00:00	45.8	40.7
16:00:00	45.9	41.1
15:00:00	45.8	40.7
14:00:00	45.7	40.2
13:00:00	45.7	40.2
12:00:00	45.8	40.7
11:00:00	45.8	40.7
10:00:00	45.8	40.7
09:00:00	45.8	40.7
08:00:00	45.8	40.7
07:00:00	45.8	40.7
06:00:00	45.9	41.1
05:00:00	45.9	41.1
04:00:00	45.9	41.1
03:00:00	46.0	41.6
02:00:00	45.9	41.1
01:00:00	45.9	41.1
00:00:00	45.7	40.2

DATE 9-14-95

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.7	40.2
21:00:00	45.7	40.2
20:00:00	45.7	40.2
19:00:00	45.7	40.2
18:00:00	45.8	40.7
17:00:00	45.8	40.7
16:00:00	45.8	40.7
15:00:00	45.8	40.7
14:00:00	45.7	40.2
13:00:00	45.7	40.2
12:00:00	45.7	40.2
11:00:00	45.7	40.2
10:00:00	45.8	40.7
09:00:00	45.8	40.7
08:00:00	45.8	40.7
07:00:00	45.8	40.7
06:00:00	45.8	40.7
05:00:00	45.9	41.1
04:00:00	45.9	41.1
03:00:00	46.0	41.6
02:00:00	45.9	41.1
01:00:00	45.9	41.1
00:00:00	46.0	41.6

DATE 9-13-95

TIME	LEVEL	FLOW
23:00:00	46.0	41.6
22:00:00	45.7	40.2
21:00:00	45.7	40.2
20:00:00	45.7	40.2
19:00:00	45.7	40.2
18:00:00	45.6	39.7
17:00:00	45.6	39.7
16:00:00	45.8	40.7
15:00:00	45.9	41.1
14:00:00	45.7	40.2
13:00:00	45.9	41.1
12:00:00	46.1	42.1
11:00:00	46.0	41.6
10:00:00	45.7	40.2
09:00:00	45.7	40.2
08:00:00	45.9	41.1
07:00:00	45.8	40.7
06:00:00	45.7	40.2
05:00:00	45.7	40.2
04:00:00	45.9	41.1
03:00:00	45.9	41.1
02:00:00	46.0	41.6
01:00:00	46.1	42.1
00:00:00	45.9	41.1

DATE 9-12-95

TIME	LEVEL	FLOW
23:00:00	46.1	42.1
22:00:00	45.7	40.2
21:00:00	45.8	40.7
20:00:00	45.7	40.2
19:00:00	45.6	39.7
18:00:00	45.8	40.7
17:00:00	45.7	40.2
16:00:00	45.7	40.2
15:00:00	45.8	40.7
14:00:00	45.7	40.2
13:00:00	45.6	39.7
12:00:00	46.0	41.6
11:00:00	46.2	42.6
10:00:00	45.8	40.7
09:00:00	45.6	39.7
08:00:00	46.1	42.1
07:00:00	45.9	41.1
06:00:00	45.6	39.7
05:00:00	45.9	41.1
04:00:00	45.9	41.1
03:00:00	45.8	40.7
02:00:00	45.6	39.7
01:00:00	46.1	42.1
00:00:00	46.0	41.6

DATE 9-11-95

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	46.0	41.6
21:00:00	46.0	41.6
20:00:00	45.9	41.1
19:00:00	45.9	41.1
18:00:00	45.6	39.7
17:00:00	45.8	40.7
16:00:00	46.0	41.6
15:00:00	45.9	41.1
14:00:00	45.8	40.7
13:00:00	45.6	39.7
12:00:00	45.9	41.1
11:00:00	46.1	42.1
10:00:00	45.6	39.7
09:00:00	45.7	40.2
08:00:00	46.7	45.0
07:00:00	45.9	41.1
06:00:00	45.6	39.7
05:00:00	46.2	42.6
04:00:00	46.0	41.6
03:00:00	45.6	39.7
02:00:00	46.1	42.1
01:00:00	46.3	43.0
00:00:00	45.6	39.7

DATE 9-10-95

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	46.4	43.5
21:00:00	45.7	40.2
20:00:00	45.6	39.7
19:00:00	46.0	41.6
18:00:00	46.1	42.1
17:00:00	45.7	40.2
16:00:00	45.9	41.1
15:00:00	46.2	42.6
14:00:00	45.6	39.7
13:00:00	45.7	40.2
12:00:00	45.7	40.2
11:00:00	46.0	41.6
10:00:00	46.2	42.6
09:00:00	45.9	41.1
08:00:00	45.7	40.2
07:00:00	45.8	40.7
06:00:00	46.0	41.6
05:00:00	46.0	41.6
04:00:00	45.8	40.7
03:00:00	45.6	39.7
02:00:00	46.0	41.6
01:00:00	46.3	43.0
00:00:00	45.7	40.2

DATE 9-09-95

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	46.3	43.0
21:00:00	46.0	41.6
20:00:00	45.7	40.2
19:00:00	45.9	41.1
18:00:00	45.8	40.7
17:00:00	45.6	39.7
16:00:00	45.8	40.7
15:00:00	46.1	42.1
14:00:00	45.9	41.1
13:00:00	45.6	39.7
12:00:00	46.3	43.0
11:00:00	45.6	39.7
10:00:00	46.3	43.0
09:00:00	45.7	40.2
08:00:00	45.8	40.7
07:00:00	45.7	40.2
06:00:00	45.9	41.1
05:00:00	45.9	41.1
04:00:00	45.7	40.2
03:00:00	46.0	41.6
02:00:00	46.1	42.1
01:00:00	45.7	40.2
00:00:00	46.2	42.6

DATE 9-08-95

TIME	LEVEL	FLOW
23:00:00	46.0	41.6
22:00:00	45.7	40.2
21:00:00	46.3	43.0
20:00:00	45.7	40.2
19:00:00	45.7	40.2
18:00:00	46.2	42.6
17:00:00	45.8	40.7
16:00:00	45.7	40.2
15:00:00	46.2	42.6
14:00:00	45.6	39.7
13:00:00	45.7	40.2
12:00:00	45.8	40.7
11:00:00	45.9	41.1
10:00:00	45.6	39.7
09:00:00	45.8	40.7
08:00:00	45.7	40.2
07:00:00	45.7	40.2
06:00:00	45.7	40.2
05:00:00	45.7	40.2
04:00:00	45.7	40.2
03:00:00	45.9	41.1
02:00:00	45.9	41.1
01:00:00	46.0	41.6
00:00:00	46.1	42.1

DATE 9-07-95

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	46.1	42.1
21:00:00	46.0	41.6
20:00:00	45.8	40.7
19:00:00	45.7	40.2
18:00:00	45.9	41.1
17:00:00	45.7	40.2
16:00:00	45.9	41.1
15:00:00	45.8	40.7
14:00:00	45.6	39.7
13:00:00	45.8	40.7
12:00:00	45.9	41.1
11:00:00	46.0	41.6
10:00:00	46.1	42.1
09:00:00	46.1	42.1
08:00:00	45.9	41.1
07:00:00	45.7	40.2
06:00:00	45.7	40.2
05:00:00	45.7	40.2
04:00:00	45.8	40.7
03:00:00	45.7	40.2
02:00:00	45.9	41.1
01:00:00	46.1	42.1
00:00:00	45.9	41.1

DATE 9-06-95

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	46.2	42.6
21:00:00	46.0	41.6
20:00:00	45.8	40.7
19:00:00	45.7	40.2
18:00:00	45.7	40.2
17:00:00	45.7	40.2
16:00:00	45.7	40.2
15:00:00	45.7	40.2
14:00:00	45.9	41.1
13:00:00	45.8	40.7
12:00:00	45.7	40.2
11:00:00	45.8	40.7
10:00:00	45.8	40.7
09:00:00	45.9	41.1
08:00:00	46.0	41.6
07:00:00	45.9	41.1
06:00:00	45.7	40.2
05:00:00	45.7	40.2
04:00:00	45.7	40.2
03:00:00	45.8	40.7
02:00:00	45.8	40.7
01:00:00	45.7	40.2
00:00:00	45.8	40.7

DATE 9-05-95

TIME	LEVEL	FLOW
23:00:00	46.2	42.6
22:00:00	45.7	40.2
21:00:00	46.2	42.6
20:00:00	46.0	41.6
19:00:00	45.7	40.2
18:00:00	46.0	41.6
17:00:00	46.0	41.6
16:00:00	45.9	41.1
15:00:00	45.8	40.7
14:00:00	45.8	40.7
13:00:00	45.7	40.2
12:00:00	45.7	40.2
11:00:00	45.8	40.7
10:00:00	45.8	40.7
09:00:00	45.7	40.2
08:00:00	45.9	41.1
07:00:00	46.0	41.6
06:00:00	46.1	42.1
05:00:00	46.1	42.1
04:00:00	45.8	40.7
03:00:00	46.0	41.6
02:00:00	45.9	41.1
01:00:00	45.8	40.7
00:00:00	45.8	40.7

DATE 9-04-95

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.8	40.7
21:00:00	45.7	40.2
20:00:00	45.7	40.2
19:00:00	46.0	41.6
18:00:00	46.2	42.6
17:00:00	46.0	41.6
16:00:00	45.6	39.7
15:00:00	45.9	41.1
14:00:00	45.7	40.2
13:00:00	45.8	40.7
12:00:00	46.0	41.6
11:00:00	46.0	41.6
10:00:00	46.0	41.6
09:00:00	45.8	40.7
08:00:00	45.9	41.1
07:00:00	46.1	42.1
06:00:00	46.6	44.5
05:00:00	47.8	50.5
04:00:00	48.5	54.2
03:00:00	45.8	40.7
02:00:00	45.7	40.2
01:00:00	45.7	40.2
00:00:00	45.9	41.1

offline at 0:3:45 and 0:5:20, bypass valve opened.

DATE 9-03-95

TIME	LEVEL	FLOW
23:00:00	46.0	41.6
22:00:00	46.1	42.1
21:00:00	45.9	41.1
20:00:00	45.8	40.7
19:00:00	45.7	40.2
18:00:00	45.6	39.7
17:00:00	45.7	40.2
16:00:00	45.7	40.2
15:00:00	45.8	40.7
14:00:00	45.7	40.2
13:00:00	45.7	40.2
12:00:00	46.0	41.6
11:00:00	46.2	42.6
10:00:00	45.8	40.7
09:00:00	45.7	40.2
08:00:00	46.2	42.6
07:00:00	46.0	41.6
06:00:00	45.8	40.7
05:00:00	45.8	40.7
04:00:00	45.9	41.1
03:00:00	45.7	40.2
02:00:00	45.8	40.7
01:00:00	46.2	42.6
00:00:00	46.0	41.6

DATE 9-02-95

TIME	LEVEL	FLOW	
23:00:00	45.7	40.2	
22:00:00	46.0	41.6	
21:00:00	45.7	40.2	
20:00:00	46.0	41.6	
19:00:00	45.6	39.7	— on line
18:00:00	48.4	53.6	
17:00:00	47.5	49.0	— off line
16:00:00	46.3	43.0	
15:00:00	45.7	40.2	
14:00:00	45.8	40.7	
13:00:00	45.9	41.1	
12:00:00	45.9	41.1	
11:00:00	45.9	41.1	
10:00:00	46.2	42.6	
09:00:00	46.0	41.6	
08:00:00	45.9	41.1	
07:00:00	45.8	40.7	
06:00:00	45.7	40.2	
05:00:00	45.7	40.2	
04:00:00	45.6	39.7	
03:00:00	45.8	40.7	
02:00:00	46.2	42.6	
01:00:00	45.7	40.2	
00:00:00	45.8	40.7	

DATE 9-01-95

TIME	LEVEL	FLOW
23:00:00	46.4	43.5
22:00:00	45.7	40.2
21:00:00	46.1	42.1
20:00:00	45.8	40.7
19:00:00	45.8	40.7
18:00:00	45.7	40.2
17:00:00	45.9	41.1
16:00:00	45.9	41.1
15:00:00	45.7	40.2
14:00:00	45.6	39.7
13:00:00	45.7	40.2
12:00:00	46.0	41.6
11:00:00	46.1	42.1
10:00:00	46.0	41.6
09:00:00	45.8	40.7
08:00:00	45.7	40.2
07:00:00	45.8	40.7
06:00:00	45.7	40.2
05:00:00	45.6	39.7
04:00:00	45.8	40.7
03:00:00	45.8	40.7
02:00:00	45.8	40.7
01:00:00	45.7	40.2
00:00:00	45.8	40.7

Hearing Exhibits.

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

37 FERC ¶ 62,267

Commercial Energy Management, Inc. Project No. 7447-002

ORDER ISSUING LICENSE
(Minor Project)

#1

(Issued December 29, 1986)

23 Feb 1988 BDF

Commercial Energy Management, Inc. has filed a license application under Part I of the Federal Power Act (Act) to construct, operate, and maintain the Portneuf River Hydroelectric Project, located in Bannock County, Idaho, on the Portneuf River. The project would affect the interests of interstate or foreign commerce.

Notice of the application has been published. The motions to intervene that have been granted and the comments and protests filed by agencies and individuals have been fully considered in determining whether to issue this license, as discussed below.

Mr. Wayne G. Jensen of Pocatello, Idaho, in a letter of protest, argued that Project No. 7447 is not needed. Need for power is discussed in the attached Environmental Assessment (EA). The Commission also discussed this issue in its recent license order for the Horseshoe Bend Project No. 5376. 36 FERC ¶61,135(1986). In its motion to intervene, Lava Hot Springs Foundation expressed concern about adverse environmental impacts of the proposed project. This concern is also discussed in the EA.

The applicant has indicated that after it has constructed the proposed transmission line, Utah Power and Light Company intends to purchase, own, and maintain that line. Because license article 5 states that no project properties shall be sold without prior Commission approval, the licensee will have to apply for amendment to change ownership of the transmission line.

Recommendations of Federal and State Fish and Wildlife Agencies

Section 10(j) of the Federal Power Act, as amended by the Electric Consumer Protection Act of 1986 (ECPA), Pub. L. No. 99-485, requires the Commission to include license conditions based on recommendations of federal and state fish and wildlife agencies for the protection, mitigation, and enhancement of fish and wildlife resources. The Environmental Assessment (EA) for the Portneuf Hydroelectric Project, which was prepared prior to enactment of ECPA, addresses the concerns of the federal and state fish and wildlife agencies. The staff did not concur with the flushing flow recommended by the Idaho Department of Fish and Game (IDFG). The staff has held discussions with the IDFG on the recommended flushing flow and came to a mutually agreeable recommended flow regime. IDFG concurred with the regime by letter dated November 5, 1986. Article 403 includes a provision for implementing the agreed to flushing flow.

Comprehensive Plans

Section 10(a)(2) of the Federal Power Act, as amended by ECPA, requires the Commission to consider the extent to which a project is consistent with comprehensive plans (where they exist) for improving, developing, or conserving a waterway or waterways affected by the project that is prepared by an agency established pursuant to Federal law that has the authority to prepare such a plan or by the state in which the facility is or will be located. The Commission considers plans to be within the scope of section 10(a)(2) only if such plans reflect the preparers' own balancing of the competing uses of a waterway, based on their data and applicable policy considerations (i.e., consider and balance all relevant public use considerations). With regard to plans prepared at the state level, such plans are within the scope of section 10(a)(2) only if they are prepared and adopted pursuant to a specific act of the state legislature and developed, implemented, and managed by an appropriate state agency. 1/

The Commission has identified one comprehensive plan of the type referred to in section 10(a)(2) of the Federal Power Act: the Northwest Power Planning Council's 1986 Northwest Conservation and Electric Power Plan.

Construction and operation of the Portneuf Hydroelectric Project would be consistent with the Northwest Power Planning Council's 1984 Fish and Wildlife Program for the Columbia River Basin, as required by section 10(a)(2) of the Federal Power Act.

The Commission also has reviewed the license application in relation to other state and federal resources plans. 2/ Based upon the Commission's review of these state and federal plans, agency and public comments, and the Commission's independent analysis, as discussed herein, it is concluded that the Portneuf River Project is best adapted to a comprehensive plan for the Portneuf River, taking into consideration the beneficial public uses described in section 10(a)(1) of the Federal Power Act.

1/ 99 CONG. REC. S4140 (remarks by Senator McClure, April 11, 1986).

2/ Environmental Protection Agency Region 10's policies on mitigating adverse environmental impacts permitted under Section 404 of the Clean Water Act; and Idaho Outdoor Recreation Plan 1983.

Summary of Finding

An EA was issued for this project. Background information, analysis of impacts, support for related license articles, and the basis for a finding of no significant impact on the environment are contained in the EA attached to this order. Issuance of this license is not a major federal action significantly affecting the quality of the human environment.

The design of this project is consistent with the engineering standards governing dam safety. The project will be safe if constructed, operated, and maintained in accordance with the requirements of this license. Analysis of related issues is provided in the Safety and Design Assessment attached to this order.

The Director, Office of Hydropower Licensing, concludes that the project would not conflict with any planned or authorized development, and would be best adapted to comprehensive development of the waterway for beneficial public uses.

The Director orders:

(A) This license is issued to Commercial Energy Management, Inc. (licensee) for a period of 50 years, effective the first day of the month in which this order is issued, to construct, operate, and maintain the Portneuf River Hydroelectric Project.

This license is subject to the terms and conditions of the Act, which is incorporated by reference as part of this license, and subject to the regulations the Commission issues under the provisions of the Act.

(B) The project consists of:

(1) All lands, to the extent of the licensee's interests in those lands, enclosed by the project boundary shown by Exhibit G:

Exhibit G-	FERC No. 7447-	Showing
1	7	Vicinity Map
2	8	Site Plan

(2) Project works consisting of: (a) a 40-foot-long, 4-foot-high reinforced concrete diversion dam with a crest elevation of 5089.4 feet and a gated penstock intake; (b) a 1,350-foot-long, 72-inch-diameter steel penstock; (c) a 25-foot by 57-foot reinforced concrete powerhouse containing three generating units rated 107 kW, 214 kW, and 423 kW at an average head of 49.2 feet and a total hydraulic capacity of 210 cfs, and discharging into the Portneuf River at a normal tailwater elevation of 5035 feet; (d) 4.16-kV generator leads and a 4.16/12.5-kV, 750-kVA transformer; (e) a 0.5-mile-long, 12.5-kV transmission line connecting to a Utah Power and Light Company distribution line; and (f) appurtenant facilities.

The project works generally described above are more specifically shown and described by those portions of Exhibits A and F recommended for approval in the attached Safety and Design Assessment.

(3) All of the structures, fixtures, equipment or facilities used to operate or maintain the project and located within the project boundary, all portable property that may be employed in connection with the project and located within or outside the project boundary, and all riparian or other rights that are necessary or appropriate in the operation or maintenance of the project.

(C) The Exhibit G described above and those sections of Exhibits A and F recommended for approval in the attached Safety and Design Assessment are approved and made part of the license.

(D) The following sections of the Act are waived and excluded from the license for this minor project:

4(b), except the second sentence; 4(e), insofar as it relates to approval of plans by the Chief of Engineers and the Secretary of the Army; 6, insofar as it relates to public notice and to the acceptance and expression in the license of terms and conditions of the Act that are waived here; 10(c), insofar as it relates to depreciation reserves; 10(d); 10(f); 14, except insofar as the power of condemnation is reserved; 15; 16; 19; 20; and 22.

(E) This license is subject to the articles set forth in Form L-15, (October 1975), entitled "Terms and Conditions of License for Unconstructed Minor Project Affecting the Interests of Interstate or Foreign Commerce," except Article 15. The license is also subject to the following additional articles:

Article 201. The licensee shall pay the United States the following annual charge, effective the first day of the month in which this license is issued:

For the purpose of reimbursing the United States for the cost of administration of Part I of the Act, a reasonable amount as determined in accordance with the provisions of the Commission's regulations in effect from time to time. The authorized installed capacity for that purpose is 992 horsepower.

Article 202. The licensee shall clear and keep clear to an adequate width all lands along open conduits and shall dispose of all temporary structures, unused timber, brush, refuse, or other material unnecessary for the purposes of the project which result from maintenance, operation, or alteration of the project works. All clearing of lands and disposal of unnecessary material shall be done with due diligence to the satisfaction of the authorized representative of the Commission and in accordance with appropriate federal, state, and local statutes and regulations.

Article 301. The licensee shall commence construction of project works within two years from the issuance date of the license and shall complete construction of the project within four years from the issuance date of the license.

Article 302. The licensee shall, at least 60 days prior to start of construction, submit one copy to the Commission's Regional Director and two copies to the Director, Division of Inspections, of the final contract drawings and specifications for pertinent features of the project, such as water retention structures, powerhouse, and water conveyance structures. The Director, Division of Inspections, may require changes in the plans and specifications to assure a safe and adequate project.

Article 303. The licensee shall review and approve the design of contractor-designed cofferdams and deep excavations prior to the start of construction and shall ensure that construction of cofferdams and deep excavations is consistent with the approved design. At lease 30 days prior to start of construction of the cofferdam, the licensee shall submit to the Commission's Regional Director and Director, Division of Inspections, one copy each of the approved cofferdam construction drawings and specifications and the letter(s) of approval

Article 304. The licensee shall within 90 days of completion of construction file, for approval by the Commission, revised Exhibits A, F, and G to describe and show the project as built.

Article 401. The licensee, after consultation with the Idaho Department of Fish and Game (IDFG) and the U.S. Fish and Wildlife Service (FWS), shall prepare and implement a detailed plan to mitigate the permanent loss of riparian vegetation from project construction and operation. In the plan, the licensee shall address in-kind replacement of habitat, either by protecting previously unprotected habitat or enhancing degraded habitat. The licensee shall file the plan for Commission approval within 1 year after the issuance of the license and shall implement the plan within 1 year after Commission approval. The licensee shall include in the filing all correspondence with IDFG and FWS on the plan. The Commssion reserves the right to require changes to the plan.

Article 402. The licensee shall consult with the Idaho Department of Fish and Game (IDFG) and the U.S. Fish and Wildlife Service (FWS) on the final design of the intake structure and the fish screen, and within 1 year from the issuance of the license, file for Commission approval, functional design drawings of the fish screen and intake structures for the Portneuf Hydroelectric Project. The letters of comment on the design from IDFG and FWS shall be included in the filing. The licensee shall file as-built drawings of the fish screens and intake structures with the Commission within 6 months after the completion of construction.

Article 403. The licensee shall operate the Portneuf Hydroelectric Project in an instanteous run-of-river mode and continuously pass 40 cubic feet per second (cfs) of water over the diversion spillway for the protection of fish and wildlife resources in the Portneuf River. The licensee, in operating the project in an instantaneous run-of-river mode, shall at all times act to minimize the fluctuation of the reservoir surface elevation, i.e., maintain discharge from the project so that flow in the Portneuf River, as measured immediately downstream from the project tailrace, approximates the instantaneous sum of inflow to the project reservoir. Instantaneous run-of-river operation may be temporarily modified if required by operating emergencies beyond the control of the licensee and for short periods upon mutual agreement between licensee and the Idaho Department of Fish and Game (IDFG).

The licensee, after consultation with IDFG and the U.S. Fish and Wildlife Service (FWS), shall implement a plan to provide a flushing flow of 350 cubic feet per second (cfs) of water past the diversion for a 10-day period each year. The plan shall include implementation criteria for initiation of flow releases, and contingencies for altering the required releases during varying hydrologic years. The plan shall be filed with the Commission for approval within 1 year of license issuance and shall include copies of all correspondance from IDFG and FWS on the plan. The Commission reserves the right to require changes to the plan.

Article 404. The licensee shall develop and implement a dissolved oxygen monitoring plan after consultation with the Idaho Department of Fish and Game (IDFG). The plan should include measures necessary to effect rapid alteration of project operation to ensure maintenance of the state dissolved oxygen standard, and a schedule for filing the study results. The plan shall be filed with the Commission within 1 year of license issuance. Comments from IDFG shall be included in the plan. The results of the monitoring study shall be filed with the Commission as specified in the plan.

Article 405. The licensee shall, after consultation with the Idaho Department of Fish and Game (IDFG), U.S. Fish and Wildlife Service (FWS), and the Soil Conservation Service (SCS), implement a plan to control erosion, dust, and slope stability, and to minimize the quantity of sediment or other potential water pollutants resulting from construction and operation of the project. The plan shall be filed with the Commission within 1 year of license issuance. The plan shall also include: provisions for identifying and mapping any erosive soils and potentially unstable slopes; an implementation schedule; monitoring and maintenance programs for project construction and operation; and provisions for periodic review of the plan and for making any necessary revisions to the plan. In the event that the licensee does not concur with any agency recommendations, licensee shall provide a discussion of the reasons for not concurring based on actual site

geological, soil, and groundwater conditions. The Commission reserves the right to require changes to the plan. Unless the Director, Office of Hydropower Licensing, directs otherwise, the licensee may commence ground-disturbing or spoil-producing activities at the project 90 days after filing the above plan.

Aritcle 406. The licensee, in cooperation with the Idaho Department of Fish and Game (IDFG) and the U.S. Fish and Wildlife Service (FWS), shall develop a plan to install streamflow gages in the Portneuf River to monitor the minimum flow and flushing flow releases required by article 403. The plan shall include a determination of the location and design of the gages, the method of flow data collection, and a provision for providing the flow data to the IDFG and FWS upon request. Within 1 year from the date of issuance of this license, the licensee shall file the plan with the Commission for approval and shall include comments from IDFG and FWS on the plan. The Commission reserves the right to require modifications to the plan.

Article 407. The licensee, before starting any ground-disturbing or land-clearing activities within the project boundaries, other than those specifically authorized in the license, shall consult with the Idaho State Historic Preservation Officer (SHPO) about the need for a cultural resources survey and salvage work. The licensee shall file with the Commission documentation of the nature and extent of consultation with the SHPO, together with a cultural resources management plan, a schedule for conducting the necessary investigation, and a copy of a letter from the SHPO commenting on the plan and schedule, 90 days before starting any ground-disturbing or land-clearing activities. The licensee shall make funds available in a reasonable amount for the required work. If the licensee discovers any previously unidentifed archeological or historic sites during the course of construction or developing project works or other facilities at the project, the licensee shall stop all construction and development activities in the vicinity of the sites and shall consult a qualified cultural resources specialist, and the SHPO concerning the eligibility of the sites for listing in the National Register of Historic Places and concerning any measures needed to avoid the sites or to mitigate effects on the sites.

If the licensee and the SHPO cannot agree on the amount of money to be spent for project specific archeological and historical purposes, the Commission reserves the right to require the licensee to conduct the necessary work at the licensee's own expense.

Article 408. The Commission reserves the authority to order, upon its own motion or upon the recommendation of federal or state fish and wildlife agencies or affected Indian Tribes, alterations of project structures and operations to take into account to the fullest extent practicable at each stage of the decision-making process the regional fish and wildlife program developed and amended in accordance with the Pacific Northwest Electric Power Planning and Conservation Act.

Article 409. (a) In accordance with the provisions of this article, the licensee shall have the authority to grant permission for certain types of use and occupancy of project lands and waters and to convey certain interests in project lands and waters for certain other types of use and occupancy, without prior Commission approval. The licensee may exercise the authority only if the proposed use and occupancy is consistent with the purposes of protecting and enhancing the scenic, recreational, and other environmental values of the project. For those purposes, the licensee shall also have continuing responsibility to supervise and control the uses and occupancies for which it grants permission, and to monitor the use of, and ensure compliance with the covenants of the instrument of conveyance for, any interests that it has conveyed, under this article. If a permitted use and occupancy violates any condition of this article or any other condition imposed by the licensee for protection and enhancement of the project's scenic, recreational, or other environmental values, or if a covenant of a conveyance made under the authority of this article is violated, the licensee shall take any lawful action necessary to correct the violation. For a permitted use or occupancy, that action includes, if necessary, cancelling the permission to use and occupy the project lands and waters and requiring the removal of any non-complying structures and facilities.

(b) The types of use and occupancy of project lands and waters for which the licensee may grant permission without prior Commission approval are: (1) landscape plantings; (2) non-commercial piers, landings, boat docks, or similar structures and facilities that can accommodate no more than 10 watercraft at a time and where said facility is intended to serve single-family type dwellings; and (3) embankments, bulkheads, retaining walls, or similar structures for erosion control to protect the existing shoreline. To the extent feasible and desirable to protect and enhance the project's scenic, recreational, and other environmental values, the licensee shall require multiple use and occupancy of facilities for access to project lands or waters. The licensee shall also ensure, to the satisfaction of the Commission's authorized representative, that the uses and occupancies for which it grants permission are maintained in good repair and comply with applicable state and local health and safety requirements. Before granting permission for construction of bulkheads or retaining walls, the licensee shall: (1) inspect the site of the proposed construction, (2) consider whether the planting of vegetation or the use of riprap would be adequate to control erosion at the site, and (3) determine that the proposed construction is needed and would not change the basic contour of the reservoir shoreline. To implement this paragraph (b), the licensee may, among other things, establish a program for issuing permits for the specified types of use and occupancy of project lands and waters, which may be subject to the payment of a reasonable fee to cover the licensee's costs of administering the permit program. The Commission reserves the right to require the licensee to file a description of its standards, guidelines, and procedures for implementing this paragraph (b) and to require modification of those standards, guidelines, or procedures.

(c) The licensee may convey easements or rights-of-way across, or leases of, project lands for: (1) replacement, expansion, realignment, or maintenance of bridges and roads for which all necessary state and federal approvals have been obtained; (2) storm drains and water mains; (3) sewers that do not discharge into project waters; (4) minor access roads; (5) telephone, gas, and electric utility distribution lines; (6) non-project overhead electric transmission lines that do not require erection of support structures within the project boundary; (7) submarine, overhead, or underground major telephone distribution cables or major electric distribution lines (69-kV or less); and (8) water intake or pumping facilities that do not extract more than one million gallons per day from a project reservoir. No later than January 31 of each year, the licensee shall file three copies of a report briefly describing for each conveyance made under this paragraph (c) during the prior calendar year, the type of interest conveyed, the location of the lands subject to the conveyance, and the nature of the use for which the interest was conveyed.

(d) The licensee may convey fee title to, easements or rights-of-way across, or leases of project lands for: (1) construction of new bridges or roads for which all necessary state and federal approvals have been obtained; (2) sewer or effluent lines that discharge into project waters, for which all necessary federal and state water quality certificates or permits have been obtained; (3) other pipelines that cross project lands or waters but do not discharge into project waters; (4) non-project overhead electric transmission lines that require erection of support structures within the project boundary, for which all necessary federal and state approvals have been obtained; (5) private or public marinas that can accommodate no more than 10 watercraft at a time and are located at least one-half mile from any other private or public marina; (6) recreational development consistent with an approved Exhibit R or approved report on recreational resources of an Exhibit E; and (7) other uses, if: (i) the amount of land conveyed for a particular use is five acres or less; (ii) all of the land conveyed is located at least 75 feet, measured horizontally, from the edge of the project reservoir at normal maximum surface elevation; and (iii) no more than 50 total acres of project lands for each project development are conveyed under this clause (d)(7) in any calendar year. At least 45 days before conveying any interest in project lands under this paragraph (d), the licensee must submit a letter to the Director, Office of Hydropower Licensing, stating its intent to convey the interest and briefly describing the type of interest and location of the lands to be conveyed (a marked Exhibit G or K map may be used), the nature of the proposed use, the identity of any federal or state agency official consulted, and any federal or state approvals required for the proposed use. Unless the Director, within 45 days from the filing date, requires the licensee to file an application for prior approval, the licensee may convey the intended interest at the end of that period.

(e) The following additional conditions apply to any intended conveyance under paragraphs (c) or (d) of this article:

(1) Before conveying the interest, the licensee shall consult with federal and state fish and wildlife or recreation agencies, as appropriate, and the State Historic Preservation Officer.

(2) Before conveying the interest, the licensee shall determine that the proposed use of the lands to be conveyed is not inconsistent with any approved Exhibit R or approved report on recreational resources of an Exhibit E; or, if the project does not have an approved Exhibit R or approved report on recreational resources, that the lands to be conveyed do not have recreational value.

(3) The instrument of conveyance must include covenants running with the land adequate to ensure that: (i) the use of the lands conveyed shall not endanger health, create a nuisance, or otherwise be incompatible with overall project recreational use; and (ii) the grantee shall take all reasonable precautions to ensure that the construction, operation, and maintenance of structures or facilities on the conveyed lands will occur in a manner that will protect the scenic, recreational, and environmental values of the project.

(4) The Commission reserves the right to require the licensee to take reasonable remedial action to correct any violation of the terms and conditions of this article, for the protection and enhancement of the project's scenic, recreational, and other environmental values.

(f) The conveyance of an interest in project lands under this article does not in itself change the project boundaries. The project boundaries may be changed to exclude land conveyed under this article only upon approval of revised Exhibit G or K drawings (project boundary maps) reflecting exclusion of that land. Lands conveyed under this article will be excluded from the project only upon a determination that the lands are not necessary for project purposes, such as operation and maintenance, flowage, recreation, public access, protection of environmental resources, and shoreline control, including shoreline aesthetic values. Absent extraordinary circumstances, proposals to exclude lands conveyed under this article from the project shall be consolidated for consideration when revised Exhibit G or K drawings would be filed for approval for other purposes.

(g) The authority granted to the licensee under this article shall not apply to any part of the public lands and reservations of the United States included within the project boundary.

(F) This order is issued under authority delegated to the Director and is final unless appealed under Rule 1902 to the Commission by any party within 30 days from the issuance date of this order. Filing an appeal does not stay the effective date of this order or any date specified in this order. The licensee's failure to appeal this order shall constitute acceptance of the license.

Richard T. Hunt

Richard T. Hunt
Director, Office of
Hydropower Licensing

ENVIRONMENTAL ASSESSMENT
DIVISION OF ENVIRONMENTAL ANALYSIS, OFFICE OF HYDROPOWER LICENSING
FEDERAL ENERGY REGULATORY COMMISSION

September 12, 1986

Project name: Portneuf River Hydroelectric FERC No. 7447-002 - ID

A. APPLICATION

1. Application type: Minor License Date filed: 08 / 30 / 85

2. Applicant: Commercial Energy Management, Inc.

3. Water body: Portneuf River River basin: Snake River

4. Nearest city or town: Lava Hot Springs

5. County: Bannock State: Idaho

B. RESOURCE DEVELOPMENT

1. Purpose: The proposed project would provide an estimated average of 3.9 gigawatt-hours (GWh) of electrical energy annually.

2. Need for Power: The power from the project would be useful in meeting a small portion of the need for power projected by the Northwest Power Planning Council (NPPC) for the northwest region of the Western Systems Coordinating Council (WSCC). From the time the project goes on-line (becomes commercially operational), it will be available to displace fossil-fueled, electric power generation in the NPPC region, thus conserving nonrenewable fossil fuels and reducing the emission of noxious byproducts caused by the combustion of fossil fuels.

3. Economic Analysis: A proposed project is economically feasible so long as its projected levelized cost is less than the long-term levelized cost of alternative energy to any utility in the region that can be served by the project. The staff has calculated the projected alternative energy cost in the region to be 73 mills/kilowatt-hour (kWh). This cost is based upon the generic coal-fueled, steam-electric plant forecasted by WSCC in its proposed resource portfolios to come on line about the year 2002. Since the levelized cost of energy from the Portneuf project is significantly less than this cost the project is economically feasible.

The applicant plans to sell the power generated by the project to Utah Power and Light Company. Recent contracts signed by Utah Power and Light Company have established levelized power values of 59 mills/kWh. The estimated levelized cost of the Portneuf project is 40.0 mills/kWh and therefore the project would be potentially financially feasible to the applicant. Any further determination on the financial feasibility must be governed by the applicant's efforts to secure a power sales contract and project financing.

4. Comprehensive Development: The proposed project would consist of three fixed propeller turbines with hydraulic capacities of 30, 60 and 90 cubic feet per second (cfs) and an aggregate capacity of 744 kilowatts (kW). These turbines will cover a flow range from approximately 20 cfs to 210 cfs and operate at a relatively constant design head of 49.2 feet. Flows exceeding the combined maximum flow would occur approximately 16% of the time.

The applicant estimated the average annual energy generated by the project to be 4.1 GWh based on flow data from the stream gage on the Portneuf River at Topaz. The staff has adjusted the estimate to 3.9 GWh in order to reflect the relief sought by the Idaho Department of Fish and Game in their motion to intervene filed May 23, 1986.

The Upper Snake River Planning Status Report includes no projects, either proposed or constructed on Portneuf River that this project would impact and the project would not conflict with any pending applications for exemption, license or preliminary permit. Based on the above, staff concludes that the proposed Portneuf River Project adequately utilizes the available flow and head at the site and would not conflict with any other planned development.

C. PROPOSED PROJECT AND ALTERNATIVES

1. Description of the proposed action: The proposed run-of-river project would consist of: (1) a 40-foot-long, 4-foot-high reinforced concrete diversion dam with a crest elevation of 5089.4 feet above mean sea level and a gated penstock intake; (2) a 1,350-foot-long, 72-inch-diameter steel penstock; (3) a 25-foot-wide by 57-foot-long reinforced concrete powerhouse containing three generating units, one rated at 107 kW, one at 214 kW, and one at 423 kW, each operating at an average head of 49.2 feet and a total hydraulic capacity of 210 cfs, and discharging into the Portneuf River at a normal tailwater elevation of 5035 feet; and (4) a 0.5-mile-long, 12.5-kilovolt (kV) transmission line connecting to a Utah Power and Light Company distribution line.

2. Applicant's proposed mitigative measures.

a. Construction: The applicant proposes to schedule construction activities during the dry months of the year to minimize erosion, to revegetate the disturbed areas with grass, and to prevent hazardous materials from entering the river. The applicant proposes to construct the transmission line according to the guidelines of Idaho Department of Fish and Game (IDFG), and to bury the powerhouse to minimize noise.

b. Operation: The applicant proposes to release 40 cfs of flow from the dam into the bypass reach for the protection of aquatic resources, and to screen the intake with fish screens with 1/4-inch openings and maintain approach velocities below one foot per second at the intake (Commercial Energy Management, Inc., 1985).

3. Federal lands affected.

_X_ No. ___ Yes; agency: _____; acreage = _____;

___ The federal land management agency has provided conditions by letter dated: ___/___/____ (Attachment ___).
___ Conditions have not been provided.

4. Alternatives to the proposed action.

a. _X_ No other reasonable action alternatives have been found.
___ Action alternative: _____

b. Alternative of no action

No action would prohibit the applicant from constructing the proposed project. No action would involve no alterations to the existing environment and would preclude the applicant from producing electrical power at the site.

D. AFFECTED ENVIRONMENT

1. Descriptions of the resources that would be impacted by the proposed project.

Geology and soils. The project would be located in the Portneuf River valley. The soils of the valley are predominately fine silts, sands, and clays deposited by alluvial action. Deposits of cobble and gravels are distributed throughout the sedimentary layers. The bedrock at the project site is basalt.

b. Streamflow.

low flow: 110 cfs; flow parameter: flow exceeded 90 percent of the time.
high flow: 350 cfs; flow parameter: flow exceeded 10 percent of the time.
average flow: 208 cfs; Remarks.

c. Water quality. The water quality of the Portneuf River is generally good, however, there is a high sediment and turbidity load in the river. The alluvial soils of the valley and local farming operations contribute significant amounts of sediment to the river. Dissolved oxygen sampling indicates that water upstream of the project area varies from approximately 80 percent of saturation to a point greater than saturation.

d. Fisheries.

Anadromous: X None. ___ Species include:

Resident: ___ None. X Species include: Rainbow, cutthroat, brown, and brook trout; Utah and bluehead suckers; speckled dace; and redside shiners.

Remarks. The applicant's creel survey indicates a low catch rate by trout anglers. The Idaho Department Fish and Game has classified the Portneuf River as a class 1 or blue ribbon stream, because of the good trout fishery.

e. Vegetation.

Cover type	Dominant species
riparian wetlands	willow, river birch, cattail, and various sedges.
agricultural cropland	alfalfa.
previously disturbed areas	manicured grasses, and shrubs.

Remarks. Most of the penstock route would cross a privately owned campground and there is little vegetation within the campground aside from grass. The diversion dam, intake, and powerhouse would be located within the riparian zone.

f. Wildlife.

Species inhabiting the project area include: beaver, ground squirrel, muskrat, and a variety of passerine birds; mule deer, elk, bear, cougar, and other game species are found in the nearby hills, but not within the project boundary.

g. Cultural.

___ There are properties listed on or eligible for listing on the National Register of Historic Places in the area of the project's potential environmental impact.

Description. _____

_____

_X_ National Register (listed and eligible) properties have not been recorded.

Remarks. The applicant's cultural resource inventory failed to locate any eligible sites or properties.

h. Visual quality. The project area has moderate visual quality because past land use and agricultural practices have modified the resources. The adjacent campground, highway, railroad right-of-way, and agricultural developments are examples of the man-made modifications near the project area.

i. Recreation. The Cottonwood family campground is within the project boundary. Most recreational use of the river is composed of trout fishing, and tubing.

j. Land use. Adjacent land use is primarily agriculture, recreational camping, and transportation related.

k. Socioeconomics. The predominant factor affecting the local socioeconomic conditions is the argicultural production of cattle. Other local income sources include truck produce farming, manufacturing, and tourism.

l. Ambient noise. The adjacent highway, railroad, and recreational developments contribute to a moderate to high local noise level.

m. Ambient air quality. Vehicle exhaust emissions and dust from agricultural practices have combined to slightly degrade local air quality.

n. Other resources. _____

_____

_____

E. CONSULTATION AND COMPLIANCE

1. Fish and wildlife consultation (Fish & Wildlife Coordination Act).
   (a) Fish & Wildlife Service (FWS): _X_ Yes ___ No (b) State(s): _X_ Yes ___ No
   (c) National Marine Fisheries Service (NMFS): ___ Yes _X_ No
   Remarks. _____

2. Section 7 consultation (Endangered Species Act).
   (a) Listed species. _____

   _____

   (b) _X_ Not required. ___ Required; completed (date): ___/___/___.
   Remarks. _____

   _____

3. Section 401 certification (Clean Water Act).
___ Not required. ___ Received. ___ Waived. X Requested. 08/ 29 /85 (date)

4. Cultural resource consultation (Historic Preservation Act).
(a) Register status: X None. ___ Potentially eligible. ___ Eligible or listed.
(b) State Historic Preservation Officer (SHPO): X Yes ___ No
(c) National Park Service (NPS): X Yes ___ No
(d) Council: X Not required. ___ Completed (date): ___/___/___.
(e) Further consultation: X Not required. ___ Required.
Remarks. _____

5. Recreation consultation [Federal Power Act, §10(a)].
(a) U.S. Owners ___ Yes X No (b) NPS: X Yes ___ No
(c) State(s): X Yes ___ No Remarks. _____

6. Wild and scenic rivers (Wild and Scenic Rivers Act).
Status: X None. ___ Listed. Determination completed: ___/___/___.
Administering agency: _____
Remarks. _____

7. LWCFA lands and facilities affected (Land and Water Conservation Fund Act).
Status: X None. ___ Designated. Determination completed: ___/___/___.
Administering agency: _____
Remarks. _____

F. COMMENTS

1. The following entities provided comments on the application in response to the public notice dated 03/ 25 / 86 .

Commenting entity	Date of letter
Idaho Department of Fish and Game*	05/ 16 / 86
Department of the Interior	06/ 02 / 86
Lava Hot Springs Foundation*	04/ 23 / 86
Wayne G. Jensen†	04/ 21 / 86
	/ /

* Indicates a petition to intervene.
† Indicates a letter of protest.

2. The applicant did not respond to the comments.

G. ENVIRONMENTAL IMPACTS AND RECOMMENDATIONS

Mitigative measures recommended by the staff are in addition to those proposed by the applicant, Section C(2), and those conditions identified in Section C(3), as appropriate. There are 12 issues addressed below.

1. Issue: Project construction and operation would disturb and adversely affect riparian vegetation.

(a) Comments: IDFG requested a riparian vegetation mitigative plan be prepared prior to project construction.

(b) Applicant's response: The applicant proposed a conceptual mitigative plan in the January 10, 1986 supplement to the application.

(c) Conclusions and recommendations: The outline proposed by the applicant would provide protection and enhancement for riparian vegetation, but the proposed plan was not complete. The licensee should develop and implement a complete mitigative plan, after consultation with IDFG, and U.S. Fish and Wildlife Service. Implementation of a riparian vegetation mitigative plan would be benefical for stabilizing the river banks and protection of riparian vegetation.

2. Issue: Project operations would contribute to fish mortality by entraining fish through the turbines and impinging fish on the intake screens.

(a) Comments: IDFG requested that the applicant provide fish screens with 1/4-inch openings to exclude fish from entering the proposed penstock, and that the applicant limit intake velocities below one foot per second.

(b) Applicant's response: The applicant proposed in the application for license to include these mitigative measures.

(c) Conclusions and recommendations: Fish screens and low intake velocities would provide protection from impingement and entrainment mortality for fish and help protect the blue ribbon trout fishery. The licensee should install fish screens at the intake structure and maintain intake velocities below one foot per second.

3. Issue: Flow diversions for project operation would reduce the amount of available fish habitat in the bypass reach, and would alter the ability of the river to transport sediments.

(a) Comments: IDFG requested a minimum flow of 40 cfs, or inflow to the project, be released into the bypass reach during project operation and that the applicant provide a flow of 400 cfs for a two-week period to flush accumulated sediments from the bypass reach.

(b) Applicant's response: The applicant proposed in the application to provide a minimum flow of 40 cfs or inflow during periods of project operation. The applicant did not propose or respond to the request for flushing flows.

(c) Conclusions and recommendations: The minimum flow of 40 cfs would provide adequate adult trout habitat, while also providing some spawning habitat. IDFG has accepted the applicant's instream flow study in making this determination. The licensee should provide a minimum flow of 40 cfs, or inflow, to the bypass reach during project operation for the protection of aquatic habitat. Analysis of the hydrograph for the Portneuf River indicates it would not be possible to meet the requested two-week-long, 400 cfs flushing flow. A flushing flow would provide

protection for the spawning gravels by removing fines from the bypass reach. Discussions between staff and IDFG have been held and an acceptable alternative flushing flow of 350 cfs for 10 days during the high-flow season was identified. The licensee should provide a flushing flow of 350 cfs for 10 days during the high-flow season.

4. Issue: Dissolved oxygen study to confirm that project operation would meet water quality standards.

   (a) Comments: IDFG requested that the applicant monitor the dissolved oxygen (DO) levels of the water in the bypass reach and below the tailrace for one year after project operation begins and alter project operation if DO levels drop below the state standard for class 1 waters, which is 90 percent of saturation.

   (b) Applicant's response: The applicant did not respond.

   (c) Conclusions and recommendations: The DO data are inconclusive; therefore monitoring DO levels and altering project operation in the event of lowered DO levels would ensure that state water quality standard is met and that aquatic habitat is protected. The licensee should monitor DO levels in the bypass reach and below the project and alter project operation to protect water quality and the aquatic habitat.

5. Issue: Erosion and sedimentation control during construction.

   (a) Comments: IDFG requested that a detailed soil erosion control plan be formulated and implemented prior to initiation of ground-disturbing activities.

   (b) Applicant's response: The applicant, in the application, proposed to utilize erosion control measures.

   (c) Conclusions and recommendations: Development of an erosion control plan would adequately protect water quality, and should be implemented by the licensee.

6. Issue: Need for recreational access at the project.

   (a) Comments: IDFG requested a license article requiring the licensee to provide recreational access to project lands and waters.

   (b) Applicant's response: The applicant did not respond.

   (c) Conclusions and recommendations: Standard article 13 of any minor license issued would require the licensee to provide free access to the public.

7. Issue: Need for stream gages to accurately measure the required minimum flows.

   (a) Comments: IDFG requested a license article requiring the licensee to provide stream gages to measure flows in the bypass reach.

   (b) Applicant's response: The applicant did not respond.

   (c) Conclusions and recommendations: Development and installation of stream gages would ensure protection of fishery resources through monitoring of the minimum flow and flushing flow requirements. The licensee should install the gages to monitor streamflow in the bypass reach.

8. Issue: Rehabilitation of the site following abandonment of the site.

   (a) Comments: IDFG requested a license article requiring the licensee to rehabilitat the site to preproject conditions following abandonment.

(b) Applicant's response: The applicant did not respond.

(c) Conclusions and recommendations: Standard article 16 of any minor license issued would require the licensee to remove project facilities when ordered by the Commission at surrender of the licensee.

9. Issue: Compliance with other state and local codes and permits.

(a) Comments: IDFG requested that the licensee be required to comply with state fish and game codes before starting construction.

(b) Applicant's response: The applicant did not respond.

(c) Conclusions and recommendations: In addition to any federal license authorizing development of the proposed project, the licensee would be expected to comply with appropriate state and local laws and regulations.

10. Issue: Cumulative impacts from multiple hydroelectric developments.

(a) Upper Snake River Basin: The Upper Snake River Basin covers most of southern Idaho and portions of Oregon, Nevada, Utah, and Wyoming. The Portneuf River flows into the 56,000-acre American Falls Reservoir, which is located on the Snake River approximately 50 miles below Idaho Falls. This general area lies within the eastern Snake River plain section of the basin, which is charaterized by a semi-arid climate, juniper woodlands, and sagebrush grasslands. Land use includes rangeland and irrigated cropland.

(b) Proposed and existing hydroelectric development: The Upper Snake River Basin currently contains 19 pending license applications, no pending exemption applications, and 98 licensed or exempted hydroelectric facilities. The majority of existing and proposed facilities are along the mainstem of the Snake, the Payette, and along the Henry's Fork of the Snake. There is one existing exempted project in the Portneuf drainage, the 260-kW, O.J. Power Project (FERC No. 7719) on Mill Creek. The Portneuf River Hydroelectric Project (FERC No. 7447) is the only pending application in the Portneuf drainage.

(c) Target resources: The staff has identified resident trout and riparian vegetation as target resources, which could be adversely affected by two or more proposed hydroelectric projects in the Portneuf drainage. The staff based its selection of target resources on review of other projects in the basin and on comments on the proposed project by IDFG and the Department of the Interior. Resident trout were selected as a target resource because of the importance of the local sport fishery and the management goals of IDFG. Riparian vegetation was selected because it provides habitat diversity and life requisites for a number of important wildlife species and provides shade and nutrient input to the stream, which are critical to the resident fishery. In addition, riparian vegetation is a relatively scarce resource in Idaho, representing less than 0.7 percent of the land area statewide (Boccard, 1980).

(d) Environmental impacts to target resources: IDFG states (letter from Al Van Vooren, staff biologist, IDFG, Boise, Idaho, August 23, 1985) that although the applicant's proposed 40 cfs minimum flow would eliminate spawning habitat in the bypass reach, it would protect adult rainbow trout habitat. IDFG further states that adult rainbow trout are the primary management species and the life stage of resident fish in the project area and that the proposed flow would be acceptable.

The total disturbance to riparian vegetation would be 0.[illegible] an acre, which the applicant proposes to revegetate in coordination with the fish and wildlife agencies. The site-specific impacts to target resources, therefore, would not be significant.

(e) Conclusions: The Portneuf drainage is relatively remote and isolated from the main areas of hydroelectric development in the Upper Snake River Basin. The one existing hydroelectric development within the Portneuf drainage, the O.J. Power project, was granted an exemption from licensing and is subject to the mandatory terms and conditions of the fish and wildlife agencies, which includes measures to protect resident fish from hydropower related impacts. Since no impacts to resident fish are expected from the O.J. Power Project, there is no potential for cumulative adverse impacts in relation to the Portneuf Project. Although the O.J. Power Project would result in minor adverse impacts to riparian vegetation (FERC, 1985), the Portneuf Project would provide minor benefits to riparian vegetation; therefore there is no potential for cumulative adverse impacts to riparian vegetation.

11. Issue: Compliance with the Columbia River Basin Fish and Wildlife Program.

(a) Comments: Under section 4(h) of the Pacific Northwest Electric Power Planning and Conservation Act, the Northwest Power Planning Council (Council) developed the Columbia River Basin Fish and Wildlife Program (Program) to protect, mitigate, and enhance fish and wildlife resources associated with the development of hydroelectric projects. The Program contains a framework for assessing the impacts of new hydroelectric development on fish and wildlife resources.

The Program requires that fish and wildlife agencies, Indian Tribes, and the Council be consulted during the study, design, construction, and operation of new hydroelectric projects. The Commission's regulations currently require applicants to initiate pre-filing consultation with these entities and to provide them the opportunity to review and to comment on the license application. This consultation process has occurred.

The Program states that authorization for new hydroelectric projects should include conditions of development that would mitigate the impacts of the project on fish and wildlife resources.

(b) Conclusion: The applicant proposes ways to mitigate adverse impacts and agrees with the consulted agencies on mitigative measures. Further, the applicant must satisfy the intent of the Program by providing adequate mitigative measures. Moreover, the Commission has the authority to order, were practical, alterations of project structures and operations in order to take into account the Council's Program. Accordingly, the staff concludes that the proposed project does not conflict with the applicable provisions of the Council's Program.

12. Issue: Future construction may disturb previously unknown archeological resources.

(a) Comments: _____

(b) Applicant's response: _____

(c) Conclusions and recommendations: The licensee should consult with the SHPO about the need for a cultural resource survey before conducting any ground-disturbing activities.

H. SUMMARY OF ENVIRONMENTAL IMPACTS

1. Assessment of adverse and beneficial impacts expected from the project as proposed by the applicant (P); the proposed project with the staff's recommended mitigation (Ps) [Section G]; and any other alternative considered (A). *

Resource	Impact P	Ps	A	Remarks
a. Geology/Soils	1AS	1AS		a. Construction activities would disturb approximately 5 acres of land causing minor erosion.
b. Streamflow	1AL			b. Diversion of flows for project operation would reduce streamflow in a 1,300-foot-long segment of the river.
c. Water quality: Temperature	1AL			c. Reduced flow in the bypass reach would slow water velocities and would slightly increase water temperatures.
Dissolved oxygen	1AL	0		Flow diversions would bypass several waterfalls that help reaerate the water. This would be a long-term adverse
Turbidity and sedimentation	1AS	1AS		impact. Construction-related erosion would cause short-term increases in turbidity and sedimentation.
Other:				
d. Fisheries: Anadromous	0			d. Flow diversions would cause a long-term, minor reduction
Resident	1AL			in the amount of habitat available for resident fish.
e. Vegetation	1AS	1BL		e. Approximately 5 acres of vegetation would be cleared for project construction, causing a short-term, adverse
f. Wildlife	1AS			impact, however the mitigative measures would provide minor, long-term benefits to riparian vegetation.
g. Cultural: Archeology	0			f. Construction activities would temporarily disturb local wildlife populations.
History	0			
h. Visual quality	1AL			h. Project facilities would present a minor, long-term intrusion to local visual resources.
i. Recreation	1AL	1BL		i. Project facilities and flow diversions would create a minor, long-term adverse impact on recreation within
j. Land use	0			the project boundary, however free public access would be required in any license issued.
k. Socioeconomics	0			
l. Ambient noise	1AS			l. & m. Construction activities would contribute to
m. Ambient air quality	1AS			increased levels of noise, exhaust emissions, and dust for a short period of time.

* The assessment reflects the adoption of any federal land management agency's conditions, in addition to the applicant's proposed mitigation. Assessment symbols indicate the following impact levels:

O = No impact; 1 = Minor impact; 2 = Substantial impact; 3 = Major impact;
A = Adverse; B = Beneficial; L = Long-term impact; S = Short-term impact.
(e.g., 1BL = Minor, beneficial, long-term impact)

2. Impacts of the no-action alternative.

Under the no-action alternative, there would be no construction of project facilities or changes to the existing physical, biological, or cultural components of the area. Electrical power that would be generated by the proposed hydroelectric project would have to be generated from other available sources or offset by conservation measures.

3. Recommended alternative (including proposed, required, and recommended mitigative measures): X Proposed project. ___ Alternative action. ___ No action.

4. Reason(s) for selecting the preferred alternative.
The construction and operation of the proposed project, as modified by the recommended mitigative measures, would allow the generation of electrical energy from a renewable resources without creating significant adverse impacts.

I. SUMMARY OF UNAVOIDABLE ADVERSE ENVIRONMENTAL IMPACTS
Construction of the project would cause minor, short-term adverse impacts to soils, turbidity, wildlife, noise, and air quality within the project area. Operation of the project would cause minor, long-term impacts to streamflow, resident fish, and visual resources.

J. CONCLUSION

X Finding of No Significant Impact. Approval of the recommended alternative [H(3)] would not constitute a major federal action significantly affecting the quality of the human environment; therefore, an environmental impact statement (EIS) will not be prepared.

___ Intent to Prepare an EIS. Approval of the recommended alternative [H(3)] would constitute a major federal action significantly affecting the quality of the human environment; therefore, an EIS will be prepared.

K. LIST OF PREPARERS

Name	Position title
Brad Bortner	Ecologist (Coordinator)
Jim Fargo	Civil Engineer
Martin Thorpe	Electrical Engineer
John Staples	Wildlife Biologist

L. LITERATURE CITED

1. Boccard, B. 1980. Important fish and wildlife habitats of Idaho: an inventory. U.S. Fish and Wildlife Service, Department of the Interior. Boise, Idaho. 165 pp.

2. Commercial Energy, Inc. 1985. Application for minor license for the Portneuf Hydroelectric Project. Project No. 7447-002. Filed August 8, 1985, and supplemented January 16, 1986, and May 19, 1986.

3. Federal Energy Regulatory Commission. 1985. Environmental assessment for the O.J. Power Company Hydroelectric Project FERC No. 7719, ID. Office of Hydropower Licensing, Washington, D.C., April 9, 1985.

SAFETY AND DESIGN ASSESSMENT
PORTNEUF DIVERSION STRUCTURE
FERC No. 7447--ID

DAM SAFETY

The proposed concrete diversion structure would have a maximum height of 4.0 feet and impound negligable storage. Failure of this structure would not pose a threat to downstream life or cause significant property damage.

Our review indicates that there are no engineering problems which would make construction, operation or maintenance of the project infeasible.

EXHIBITS

Exhibit A pages 7 thru 9, and the following Exhibit F drawings conform to the Commission's rules and regulations and should be approved and made a part of the license if issued.

Exhibit F	FERC No. 7447-	Showing
1	1	Diversion/Intake Structure Plan
2	2	Diversion/Intake Structure Elevation
3	3	Powerhouse Plan
4	4	Powerhouse Section
5	5	Penstock Profile

Form L-15
(October, 1975)

FEDERAL POWER COMMISSION

TERMS AND CONDITIONS OF LICENSE FOR UNCONSTRUCTED MINOR PROJECT AFFECTING THE INTERESTS OF INTERSTATE OR FOREIGN COMMERCE

Article 1. The entire project, as described in this order of the Commission, shall be subject to all of the provisions, terms, and conditions of the license.

Article 2. No substantial change shall be made in the maps, plans, specifications, and statements described and designated as exhibits and approved by the Commission in its order as a part of the license until such change shall have been approved by the Commission: Provided, however, That if the Licensee or the Commission deems it necessary or desirable that said approved exhibits, or any of them, be changed, there shall be submitted to the Commission for approval a revised, or additional exhibit or exhibits covering the proposed changes which, upon approval by the Commission, shall become a part of the license and shall supersede, in whole or in part, such exhibit or exhibits theretofore made a part of the license as may be specified by the Commission.

Article 3. The project works shall be constructed in substantial conformity with the approved exhibits referred to in Article 2 herein or as changed in accordance with the provisions of said article. Except when emergency shall require for the protection of navigation, life, health, or property, there shall not be made without prior approval of the Commission any substantial alteration or addition not in conformity with the approved plans to any dam or other project works under the license or any substantial use of project lands and waters not authorized herein; and any emergency alteration, addition, or use so made shall thereafter be subject to such modification and change as the Commission may direct. Minor changes in project works, or in uses of project lands and waters, or divergence from such approved exhibits may be made if such changes will not result in a decrease in efficiency, in a material increase in cost, in an adverse environmental impact, or in impairment of the general scheme of development; but any of such minor changes

made without the prior approval of the Commission, which in its judgment have produced or will produce any of such results, shall be subject to such alteration as the Commission may direct.

Upon the completion of the project, or at such other time as the Commission may direct, the Licensee shall submit to the Commission for approval revised exhibits insofar as necessary to show any divergence from or variations in the project area and project boundary as finally located or in the project works as actually constructed when compared with the area and boundary shown and the works described in the license or in the exhibits approved by the Commission, together with a statement in writing setting forth the reasons which in the opinion of the Licensee necessitated or justified variation in or divergence from the approved exhibits. Such revised exhibits shall, if and when approved by the Commission, be made a part of the license under the provisions of Article 2 hereof.

Article 4. The construction, operation, and maintenance of the project and any work incidental to additions or alterations shall be subject to the inspection and supervision of the Regional Engineer, Federal Power Commission, in the region wherein the project is located, or of such other officer or agent as the Commission may designate, who shall be the authorized representative of the Commission for such purposes. The Licensee shall cooperate fully with said representative and shall furnish him a detailed program of inspection by the Licensee that will provide for an adequate and qualified inspection force for construction of the project and for any subsequent alterations to the project. Construction of the project works or any feature or alteration thereof shall not be initiated until the program of inspection for the project works or any such feature thereof has been approved by said representative. The Licensee shall also furnish to said representative such further information as he may require concerning the construction, operation, and maintenance of the project, and of any alteration thereof, and shall notify him of the date upon which work will begin, as far in advance thereof as said representative may reasonably specify, and shall notify him promptly in writing of any suspension of work for a period of more than one week, and of its resumption and completion. The Licensee shall allow said representative and other

officers or employees of the United States, showing proper credentials, free and unrestricted access to, through, and across the project lands and project works in the performance of their official duties. The Licensee shall comply with such rules and regulations of general or special applicability as the Commission may prescribe from time to time for the protection of life, health, or property.

Article 5. The Licensee, within five years from the date of issuance of the license, shall acquire title in fee or the right to use in perpetuity all lands, other than lands of the United States, necessary or appropriate for the construction, maintenance, and operation of the project. The Licensee or its successors and assigns shall, during the period of the license, retain the possession of all project property covered by the license as issued or as later amended, including the project area, the project works, and all franchises, easements, water rights, and rights of occupancy and use; and none of such properties shall be voluntarily sold, leased, transferred, abandoned, or otherwise disposed of without the prior written approval of the Commission, except that the Licensee may lease or otherwise dispose of interests in project lands or property without specific written approval of the Commission pursuant to the then current regulations of the Commission. The provisions of this article are not intended to prevent the abandonment or the retirement from service of structures, equipment, or other project works in connection with replacements thereof when they become obsolete, inadequate, or inefficient for further service due to wear and tear; and mortgage or trust deeds or judicial sales made thereunder, or tax sales, shall not be deemed voluntary transfers within the meaning of this article.

Article 6. The Licensee shall install and thereafter maintain gages and stream-gaging stations for the purpose of determining the stage and flow of the stream or streams on which the project is located, the amount of water held in and withdrawn from storage, and the effective head on the turbines; shall provide for the required reading of such gages and for the adequate rating of such stations; and shall install and maintain standard meters adequate for the determination of the amount of electric energy generated by the project works. The number, character, and location of gages, meters, or other measuring devices, and the method of operation thereof, shall at all times be satisfactory to the Commission or its authorized representative.

The Commission reserves the right, after notice and opportunity for hearing, to require such alterations in the number, character, and location of gages, meters, or other measuring devices, and the method of operation thereof, as are necessary to secure adequate determinations. The installation of gages, the rating of said stream or streams, and the determination of the flow thereof, shall be under the supervision of, or in cooperation with, the District Engineer of the United States Geological Survey having charge of stream-gaging operations in the region of the project, and the Licensee shall advance to the United States Geological Survey the amount of funds estimated to be necessary for such supervision, or cooperation for such periods as may be mutually agreed upon. The Licensee shall keep accurate and sufficient records of the foregoing determinations to the satisfaction of the Commission, and shall make return of such records annually at such time and in such form as the Commission may prescribe.

Article 7. The Licensee shall, after notice and opportunity for hearing, install additional capacity or make other changes in the project as directed by the Commission, to the extent that it is economically sound and in the public interest to do so.

Article 8. The Licensee shall, after notice and opportunity for hearing, coordinate the operation of the project, electrically and hydraulically, with such other projects or power systems and in such manner as the Commission may direct in the interest of power and other beneficial public uses of water resources, and on such conditions concerning the equitable sharing of benefits by the Licensee as the Commission may order.

Article 9. The operations of the Licensee, so far as they affect the use, storage and discharge from storage of waters affected by the license, shall at all times be controlled by such reasonable rules and regulations as the Commission may prescribe for the protection of life, health, and property, and in the interest of the fullest practicable conservation and utilization of such waters for power purposes and for other beneficial public uses, including recreational purposes, and the Licensee shall release water from the project reservoir at such rate in cubic feet per second, or such volume in acre-feet per specified period of time, as the Commission may prescribe for the purposes hereinbefore mentioned.

Article 10. On the application of any person, association, corporation, Federal agency, State or municipality, the Licensee shall permit such reasonable use of its reservoir or other project properties, including works, lands and water rights, or parts thereof, as may be ordered by the Commission, after notice and opportunity for hearing, in the interests of comprehensive development of the waterway or waterways involved and the conservation and utilization of the water resources of the region for water supply or for the purposes of steam-electric, irrigation, industrial, municipal or similar uses. The Licensee shall receive reasonable compensation for use of its reservoir or other project properties or parts thereof for such purposes, to include at least full reimbursement for any damages or expenses which the joint use causes the Licensee to incur. Any such compensation shall be fixed by the Commission either by approval of an agreement between the Licensee and the party or parties benefiting or after notice and opportunity for hearing. Applications shall contain information in sufficient detail to afford a full understanding of the proposed use, including satisfactory evidence that the applicant possesses necessary water rights pursuant to applicable State law, or a showing of cause why such evidence cannot concurrently be submitted, and a statement as to the relationship of the proposed use to any State or municipal plans or orders which may have been adopted with respect to the use of such waters.

Article 11. The Licensee shall, for the conservation and development of fish and wildlife resources, construct, maintain, and operate, or arrange for the construction, maintenance, and operation of such reasonable facilities, and comply with such reasonable modifications of the project structures and operation, as may be ordered by the Commission upon its own motion or upon the recommendation of the Secretary of the Interior or the fish and wildlife agency or agencies of any State in which the project or a part thereof is located, after notice and opportunity for hearing.

Article 12. Whenever the United States shall desire, in connection with the project, to construct fish and wildlife facilities or to improve the existing fish and wildlife facilities at its own expense, the Licensee shall

permit the United States or its designated agency to use, free of cost, such of the Licensee's lands and interests in lands, reservoirs, waterways and project works as may be reasonably required to complete such facilities or such improvements thereof. In addition, after notice and opportunity for hearing, the Licensee shall modify the project operation as may be reasonably prescribed by the Commission in order to permit the maintenance and operation of the fish and wildlife facilities constructed or improved by the United States under the provisions of this article. This article shall not be interpreted to place any obligation on the United States to construct or improve fish and wildlife facilities or to relieve the Licensee of any obligation under this license.

Article 13. So far as is consistent with proper operation of the project, the Licensee shall allow the public free access, to a reasonable extent, to project waters and adjacent project lands owned by the Licensee for the purpose of full public utilization of such lands and waters for navigation and for outdoor recreational purposes, including fishing and hunting: Provided, That the Licensee may reserve from public access such portions of the project waters, adjacent lands, and project facilities as may be necessary for the protection of life, health, and property.

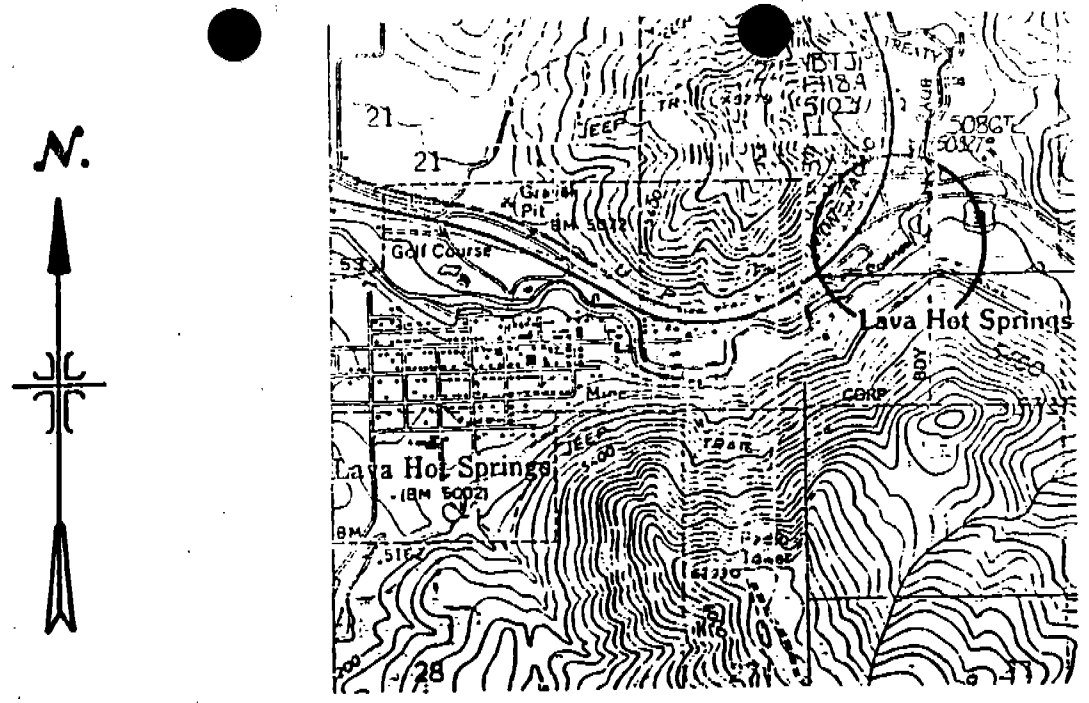
Article 14. In the construction, maintenance, or operation of the project, the Licensee shall be responsible for, and shall take reasonable measures to prevent, soil erosion on lands adjacent to streams or other waters, stream sedimentation, and any form of water or air pollution. The Commission, upon request or upon its own motion, may order the Licensee to take such measures as the Commission finds to be necessary for these purposes, after notice and opportunity for hearing.

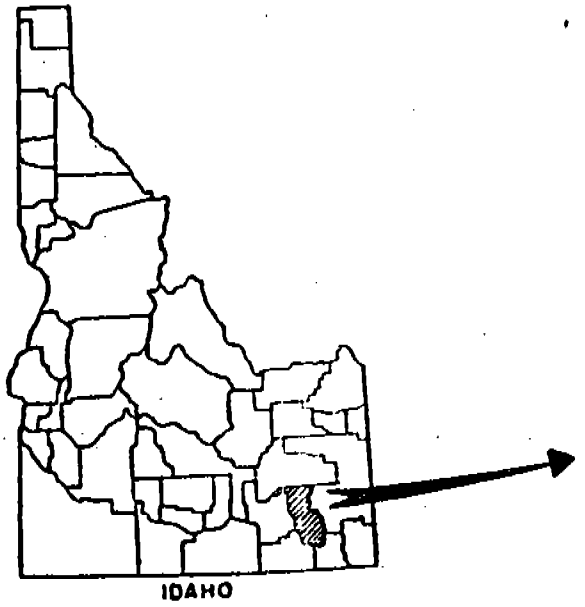
Article 15. The Licensee shall consult with the appropriate State and Federal agencies and, within one year of the date of issuance of this license, shall submit for Commission approval a plan for clearing the reservoir area. Further, the Licensee shall clear and keep clear to an adequate width lands along open conduits and shall dispose of all temporary structures, unused timber, brush, refuse, or other material unnecessary for the purposes of the project which results from the clearing of lands or from the maintenance or alteration of the project works. In addition,

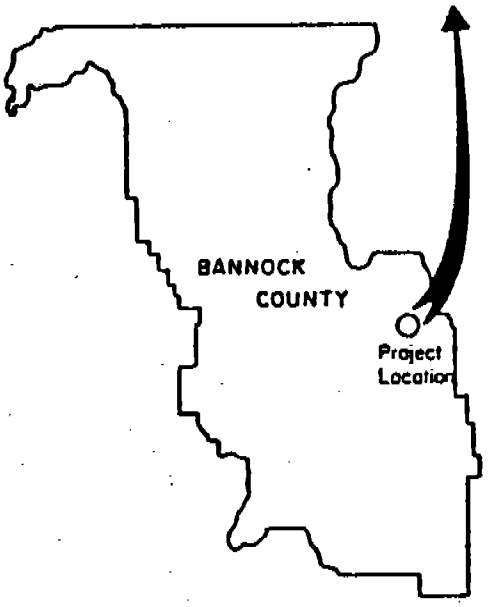
all trees along the periphery of project reservoirs which may die during operations of the project shall be removed. Upon approval of the clearing plan all clearing of the lands and disposal of the unnecessary material shall be done with due diligence and to the satisfaction of the authorized representative of the Commission and in accordance with appropriate Federal, State, and local statutes and regulations.

Article 16. If the Licensee shall cause or suffer essential project property to be removed or destroyed or to become unfit for use, without adequate replacement, or shall abandon or discontinue good faith operation of the project or refuse or neglect to comply with the terms of the license and the lawful orders of the Commission mailed to the record address of the Licensee or its agent, the Commission will deem it to be the intent of the Licensee to surrender the license. The Commission, after notice and opportunity for hearing, may require the Licensee to remove any or all structures, equipment and power lines within the project boundary and to take any such other action necessary to restore the project waters, lands, and facilities remaining within the project boundary to a condition satisfactory to the United States agency having jurisdiction over its lands or the Commission's authorized representative, as appropriate, or to provide for the continued operation and maintenance of nonpower facilities and fulfill such other obligations under the license as the Commission may prescribe. In addition, the Commission in its discretion, after notice and opportunity for hearing, may also agree to the surrender of the license when the Commission, for the reasons recited herein, deems it to be the intent of the Licensee to surrender the license.

Article 17. The right of the Licensee and of its successors and assigns to use or occupy waters over which the United States has jurisdiction, or lands of the United States under the license, for the purpose of maintaining the project works or otherwise, shall absolutely cease at the end of the license period, unless the Licensee has obtained a new license pursuant to the then existing laws and regulations, or an annual license under the terms and conditions of this license.







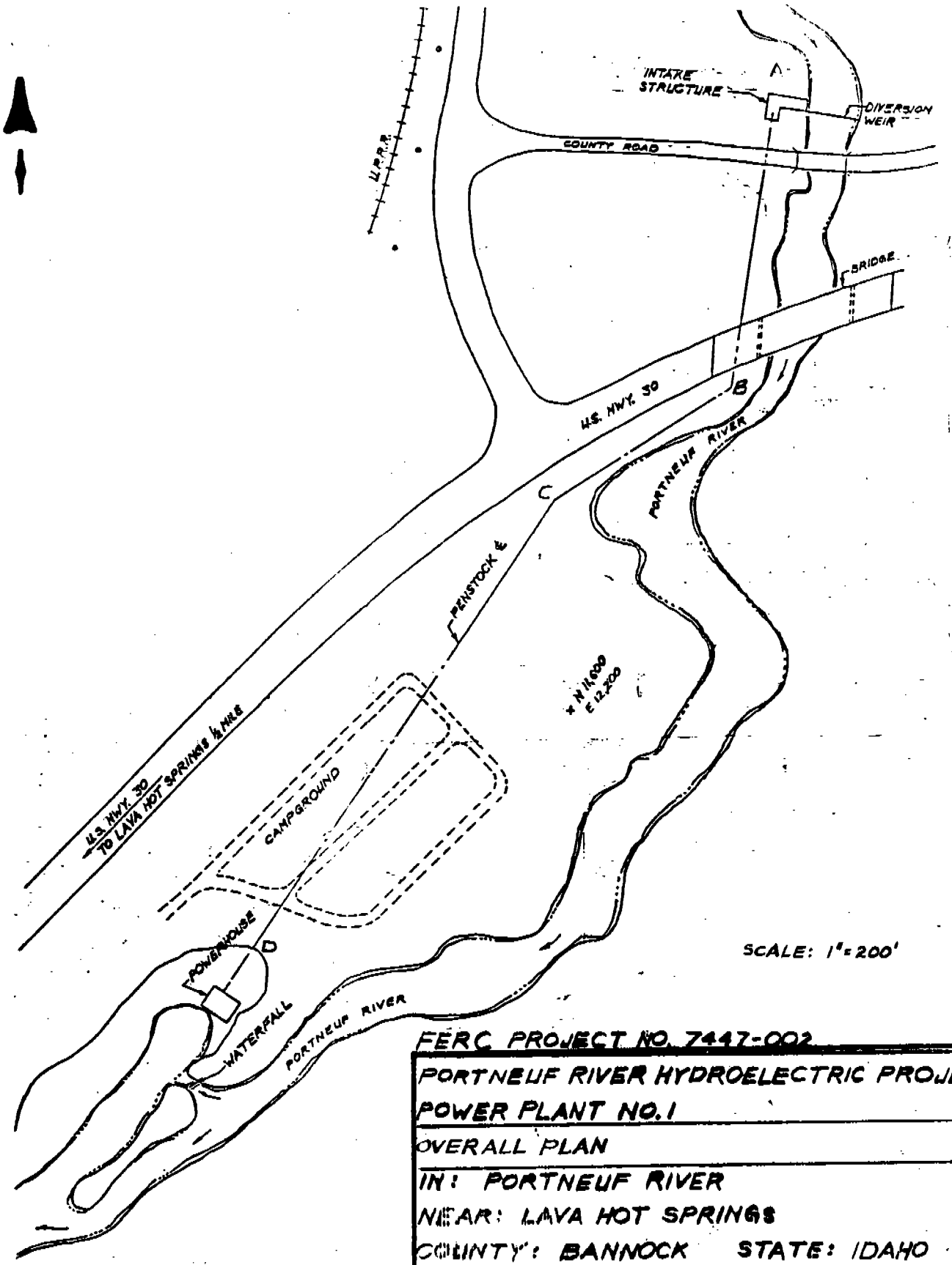
FERC PROJECT NO. 7447-002

PORTNEUF RIVER HYDROELECTRIC PROJECT.
POWER PLANT NO. 1

VICINITY MAP

IN: PORTNEUF RIVER
NEAR: LAVA HOT SPRINGS
COUNTY: BANNOCK STATE: IDAHO
APPLICATION BY: HYDRO POWER MANAGEMENT, INC.
DATE: 9 NOV. 1987 SHEET 1 OF 6

~~#1~~ #2
23 Feb 1988 DDF



FERC PROJECT NO. 7447-002

PORTNEUF RIVER HYDROELECTRIC PROJECT

POWER PLANT NO. 1

OVERALL PLAN

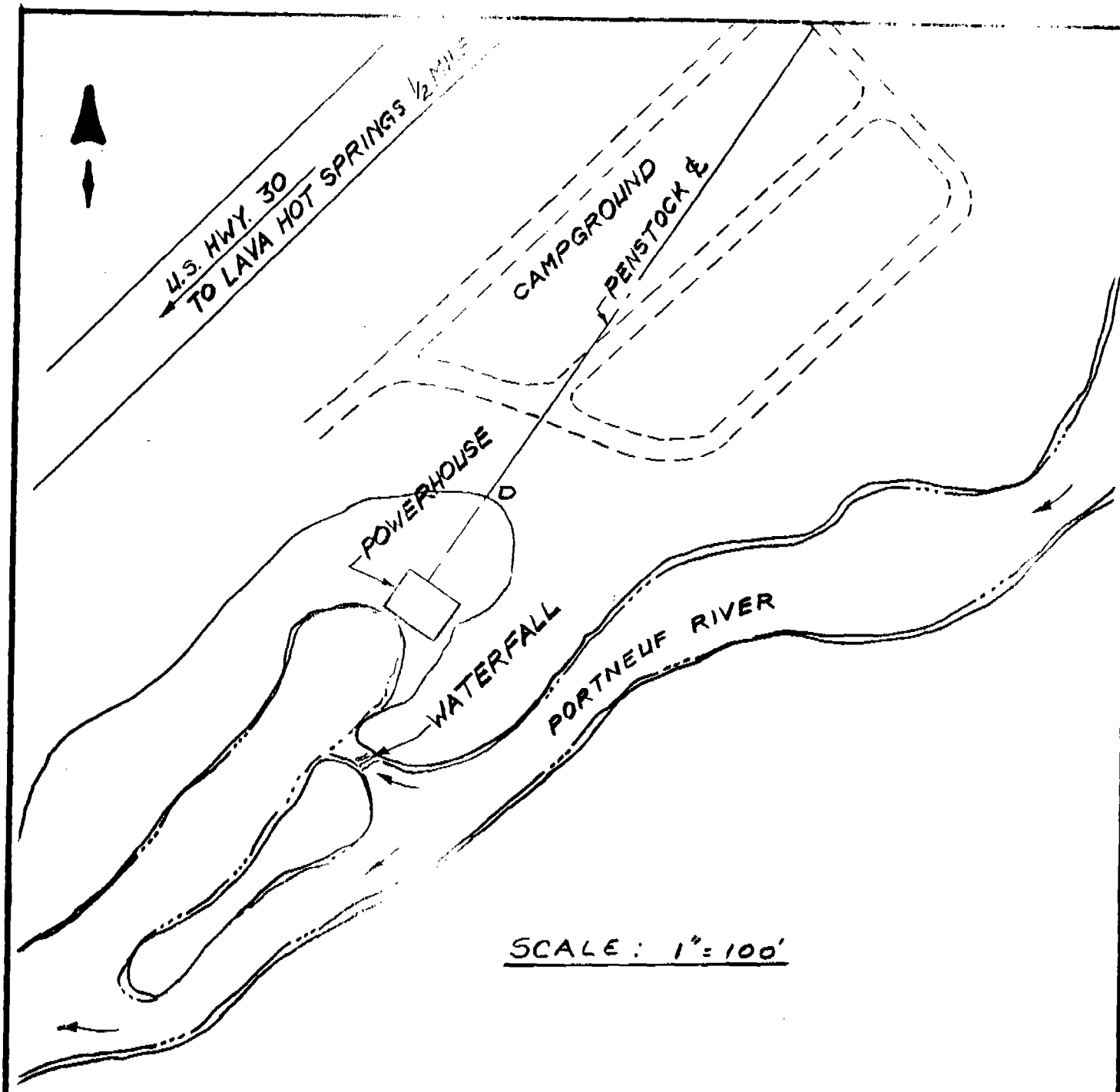
IN: PORTNEUF RIVER

NEAR: LAVA HOT SPRINGS

COUNTY: BANNOCK STATE: IDAHO

APPLICATION BY: HYDRO POWER MANAGEMENT INC.

DATE: 9 NOV. 1987 SHEET 2 OF 6



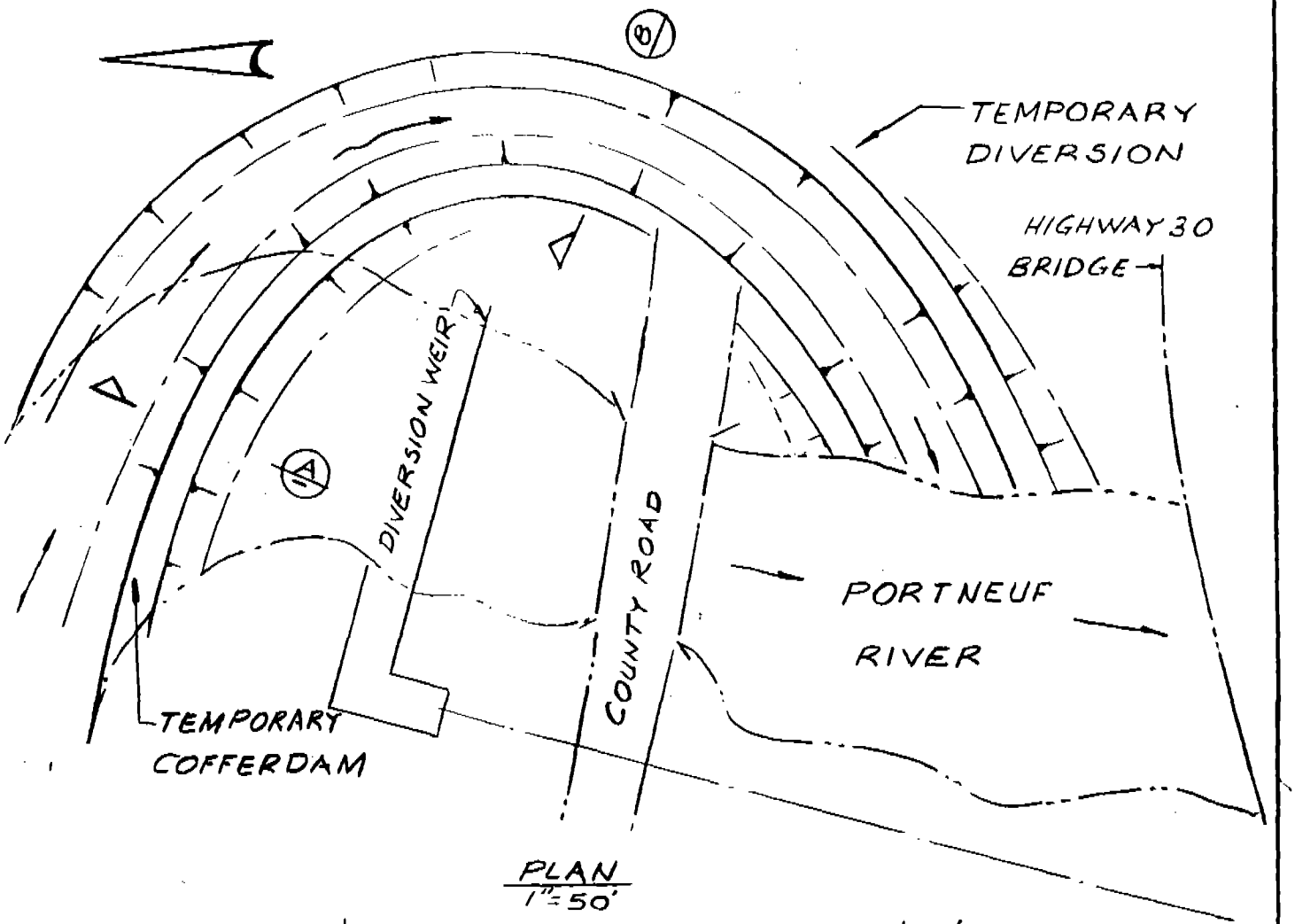
SCALE: 1" = 100'

FERC PROJECT NO. 7447-002

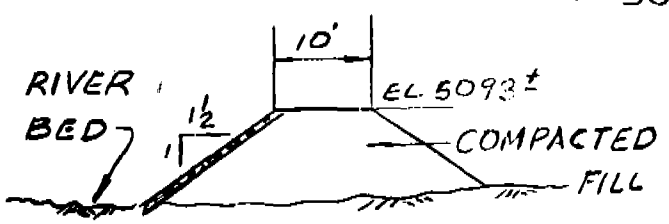
PORTNEUF RIVER HYDROELECTRIC PROJECT
POWER PLANT NO. 1

PLAN: POWER PLANT AREA

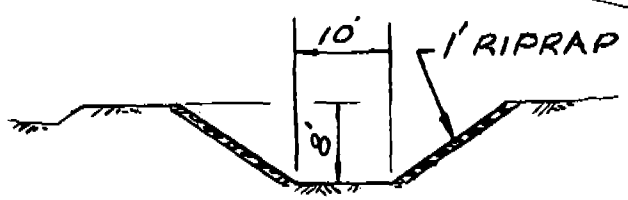
IN: PORTNEUF RIVER
NEAR: LAVA HOT SPRINGS
COUNTY: BANNOCK STATE: IDAHO
APPLICATION BY: HYDRO POWER MANAGEMENT, INC.
DATE: 9 NOV. 1987 SHEET 5 OF 6



PLAN
1" = 50'



SECTION A
1" = 20'



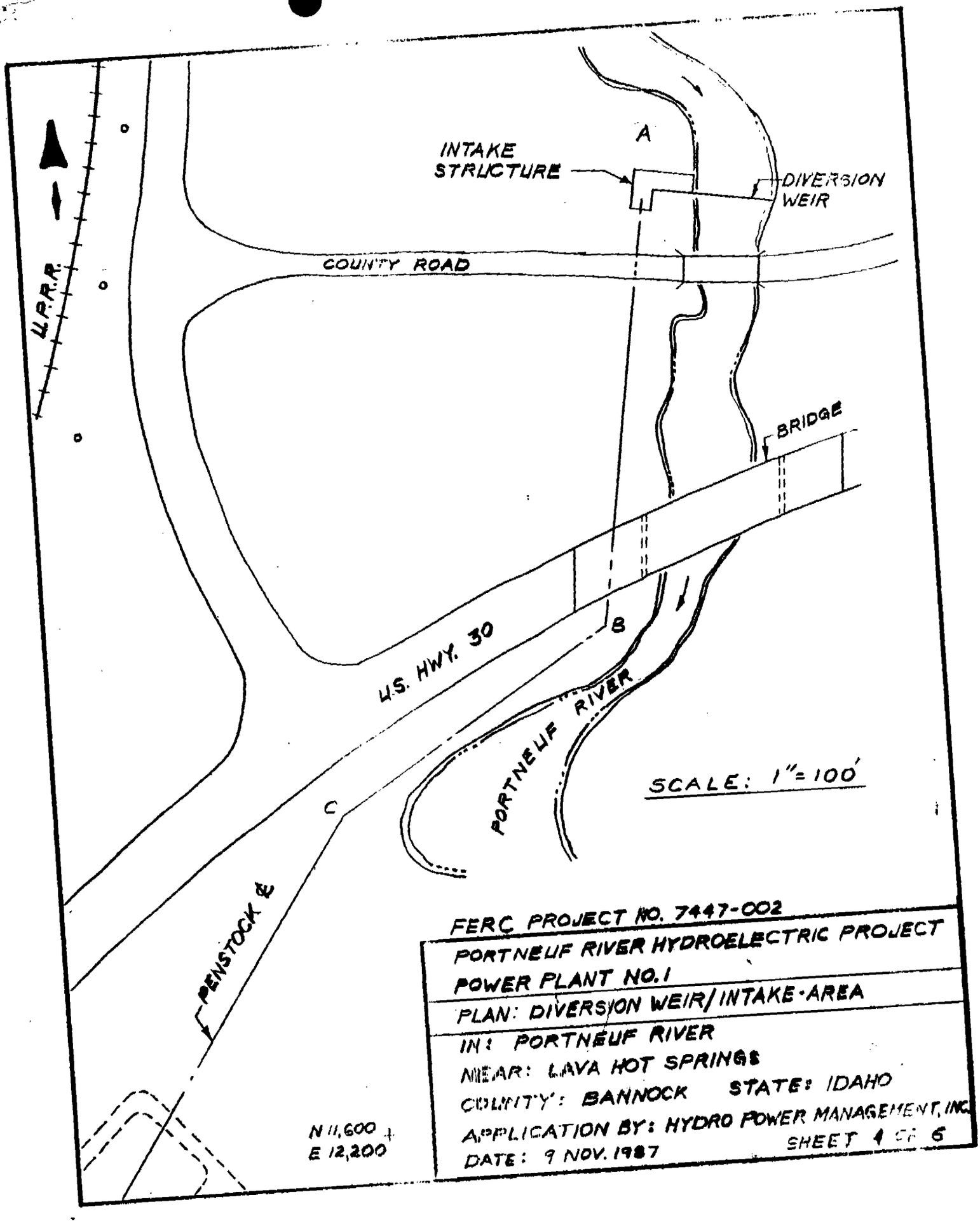
SECTION B
1" = 20'

FERC PROJECT NO. 7447-002

PORTNEUF RIVER HYDROELECTRIC PROJECT
POWER PLANT NO. 1

TEMPORARY COFFERDAM AND DIVERSION

IN: PORTNEUF RIVER
NEAR: LAVA HOT SPRINGS
COUNTY: BANNOCK STATE: IDAHO
APPLICATION BY: HYDRO POWER MANAGEMENT, INC.
DATE: 9 NOV. 1987 SHEET 6 OF 6



FERC PROJECT NO. 7447-002

PORTNEUF RIVER HYDROELECTRIC PROJECT

POWER PLANT NO. 1

PLAN: DIVERSION WEIR/INTAKE AREA

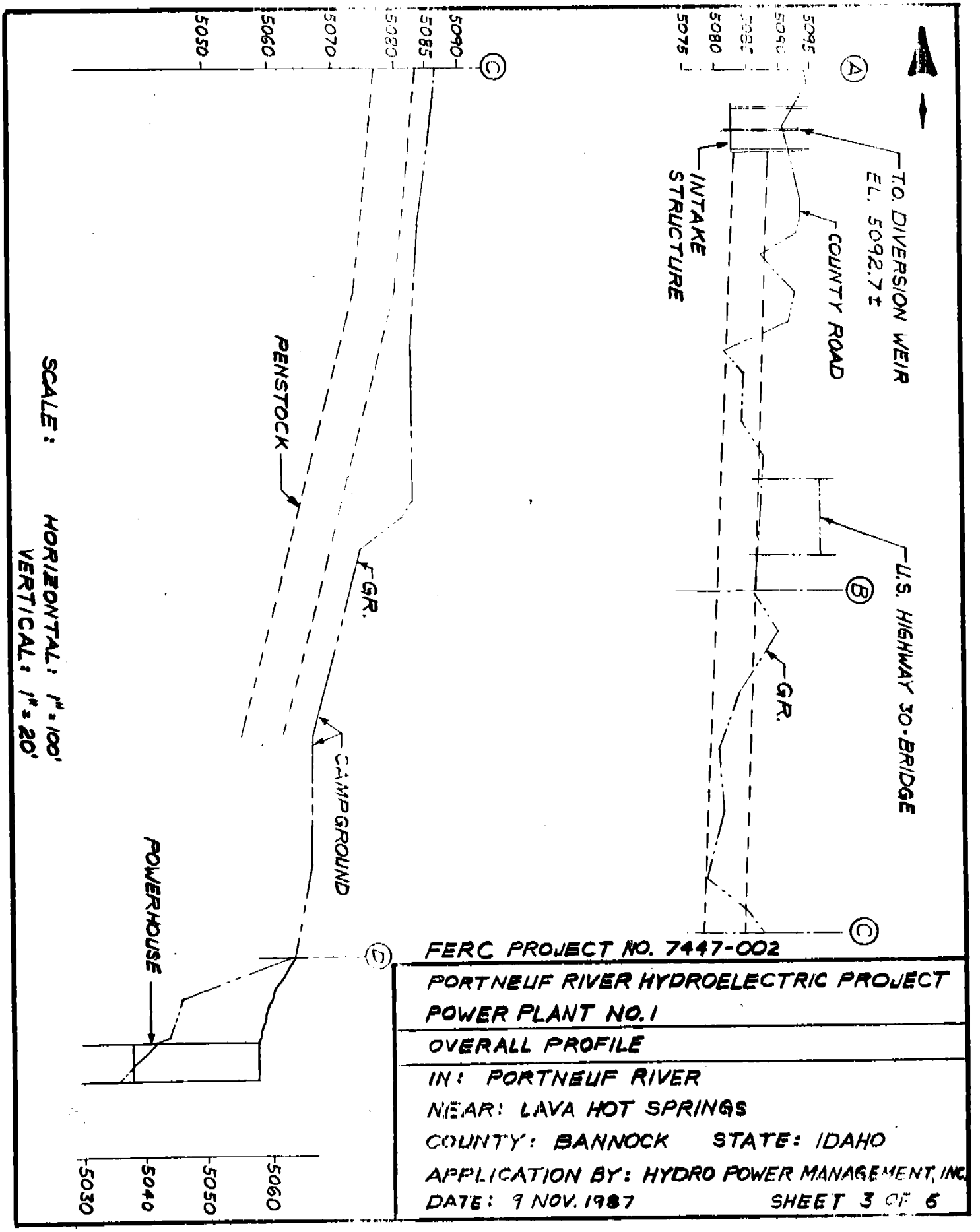
IN: PORTNEUF RIVER

NEAR: LAVA HOT SPRINGS

COUNTY: BANNOCK STATE: IDAHO

APPLICATION BY: HYDRO POWER MANAGEMENT, INC.

DATE: 9 NOV. 1987 SHEET 4 OF 6



FERC PROJECT NO. 7447-002

PORTNEUF RIVER HYDROELECTRIC PROJECT

POWER PLANT NO. 1

OVERALL PROFILE

IN: PORTNEUF RIVER

NEAR: LAVA HOT SPRINGS

COUNTY: BANNOCK STATE: IDAHO

APPLICATION BY: HYDRO POWER MANAGEMENT, INC.

DATE: 9 NOV. 1987 SHEET 3 OF 6

IDAHO DEPARTMENT OF LANDS
STATEHOUSE, BOISE, IDAHO 83720

STANLEY F. HAMILTON
DIRECTOR

#3

23 Feb 88. BDF

BOARD OF LAND COMMISSIONERS
CECIL D. ANDRUS
Governor
PETE T. CENARRUSA
Secretary of State
JIM JONES
Attorney General
JOE R. WILLIAMS
State Auditor
JERRY L. EVANS
Sup't of Public Instruction

February 11, 1988

Archie W. Service, Esq.
GREEN, SERVICE, GASSER & KERL
Center Plaza - P. O. Box 4883
Pocatello, Idaho 83205-4883

Monte R. Whittier, Esq.
WHITTIER AND SOUZA, P. A.
940 East Clark
Pocatello, Idaho 83205

Re: Hydro Power Management, Inc.'s Easement Application to Construct a Hydroelectric Facility On State Lands Administered By The Lava Hot Springs Foundation

Dear Messrs. Service and Whittier:

The above-referenced application was considered by the State Board of Land Commissioners at their February 9, 1988 meeting.

The Board, by majority vote, approved the hydroelectric easement application.

I encourage each of you to work together in negotiating appropriate easement terms and conditions that will result in execution of an easement instrument satisfactory to the Foundation, HPM and the Board.

Please feel free to call on my staff - Don McNarie, Jay Biladeau or Fred Kisabeth - for any needed assistance.

Sincerely,

Stan

STANLEY F. HAMILTON
Director

SFH:lr

ATTACHMENT A

#4

23 Feb 1988 EMC

BEFORE THE DIRECTOR, IDAHO DEPARTMENT OF LANDS

IN THE MATTER OF THE EASEMENT APPLICATION BY HYDRO POWER MANAGEMENT, INC. TO CONSTRUCT A HYDROELECTRIC FACILITY ON STATE LANDS ADMINISTERED BY THE LAVA HOT SPRINGS FOUNDATION	))))))	FINDINGS OF FACT

THIS MATTER having come up duly and regularly for hearing before the Department of Lands, the administrative agency for the State Board of Land Commissioners, on January 21, 1988 at 9:00 a.m. in the Executive Room of the CottonTree Inn, Pocatello, Idaho, before Fred A. Kisabeth, Hearing Officer, duly designated by the Director, Department of Lands, and other persons appearing, and evidence having been presented, both oral and documentary, the Director of the Department of Lands, being fully advised as to the law and to the facts, now makes the following:

FINDINGS OF FACT

I .

The Idaho Department of Lands (hereinafter called "department") received an easement application on September 2, 1987 from Commercial Energy Management, Inc. of Rigby, Idaho, predecessor in interest of Hydro Power Management, Inc. (hereinafter called "HPM") of Chubbuck, Idaho, to construct and operate a small hydroelectric power project on state-owned lands administered by the Lava Hot Springs Foundation (hereinafter

called "foundation"). The proposed project is situated on the Portneuf River approximately one-half mile northeast of the town of Lava Hot Springs in Bannock County, Idaho.

II

A prehearing conference was held on January 8, 1988 at 1:00 p.m. in the Attorney General's Conference Room in the Statehouse, Boise, Idaho. The purpose of the conference was to discuss procedures, focus the issues and determine how much time will be needed for the hearing. A copy of a hydroelectric development easement recently granted by the department was discussed with the two parties in order to help focus the issues. This also prompted questions concerning how various matters will be handled if the State Board of Land Commissioners (hereinafter called "board") decides to grant the easement to HPM. Because the hearing would not be a public hearing, it was agreed that the hearing officer would receive comment letters from those witnesses not able to be present at the hearing provided the letters were received by January 21, 1988.

III

The purpose of this hearing was to obtain the necessary facts from the foundation and HPM to allow the board to make a determination whether or not it is appropriate for the board to

grant the easement as requested by HPM. The hearing, directed by the board, was conducted under the procedural authority of the Idaho Administrative Procedures Act, Title 67, Chapter 52, Idaho Code, and the board's Rules of Practice and Procedure. The proceedings were tape recorded.

IV

The applicant, HPM, represented by Monte R. Whittier, proceeded first with their witnesses in support of the application. HPM witnesses furnishing testimony were:

Robert Nestor, President and Co-owner of HPM - Chubbuck

Cindy Nestor, Secretary-Treasurer and Co-owner of HPM - Chubbuck

DeRay Perry, Insurance Agent, The Hartwell Corp. - Idaho Falls

Mike Heberlein, Owner, Acoustic Specialties - Idaho Falls

Ted Sorensen, PE, Civil Engineer - Idaho Falls

Anant V. Gokhale, Structural Engineer, Gem Engineering - Pocatello

In addition to the Memorandum of Position provided by Mr. Whittier, documentary evidence submitted on behalf of HPM is summarized as follows:

Exhibit Number	Description
A-1	Color photo - site of diversion weir
A-2	Color photo - general area
A-3 & 4	Color photo - site of buried powerhouse
A-5	Traffic Count on US-30, Idaho Transportation Dept.
A-6	Daily train count, Union Pacific Railroad
A-7	Project vicinity map and site plans
A-8	Federal Energy Regulatory Commission (FERC) Order issuing license and Environmental Assessment Report
A-9	Project Construction Contract Specifications Documents (Quality Manual)
A-10	Application for Approval of Transfer of FERC License
A-11	Color photo - Bristol Falls

HPM's Memorandum of Position is included as Attachment Number 1 to this hearing officer's report.

V

The protestant foundation, represented by Archie W. Service, followed with their witnesses in opposition to HPM's application. Foundation witnesses furnishing testimony were:

Floyd Jensen, Chairman of Foundation - Preston
Karen Keller, Executive Director, Foundation - Lava Hot Springs
David Anderson, Member of Foundation - Pocatello
Paul D. Bieniasa, Physician's Assistant - Lava Hot Springs
Dr. Lend D. Seppi (retired), Past Mayor of Lava Hot Springs - Lava Hot Springs
Mike Norkevich, Lessee, Cottonwood Campground - Lava Hot Springs
Lynn W. Stewart, District Mgr., Utah Power & Light - Lava Hot Springs
R. Paul Erickson, Engineer, Utah Power & Light - Sandy,

Utah
L. Dale Veile, Electrical Engineer, Utah Power & Light - Rexburg

Documentary evidence submitted on behalf of the foundation is summarized as follows:

Exhibit Number	Description
P-1	Memorandum in Opposition to Granting Permission
P-2	Memo from insurance agency to Mike Norkevich regarding risk exposure
P-3	News clipping from January 7, 1988 issue of Idaho State Journal pertaining to Northwest Power Council estimates of power surplus

The foundation's Memorandum In Opposition To Granting Permission is included as Attachment Number 2 to this hearing officer's report.

Comment letters in opposition received from persons unable to participate in the hearing, but included in the official hearing record are listed below:

Representative Wayne Hall, District 27 - McCammon
Representative Al Johnson, District 27 - Pocatello
Senator C. E. "Chick" Bilyeu, District 27 - Pocatello
Senator Ralph E. Lacy, District 34 - Pocatello
Senator Bert W. Marley, District 27 - McCammon
Mayor Newt Lowe, City of Lava Hot Springs - Lava Hot Springs
Janice R. Cisneros, President, Chamber of Commerce - Lava Hot Springs
Clifford Bryan, resident - Lava Hot Springs
Cathy L. Sher, resident and business person - Lava Hot Springs
Willis M. Young, security interest in campground - Hermiston, Oregon

The foundation introduced petitions in opposition to the project signed by 152 members of the community of Lava Hot Springs. The petitions reflect actions taken by the Lava Hot Springs Chamber of Commerce during their meeting on January 12, 1988. HPM objected because a public comment period and an opportunity for a public hearing had been provided early in the FERC application review and decision process for FERC Project No. 7447. The FERC application was filed on August 30, 1985 and the public notice was dated March 25, 1986. This material was not used by the hearing officer because it did not materially affect the factors being evaluated.

VI

HPM's FERC Project No. 7447 consists of 1) All lands, to the extent of their FERC licensed interests in those lands, enclosed by the project boundary shown on the vicinity map and site plan (Exhibit A-7), and 2) Project works consisting of:

(a) a 40-foot-long, 4-foot-high reinforced concrete diversion dam with a crest elevation of 5089.4 feet and a gated penstock intake; (b) a 1,350-foot-long, 72-inch-diameter steel penstock; (c) a 25-foot by 57-foot reinforced concrete powerhouse containing three generating units rated 107 kW, 214 kW and 423 kW at an average head of 49.2 feet and a total hydraulic capacity of 210 cfs, and discharging into the Portneuf River at a normal tailwater elevation of 5035 feet; (d) 4.16-kV generator leads and a 4.16/12.5-kV, 750-kVA transformer; (e) a 0.5-mile-long, 12.5-kV transmission line connecting to a Utah Power and Light Company distribution line; and (f) appurtenant facilities. The project would provide an estimated average of 3.9 gigawatt hours of electrical energy annually.

The issues or concerns over HPM's proposed project are categorized as follows and will be addressed in this order by the hearing officer in this report:

1. Noise level
2. Aesthetic impact
3. Safety
4. Environmental impact
5. Economic impact
6. Public interest
7. Bonding and liability insurance
8. Impact on Cottonwood Campground lease

9. Consistency with purpose of the Lava Hot Springs land grant

VII

Noise Level - The foundation expressed concerns about the noise level of water going through the penstock and noise from the turbine generators in the powerhouse. Mr. Heberlein, a specialist in acoustics, testified that the decibel level inside the powerhouse would be about 80. The Federal Occupational Safety and Health Administration (OSHA) requires earphone protection for 90 decibels or higher. Mr. Heberlein stated that each 10 decibel reduction means reducing the noise level by one-half. Reinforced concrete walls will reduce the decibel level to 40 outside, which is comparable to a quiet radio. HPM will construct the powerhouse below ground level - the structure will in effect be buried except for the water discharge side that will remain uncovered but face down river. Mr. Heberlein testified that it would be reasonable to design the structure to a level of 20 to 25 decibels. Mr. Sorenson, a civil engineer with design and operation experience on twelve similar projects currently in operation, testified that there would be no noise from the penstock as it would be buried a minimum of four feet deep. Furthermore he stated that transformer noise would be the main noise source but at a very low level.

A major highway, US-30, and a railway line are located adjacent to the subject property. Testimony was presented that the average daily motor vehicle traffic was 2790 vehicles of which 20% are trucks (Exhibit A-5); and the Union Pacific Railway runs approximately 25 to 30 trains a day through Lava Hot Springs (Exhibit A-6). The decibel level for a truck is about 90 and 110 for a train. Noise level of average street traffic is 70 decibels. These noise levels are much higher than the 20-25 decibel noise level expected from the turbine generators. Also, there was testimony that river sounds at the tail race will mask any generator noise.

Therefore, I find that noise should not be a factor in a subsequent decision regarding this project.

VIII

Aesthetic Impact - Many foundation witnesses expressed concern about the adverse aesthetic impact of the project. The primary concern focused on the powerhouse, transmission lines and impact on Bristol Falls due to the water diversion. Mr. Nestor testified that the penstock would be buried through the campground area - from Point "B" to the powerhouse as referenced on the site plans (Exhibit A-7). The penstock would be above ground from point "B" to "C". If this segment were of concern to the foundation, HPM would bury this portion of the penstock. Mr.

Nestor also testified that the powerhouse dimensions would be 22' x 40' with a 12' to 14' ceiling height rather than the 25' x 57' dimension stated in the FERC application. The hole where the powerhouse will be built is 26 feet deep. Topography will permit the powerhouse to be buried on three sides and the roof will also be buried without raising the ground level of the adjacent area. A security fence is required around the top of the powerhouse area for safety purposes. HPM stated that the fence would still be below ground level and appropriately landscaped and screened by vegetation.

The FERC license provides for a 40 CFS minimum flow in the bypass reach of the river during project operation which would provide adequate adult trout habitat and some spawning habitat. The FERC environmental assessment report included the following statement:

> "IDFG states (letter from Al Van Vooren, staff biologist, IDFG, Boise, Idaho, August 23, 1985) that although the applicant's proposed 40 cfs minimum flow would eliminate spawning habitat in the bypass reach, it would protect adult rainbow trout habitat. IDFG further states that adult rainbow trout are the primary management species and the life stage of resident fish in the project area and that the proposed flow would be acceptable."

HPM introduced evidence in the form of a picture (Exhibit A-11) of Bristol Falls depicting a flow of 5 CFS. Moreover, HPM committed to make natural appearing alterations in the main channel, if necessary, to direct water flow to the falls to

assure the aesthetic qualities of Bristol Falls.

It would be infeasible and cost prohibitive to bury the transmission line and make a submerged line river crossing. HPM testimony focused on the preponderance of powerlines and utility poles in the immediate vicinity, in the developed campground, and the visibility of the Utah Power and Light (UP&L) distribution line on the east side of the river. These features are evident in the pictorial exhibits.

Mrs. Keller stated that the foundation administers 183.5 acres of which 90 acres are developed. The undeveloped portion is on the mountain side west of the railroad and highway. The developed acres include 17.5 acres of park, picnic and campground areas. Approximately five acres would be impacted by project construction activities according to the FERC license and environmental assessment report. HPM is required to re-claim and re-vegetate the impacted lands as a condition of the FERC license.

I find that aesthetic impacts of the project would be negligible if reasonable and appropriate mitigation measures are imposed as conditions of any easement authorized by the board.

IX

Safety - This is of major concern to the foundation and its campground lessee, Mike Norkevich. Foundation testimony centered on potential for penstock failure and resultant risk to over-night campground occupants and related liability. They cited a penstock failure at the small hydro plant in Grace operated by UP&L that resulted in three fatalities a few years ago. There was also discussion about a recent penstock failure on the Birch Creek project north of Idaho Falls.

HPM witness, Ted Sorenson, stated that the two failures involved high pressure penstocks, not a low pressure penstock as designed for HPM's project. The Birch Creek project involved a penstock length of 15,810 feet with an operating pressure of 230 PSI. Working pressure of HPM's project will be 25 psi which is less than the pressure of a common garden hose (40 PSI). Mr. Sorenson stated that collapse of the penstock is a possibility if the intake is suddenly plugged. Collapse would result in subsidence of the ground over the penstock area. Mr. Nestor testified that the power plant would be computer controlled, capable of automatic shut-down in case of malfunction, with monitoring capability in his office.

The FERC license includes the following statement of finding:

> "The design of this project is consistent with the engineering standards governing dam safety. The project will be safe if constructed, operated, and maintained in accordance with the requirements of this license. Analysis of related issues is provided in the Safety and Design Assessment attached to this order."

I find that the project can be safely constructed given adequate quality control monitoring to assure compliance with applicable state and federal standards in accordance with license requirements.

X

Environmental Impact - Foundation witness, Paul Bieniasa, spoke out against the environmental impacts and explained the objective of the environmental organization "Friends of the Portneuf" of restoring the river to blue ribbon fishery status. Subsequent testimony revealed that this effort, in cooperation with state and federal resource agencies, is directed upstream and in the headwaters of the river, not in the segment affected by this project. Mr. Bieniasa spoke out against any easements in the river segment through Lava as its uniqueness is a strong drawing point; he also expressed concern that ditching by blasting would jeopardize the integrity of the mineral hot springs source. Foundation chairman, Floyd Jensen, also

expressed concern about impacts on the spring source. However, no technical data was introduced either pro or con on this issue. HPM did state that the ditch excavation would be done without blasting.

The conclusion in the environmental assessment report integral to the licensing process indicated no significant impact affecting the quality of the human environment. The summary of unavoidable adverse impacts contained the following statement:

> "Construction of the project would cause minor, short-term adverse impacts to soils, turbidity, wildlife, noise, and air quality within the project area. Operation of the project would cause minor, long-term impacts to streamflow, resident fish, and visual resources."

The environmental assessment and license incorporates recommendations of federal and state fish and wildlife agencies. See reference to IDFG comments in section VIII above.

I find that the project would not have significant long-term adverse environmental impacts.

XI

Economic Impact - HPM testified that the project would provide 45 jobs over a 10-month period with 10 to 15 individuals working directly on the project. Upon completion, the project operation will provide employment for one permanent part-time

employee. The assessed valuation of the project for Bannock County is estimated at $800,000. By comparison, the campground lessee's improvements are assessed at $133,000.

An easement would provide a one-time payment based on land value for foundation lands affected by the project plus an annual royalty based on gross receipts. HPM offered the foundation 5% of gross receipts ($220,000) or $11,050 annually. This figure compares closely to the board's interim hydroelectric easement policy of 2 mils x average annual net generation in kilowatt hours.

The FERC environmental assessment included an economic analysis section that concluded the project is economically feasible. Negotiation of a power purchase contract between HPM and UP&L would provide a basis for a more definitive analysis.

The foundation criticized the use of foreign equipment in the power plant. (A Chinese turbine is specified in the plans.) Mr. Sorensen testified that there are no domestic manufacturers of standard small turbines since Allis Chalmers was purchased by the Germans. The turbine currently being installed by the City of Soda Springs in their facility was manufactured by the Chinese. Mr. Nestor stated that with the exception of the turbines, he would purchase domestic equipment.

It was learned that the diversion structure is located on private land owned by Cal Roslind, thus the project is not located in its entirety on foundation land. This does not affect the overall economic feasibility of the project, but it could diminish the amount of annual royalties to be paid to the foundation.

I find that there is economic justification for the project.

XII

Public Interest - The foundation asserted that the project is unnecessary as the power is not needed. This was the thrust of the newspaper article (Exhibit P-3) citing Northwest Power Council's estimates of power surplus. The gist of that article is that the Pacific Northwest's power surplus is shrinking - "The Northwest Power Planning Council estimates the current surplus averages 1400 megawatts of firm power supply, down from 2500 megawatts estimated in its 1986 regional power plan." The article further states: "Even with the energy surplus dropping, however, the need for power plants, either coal or nuclear, isn't seen until the year 2,000 or after, under the power council's regional energy plan." The impact of minor projects, such as HPM's proposal was not discussed in the article.

The FERC licensing documents address this protest argument

by discussing the need for power in the environmental assessment:

> "The power from the project would be useful in meeting a small portion of the need for power projected by the Northwest Power Planning Council (NPPC) for the northwest region of the Western Systems Coordinating Council (WSCC). From the time the project goes on-line (becomes commercially operational), it will be available to displace fossil-fueled, electric power generation in the NPPC region, thus conserving nonrenewable fossil fuels and reducing the emission of noxious byproducts caused by the combustion of fossil fuels."

I find that the need for power is consistent with national, regional and state power plans and policies - thus in the public interest.

XIII

Bonding and Liability Insurance - HPM witness, DeRay Perry, discussed the availability and amount of coverage of bonding and liability insurance for the project. General public liability insurance providing coverage for property damage and personal injury would be provided. HPM is also agreeable to posting a bond in the amount of $35,000 to $40,000 guaranteeing removal of facilities and rehabilitation of the site in case of project failure and default. The amount of bond can include an escalation clause to hedge against inflation. Moreover, there could be professional liability insurance (errors and omissions) provided to guarantee adequacy of of engineering and design, and project performance. Mr. Sorensen testified that the Idaho Public Utilities Commission has stringent bonding requirements to

guarantee delivery of power during the contract period.

Foundation member, David Anderson, stated that the proposed use is foreign to them and there are too many unknowns. Campground lessee, Mike Norkevich, expressed concern about increased insurance costs because of the increased risk exposure of his customers.

I find that the question of bonding and liability insurance need not be a factor in this matter. Rather, it is a reasonable requirement that HPM furnish bonding, liability insurance coverage and otherwise protect the State of Idaho, foundation or its assigns from liability, property damage or personal injury claims arising from project operations. The actual amounts and risks to be insured should be negotiated between the parties and incorporated as conditions for any easement as may be authorized by the board.

XIV

Impact On Campground Lease - Mr. and Mrs. Norkevich have a 50-year lease (dated March 11, 1971) from the foundation for operation of Cottonwood Campground. One of the recitals from the lease agreement is:

> "It would be for the public use and benefit to enter into the within lease agreement for the below described lands to provide for camping and overnight accommodations which will enable the general public to

better use the mineral waters, facilities, lands and buildings of the State of Idaho under control of the Lava Hot Springs Foundation."

The campground is franchised by Campground of America (KOA). The lease agreement is silent on the lessor reserving the right to authorize other parties to make other uses of the leased premises not in conflict with lessee's interests.

According to Mrs. Keller, this lease generates $8,000 to $12,000 annually (8% of gross receipts) to the foundation depending upon the amount of gross campground revenues. Mr. Norkevich said he now grosses about $100,000 per year; his goal is to increase the gross by 40 to 50 percent. He plans to expand into the upper area of about two acres currently occupied by the water slide. The assessed value of lessee improvements is $133,000. Lessee stated that he purchased the water slide from the previous lessee for $1.00. The water slide has been shut down for past two years because of high cost of operations and high cost of liability insurance. His operation is subject to a five percent city option tax. Lessee's main concern is about potential long-term adverse impact on campground business. The season of use varies, but generally runs from May 1 to late October. Mr. Norkevich testified that his long-range plans do not involve any permanent buildings - structures will be limited to portable or prefabricated A-frame type buildings. Three campground spaces alleged to be affected are actually three tent

sites near the falls. This impact was not supported by testimony.

HPM stated that construction activities would impact the campground area for a period of 30 days. The construction should be accomplished either before or after the season of campground use - not during.

I find that the project would have only minor impact on the campground operation if construction is performed before or after the campground season. Moreover, the project must be conditioned upon restoring the campground to its present condition including re-connecting or re-locating any utility and service lines impacted by installation of the buried penstock. HPM should provide a good and sufficient bond for this purpose.

XV

Consistency With Purposes Of The Hot Springs Grant - The subject lands (147.30 acres) were granted to the State of Idaho by the federal government under authority of a congressional act approved June 13, 1902 with the only restriction being that the lands....."be held by said State for public use under such regulation as said State may prescribe." The Idaho Legislature in 1919 created the Lava Hot Springs Foundation to manage and control the lava hot springs grant. Thus, the foundation has had

about 68 years of experience administering those lands for foundation purposes.

Dr. Seppi, former mayor of Lava Hot Springs for about 15 years and a 63-year resident of Lava Hot Springs, testified that "the foundation is Lava Hot Springs." He further testified that the city had proposed a hydroelectric project in the 1930's but it was opposed by the foundation at that time and subsequently dropped.

Mrs. Keller stated that the foundation generates an income of $475,000 to $525,000 annually from various business activities associated with the properties. One-third of this income is from leases. In addition to the campground lease, foundation developments include a set of condominiums, swimming pool complex, community building, motel unit, service station and hot pools. The foundation budget is comprised entirely of dedicated funds - no general funds. The foundation returns about $22,000 to the local community through collection of the voluntary options tax.

Foundation member, David Anderson, expressed concern about use of the easement area into the future. "The minor long-term intrusion to visual resources and minor long-term impacts on recreation" of the FERC analysis is, in the foundation's view, major. The foundation resents Washington's (FERC's) intrusion

into local affairs. Mr. Anderson emphasized that the business decision of the foundation's denial is a good one.

I find that HPM's project could be construed either way with respect to the public use restriction of the grant. If the foundation were favorable to the application, a case for public use could be made by virtue of: 1) the power generated for public consumption and 2) the income paid to the foundation for subsequent investment or expenditure to further public service goals of the foundation. Conversely, the foundation's opposition, based on their perception of long-term adverse impacts to aesthetics and recreation, could be supported because of the grant language. The foundation, through years of experience in managing the purposes of the lava hot springs grant, has an intimacy of knowledge that should not be treated lightly. In their view, the addition of $10,000 to $12,000 annually to their income stream is not worth the risk and long-term impacts associated with the proposed project. It has been

the policy of the foundation to develop the lands for recreational and therapeutic use.

Dated this 4th day of February, 1988.

Fred A. Kisabeth

FRED A. KISABETH
Hearing Officer

#5
23 Feb 1988 EMC

STATE OF IDAHO EASEMENT

No. 5253

THIS INDENTURE, made this 24th day of November, 1987, by and between the STATE OF IDAHO, acting by and through the State Board of Land Commissioners, hereinafter the Grantor, and FORD HYDRO LIMITED PARTNERSHIP, P.O. Box 1940, Orofino, Idaho 83544, hereinafter the Grantee.

In consideration of the mutual covenants and agreements of the parties hereto, the Grantor hereby grants to the Grantee an easement upon, over and across the lands hereinafter described and for the purposes and in accord with the provisions hereinafter set forth.

I. DURATION: This easement shall be effective upon execution and shall continue in perpetuity, subject only to the terms and provisions of this easement, and the requirements of Grantee's license with the Federal Energy Regulatory Commission (FERC) as granted or later amended.

II. PROPERTY DESCRIPTION: The Grantor grants this easement upon, over and across the following described lands, situated in the COUNTY OF CLEARWATER (all in Township 35 North, Range 4 East, B.M.):

Existing Road: N2SE, SESE Section 9

New Road Construction: W2NE, N2SE, Section 9

New 110 KV Transmission Line: NWNE, S2NE, E2SE, Section 9, and NWSW, Section 10

Conduit or Flume: NWNE, S2NE, E2SE Section 9; and NWSW Section 10

Surge Tank: SWNE, Section 9

36" O.D. Steel Penstock: W2NE, Section 9

Powerhouse: NWNE, Section 9.

III. PURPOSE. This easement is granted for the following purpose: Constructing, operating, and maintaining a hydroelectric project, known as FORD POWER PROJECT (the Project). Construction and installation and/or alterations may commence only after Grantor has approved plans and specifications submitted by a licensed engineer. The approval shall not be unreasonably withheld.

IV. FEES. Grantee shall pay to the Grantor a one time fee of Four Thousand Eight Hundred Dollars ($4,800.00). In addition, once the project is producing hydroelectric power, the Grantee shall pay to the Grantor an annual fee for the easement based on the following formula:

> Annual fee = ANG (annual net generation) x 2 mills (2/10 of a cent) x 74% (percentage of the hydroelectric project on State land).

WHERE

"Annual net generation" means the energy output in kilowatt hours that the Grantee received payment for in the previous calendar year,

AND

"Hydroelectric project" means the dam, diversion, penstock, transmission lines, water storage area, powerhouse and other related facilities but does not include any access roads.

The fee formula shall remain in effect for the term of the power purchase contract that the Grantee has with a power utility or for the term of the FERC license, whichever expires first. At the expiration of said contract or license or if, under the power purchase contract, the amount paid to the Grantee is increased before the expiration of the contract, the Grantor reserves the right to alter the fee formula, with due and proper notice to the Grantee (would not apply to any built in increase for maintenance or cost of living adjustments). Any new fee formula shall be based on the then current Land Board policy governing hydroelectric projects.

V. REPORTING. The Grantee shall submit to the Grantor a verified copy of the annual net generation along with the annual fee, both of which shall be due and payable on or before February 1st of the following year. If the annual fee is not paid on or before February 1st, the Grantor shall give written notice to the Grantee that if the payment of the annual fee and interest thereon, accruing from February 1st at the prevailing interest rate of the Grantor's transactions, is not received within sixty (60) days of notice thereof, the Grantor may cancel the easement without further notice.

VI. ADDITIONAL RIGHTS RESERVED TO THE GRANTOR. It is understood and acknowledged that all rights are contingent upon their failure to conflict with any provision of the Federal Energy Regulatory Commission license for Project No. 7986 issued to Grantee on January 17, 1986, as such license may be amended (the FERC license); and that

all individuals or entities authorized by the Grantor to enter upon or cross this easement shall insure against damage to the easement or Grantees property in the sum of Five Hundred Thousand Dollars ($500,000.00). The Grantor expressly reserves the following rights:

A. Oil and gas, geothermal, and all other mineral rights.

B. To grant easements over or leases, permits, or licenses upon the easement area, provided that such easement, lease, license, or other use shall not unreasonably interfere with the Grantee's use of its easement.

C. The Grantor, its agents, contractors, lessees, permittees, and other authorized individuals and entities may enter upon and across the easement area to inspect the improvements, to harvest timber and for other lawful uses, so long as such use does not unreasonably interfere with Grantee's use of this easement. In addition to the insurance provided above all those authorized by the Grantor to use the easement area to harvest timber shall be bonded in an amount sufficient to insure that access roads shall be maintained in and restored to the condition they were in prior to commencement of timber operations.

D. To sell the lands subject to the terms of this easement.

VII. PERFORMANCE. Grantee shall complete construction and commence operations and the generation of electricity upon this easement area in accord with the terms herein within three (3) years after

the granting of this easement; otherwise, this easement shall automatically be extinguished on such date unless an extension is granted by the Grantor, or any Court action regarding the construction of the project has not been completed.

VIII. MAINTENANCE. Grantee shall bear the sole and complete responsibility for all improvements constructed upon the easement area, including without limitation, the pipelines, the transmission lines, the powerhouse and all other improvements.

IX. RESPONSIBILITY - HOLD HARMLESS CLAUSE. Both parties shall indemnify and hold harmless the other against any and all liability, claims and expenses of any kind, including reasonable attorney fees for any damage to any person or property caused by any negligent or other wrongful act of the other party, or its officers, employees, agents, or invitees in connection with the activities of the easement. The party seeking indemnification under this provision shall give the other party written notice of the claim for indemnification within ten (10) days after it receives notice or has knowledge of the claim and shall give the other party a reasonable opportunity to defend against the claim including cooperation in the defense of the claim. Grantee shall not be considered an agent of the Grantor in the construction, operation, maintenance or use of the easement area or the facilities, structures, or improvements situated thereon.

X. ASSIGNMENT. The Grantee shall not sublet all or any part of the easement or assign or transfer this easement or any interest therein, except as follows:

(a) Subject to the approval of the Grantor which shall not be unreasonably delayed or denied, the Grantee may assign this easement to an assignee who agrees to perform all of Grantee's obligations under this agreement.

(b) The Grantee may mortgage or otherwise create a security interest in the Grantee's interest in this easement to secure indebtedness incurred by the Grantee to finance the construction of the Project, or to secure the Grantees, obligations to a third party under a lease to the Grantee of the improvements constituting the Project, in the event that any or all of the improvements are constructed or acquired by the third party and leased by it to the Grantee.

XI. MORTGAGES. In the event that the Grantee shall mortgage or otherwise create a security interest in its interest in the easement as permitted in Article IX, the holder of the mortgage or security interest (the "Secured Party") shall notify the Grantor of the creation of such mortgage or security interest and the name and address for the service of notice upon the Secured Party. The Grantor hereby agrees for the benefit of the Secured Party that:

(a) Upon serving the Grantee with any notice of default, Grantor shall simultaneously serve a copy of such notice upon the Secured Party.

No notice to the Grantee shall be effective unless a copy is also served upon the Secured Party.

(b) In the event of any default by the Grantee hereunder or under the terms of the mortgage or other security interest, the Secured Party shall at its option have the right to perform any of the Grantee's covenants, to cure any defaults by the Grantee, and/or to exercise any election, option or right conferred upon the Grantee by the terms of this easement.

(c) The Grantor will not terminate this easement or the Grantee's right of possession for any default of the Grantee if within a period of thirty (30) days after the expiration of the period of time within which the Grantee might cure said default under the provisions of this easement, the Secured Party cures the default or causes the default to be cured, or if within a period of thirty (30) days after the expiration of the period of time within which the Grantee might commence to eliminate the cause of such default under the provisions of this easement, the Secured Party commences to eliminate the cause of such default and proceeds therewith diligently and with reasonable dispatch.

(d) The Grantor will not terminate this easement if the Secured Party takes possession of the easement upon default by the Grantee under the terms of the mortgage, provided that the fees due and payable under this easement shall continue to be paid and the other covenants, conditions and agreements of this easement on the Grantee's part to be kept and performed shall continue to be kept and performed. Secured Party shall have a period of thirty (30) days after taking possession within which to commence performance.

(e) No right, privilege or option available to the Grantee to cancel or terminate this easement shall have been exercised effectively unless joined in by the Secured Party.

(f) No modification or amendment to this easement shall be effective without the written consent of the Secured Party.

(g) Notwithstanding anything to the contrary upon the occurrence of an event of default, other than a default in the payment of money, the Grantor shall take no action to effect a termination of this easement without first giving to the Secured Party a reasonable time within which either (i) to obtain possession of the easement (including possession by a receiver) or (ii) to institute, prosecute and complete foreclosure proceedings or otherwise acquire the Grantee's interest under this easement with diligence. The Secured Party, upon obtaining possession or acquiring the Grantee's interest under this easement, shall be required promptly to cure all defaults then reasonably susceptible of being cured by the Secured Party.

(h) In the event of the termination of this easement as a result of the bankruptcy or insolvency of the Grantee, the Grantor shall serve upon the Secured party written notice that the easement has been terminated. The notice shall include a statement of any and all sums which would be due under this easement but for such termination and of all other defaults, if any, under this easement then known to the Grantor. If within thirty (30) days after the Grantor's notice, the Secured Party shall request a new easement, the Grantor shall enter into a new easement with the Secured Party, or its designee, in accordance with and upon the following terms and conditions: (1) the new easement shall be at the reasonable cost of the Grantee, (2) the new easement shall be effective as of the date of termination of this easement, (3) the new easement shall be for the same term of this easement and at its same rent, agreements, terms, covenants, and conditions, (4) the new easement shall require the Grantee to perform any unfulfilled obligation of the Grantee under this easement which is reasonably susceptible of being performed by such Grantee. Upon the execution of such new easement, the Grantee named therein shall pay any and all sums which would at the time of its execution be due under this easement but for such termination and shall pay all expenses, including reasonable counsel fees, court costs and disbursements incurred by the Grantor in connection with such default and termination, the recovery of possession of the easement, and the preparation, execution and delivery of the new easement.

XII. BONDS. Grantee shall secure and maintain during the entire term of this easement, a performance bond or an irrevocable letter of credit in the amount of Two Thousand Dollars ($2,000.00) per acre to guarantee compliance with the terms of this easement including without limitation construction, safety, performance, maintenance, reclamation and, if required by the Grantor, the prompt removal of all equipment and improvements from the easement area, upon Grantee's default or extinguishment of the easement for any reason.

XIII. INSURANCE. Grantee shall secure and maintain during the terms of this easement, public liability, property damage, and products liability insurance at least in the sum of Five Hundred Thousand Dollars ($500,000.00) for injury or death for each occurrence; and the aggregate sum of One Million Dollars ($1,000,000.00) for injury or death; and in the sum of Five Hundred Thousand Dollars ($500,000.00) for damages to property and products damage caused by any occupancy, use, operations or any other activity upon the easement area carried on by
the Grantee, its assigns, its agents, operators or contractors. The Grantor shall be a named insured in all instances. A signed, completed certificate of insurance shall be submitted to the Director of the Department of Lands prior to execution of this easement.

XIV. WASTE. Grantee shall not allow waste to be committed upon the easement area. Grantee shall at all times keep the premises free from abandoned machinery, motor vehicles, refuse and other unsightly materials. Grantee shall gate the access road that follows the

pipeline route at the point where it enters Grantor's land.

XV. RECLAMATION. Upon relinquishment, termination or extinguishment for any reason, Grantee shall reclaim all lands disturbed by its construction by reseeding and revegetating with seed to the extent necessary to minimize erosion. The amount and species of seed shall be determined by the Grantor. The seedbed area suitable for disking shall be disked to a depth of 1/2" to 1" before seeding.

In the event that Grantee fails to commence and continue reclamation within thirty (30) days after relinquishment, termination or extinguishment, the Grantor may declare the performance bond forfeited and use the bond monies to reclaim the land, and may exercise all other remedies at law and in this easement. The Grantor may extend the thirty (30) day period to allow for optimum weather and planting conditions.

XVI. REVERSION FOR NON-USE. In the event that the easement is not used for the purpose for which it was granted, for any five (5) year period, the easement is presumed abandoned and shall automatically terminate. The Grantor shall notify the Grantee and the Secured Party in writing of the termination. The Grantee and the Secured Party shall have thirty (30) calendar days from the date of notification to reply in writing to the Grantor to show cause why the easement should be reinstated. Within sixty (60) calendar days of receipt of the statement to show cause, the Grantor shall notify the

Grantee and the Secured Party in writing as to the Grantor's decision concerning reinstatement. The Grantee or the Secured Party shall have thirty (30) calendar days of receipt of the Grantor's decision to appeal an adverse decision to the State Board of Land Commissioners.

XVII. RELINQUISHMENT. The Grantee may relinquish this easement by filing a written relinquishment with the Grantor. Thirty (30) days thereafter, the Grantee shall be relieved of liability under this easement except for the continued obligation to make payments of all accrued fees, timely removal of equipment and improvements and/or the release of the performance bond for the removal of equipment and improvements if required by the Grantor, the reclamation of the premises, and compliance with all other duties and payments of all liabilities required by this easement or by law or regulation, which accrued prior to the filing of the relinquishment.

XVIII. COVENANT. It is mutually understood and agreed by the parties that all of the terms, covenants, conditions, and obligations in this easement contained are of the essence and shall be binding upon the heirs, executors and assigns of this easement.

XIX. COMPLIANCE WITH APPLICABLE LAWS. All applicable laws and regulations of the United States and the State of Idaho and its political subdivisions are incorporated herein by reference, except as lawfully varied by the contractual terms of this easement. Grantee shall comply with all such applicable laws and regulations.

XX. TERMINATION. Except as provided in paragraphs IV and VI above, the Grantor may terminate this easement for any material breach of its terms ninety (90) days after written notice of default has been given to the Grantee and Secured Party, unless the breach has been cured to the Grantor's satisfaction before the ninety (90) day period has expired.

In the event the Grantor declares a termination of the easement, thereafter the easement shall be completely and finally extinguished and all right and title thereto shall automatically revert to the Grantor or to the record owner of the Grantor's interest in the lands subject to this easement; provided that the Grantee shall remain bound to comply with all duties and liabilities required by this easement or by law, which accrued prior to the date of extinguishment; the Grantee shall quietly and peaceably surrender possession of the easement to the Grantor; and the Grantor may pursue all other remedies at law and in this easement.

XXI. FORCE MAJEURE. In the event that any performance required of either party by this easement is delayed by any reason beyond its control, including but not limited to fire, flood, storms, strikes, labor disputes, riots, insurrection, inability to procure materials or the act or omission of the other party, the affected party shall notify the other party of the delay and the reasons for it. The time for which the affected performance is required shall be excused and/or

extended for the amount of time the performance is delayed. Nothing in this paragraph shall excuse the Grantee from making timely payment of the fees due under this easement.

XXII. NOTICE. All notices, requests, demands and other communications hereunder shall be in writing and shall be deemed to have been duly given when delivered in hand to such party or mailed by certified or registered mail, postage prepaid, return receipt requested, addressed:

If to the Grantee: Ford Hydro Limited Partnership
P.O. Box 1940
Orofino, ID 83544

If to the Grantor: Director
Idaho Dept. of Lands
Statehouse
Boise, ID 83720

or in each case to such other address as may be specified in a written notice delivered in compliance with the foregoing requirements.

XXIII. FERC REGULATION. Both parties recognize that the Project and therefore this easement is subject to the regulatory jurisdiction of FERC. Any performance required under this easement is expressly conditioned on it being in compliance with FERC rules, regulations, or orders. If any performance under this easement requires FERC approval, that performance is conditioned upon receipt of that approval. Both parties shall take all reasonable and appropriate steps to insure that the performance required under this contract are within FERC rules, regulations and orders and that applications for required approvals are filed in a timely fashion.

Easement No. 5253

STATE BOARD OF LAND COMMISSIONERS

Countersigned:

Governor of the State of Idaho
and President of the State Board
of Land Commissioners

Secretary of State

Director, Department of Lands

DFM

* * * * * *

STATE OF IDAHO)
) ss.
COUNTY OF ADA)

On this 24th day of November, 1987, before me, a Notary Public in and for said State, personally appeared CECIL D. ANDRUS, known to me to be the Governor of the State of Idaho and President of the State Board of Land Commissioners; PETE T. CENARRUSA, known to me to be the Secretary of State of the State of Idaho; and STANLEY F. HAMILTON, known to me to be the Director of the Department of Lands of the State of Idaho, that executed the said instrument and acknowledged to me that such State of Idaho and State Board of Land Commissioners executed same.

IN WITNESS WHEREOF, I have hereunto set my hand and seal on the day and year last written above.

JOHN B. BROGAN, Notary Public
residing at Idaho City, Idaho

My Bond expires August 25, 1992

Easement No. 5253

FORD HYDRO LIMITED PARTNERSHIP

By: Archie B. Ford

STATE OF IDAHO)
) ss.
County of)

On this 8th day of June, 1987, before me, the undersigned, a Notary Public in and for the State of Idaho personally appeared Archie B. Ford, known to me to be the General Partner of the said FORD HYDRO LIMITED PARTNERSHIP whose name is subscribed to the within and foregoing instrument, and acknowledged to me that such Partnership executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written.

Carrie Bird

Notary Public in and for the State of Idaho, residing at Orofino

My Bond expires 8-28-87

A

23 Feb 1988 EMC

August 5, 1985

Mr. Robert Bird
Commercial Engery Management
P.O. Box 62
Rigby, ID 83442

Dear Mr. Bird:

After serious consideration of the impact of your proposed project upon the land of the Lava Hot Springs Foundation it is the decision of the Board not to approve a project across State lands.

Very truly yours,

KAREN KELLER
Executive Director

DAVID ANDERSON
Board Member

FLOYD JENSEN
Board Member

JACK TERRELL
Board Member

ls

AL JOHNSON
DISTRICT 27
BANNOCK & POWER COUNTIES

HOME ADDRESS
12350 N. PHILBIN ROAD
POCATELLO, IDAHO 83202
PHONE: (208) 237-2828

COMMITTEES
REVENUE & TAXATION
RESOURCES & CONSERVATION
ENVIRONMENTAL AFFAIRS

House of Representatives
State of Idaho

February 15, 1988

B
23 Feb 1988 EMC

The Hon. Cecil D. Andrus
Governor, State of Idaho
Office of the Governor
Statehouse Mail

Dear Governor Andrus:

I am very disappointed, and disturbed, by a recent decision from the Land Board. This decision will allow a small hydroelectric project to cross lands which are under the jurisdiction of the Lava Foundation.

It would appear the Land Board failed to take into consideration several major items before making its decision. First, there is unanimous opposition on the part of the Lava Foundation Board to this proposal. Neither does it appear the Land Board sought local input before making its decision. If it had done so, it would have found overwhelming opposition to this proposal. Further, no thought must have been given to the fact that we now have a surplus of electricity, which will probably continue for quite some time.

I realize the State Land Board has an obligation to supervise state lands in such a way that provides the greatest possible income for the state. However, I believe there are times when preservation of our state's natural beauty and resources should take precedence over the almighty dollar.

Governor, I am asking you to do everything you can to convince the other members of the Land Board to reconsider their position and, hopefully, overturn their decision.

Sincerely,

Al Johnson
District 27

cc: Members of the State Land Board
Mr. Archie Service
Karen Keller

AJ/bb

BANNOCK & POWER COUNTIES

HOME ADDRESS
126 S. 15TH
POCATELLO, IDAHO 83201
RESIDENCE: (208) 232-4951

LOCAL GOVERNMENT & TAXATION

COMMERCE & LABOR

HEALTH & WELFARE

Idaho State Senate

CAPITOL BUILDING
BOISE

January 15, 1988

Mr. Fred Kisabeth, Hearing Officer
Department of Lands
State Capitol Building
Boise, ID 83720

Re: Lava Hot Springs Foundation - Hydro Project

Dear Sir:

We have been informed that a public hearing will be conducted in Pocatello concerning an application by Hydro Power Management, Inc. for an easement on property owned by the State of Idaho.

We have attended two meetings at which time legal council and members of that corporation presented and explained their proposal. We do feel properly informed on the matter and conclude that we must support the Lava Hot Springs Foundation decision not to allow the installation of a Hydro plant on the Foundation property.

Some reasons for this decision include:

1. There is no need for the electric power to be produced by this installation. Utah Power Company officials definitely testified to this.

2. Officials of Hydro Power Management, Inc. testified that their main interest in their proposal was to make money.

3. The increased cost to the power company for the power to be produced by this installation (i.e. avoided cost) will be indirectly diverted to the rate payer.

4. The purpose for the use of this land is questionable and there may be a conflict for anything other than its present use.

5. A large majority of the residents of the Lava Hot Springs community are opposed to the proposal.

If you have any questions or comments, please call.

Sincerely,

Ralph E. Lacy
Senator, District 34

Bert W. Marley
Senator, District 27

C. E. "Chick" Bilyeu
Senator, District 27

cc: A. Service, Attorney at Law

WAYNE HALL
DISTRICT 27
BANNOCK COUNTY
Power County
HOME ADDRESS
10256 SOUTH HALL ROAD
McCAMMON, IDAHO 83250
PHONE: (208) 254-3431

COMMITTEES
LOCAL GOVERNMENT
RESOURCES & CONSERVATION

House of Representatives
State of Idaho

January 14, 1988

Fred Kisabeth, Hearing Officer
Department of Lands
State Capitol Building
Boise, Idaho 83720

Re: Lava Hot Springs Foundation
Hydro Project

Dear Mr. Kisabeth:

As I will be unable to attend the hearing in Pocatello on January 21, 1988, may I submit my objections in writing to the proposed Hydropower project across Lava Hot Springs Foundation property.

We met with the Foundation Board and their director in December of 1987 and I certainly support their position in the matter of not allowing this project on Foundation property.

I also feel and agree that they have good, solid and documented reasons for opposing this project.

Sincerely,

Wayne Hall

Wayne Hall,
Representative

WH:mhy

cc: Archie Service
Karen Keller

CITY OF LAVA HOT SPRINGS
103 West Elm – P. O. Box 187
Lava Hot Springs, Idaho 83246

January 15, 1988

TO THE STATE LAND BOARD,

Sirs:

The Lava City Council discussed the Hydro electric generation proposal of Hydro Power Management at the January 15, 1988 meeting. It was voted unanimously by the council that such a project was detrimental to to the best interests of the City of Lava and oppose its construction unequivocally.

Among the many reasons for this rejection are: It would violate the Flood Plane Ordinance; It would despoil the scenic and recreational environment so vital to our economy; It would be a potential hazard; It would not add to our economy to any measurable extent; and we as a group resent the high handed manner of the company in attempting to force this project upon us.

Yours truly,

Newt Lowe

Newt Lowe
Mayor

AL JOHNSON
DISTRICT 27
BANNOCK & POWER COUNTIES

HOME ADDRESS
12350 N. PHILBIN ROAD
POCATELLO, IDAHO 83202
PHONE: (208) 237-2828

COMMITTEES
REVENUE & TAXATION
RESOURCES & CONSERVATION
ENVIRONMENTAL AFFAIRS

House of Representatives
State of Idaho

January 14, 1988

Fred Kisabeth, Hearing Officer
Department of Lands
State Capital Building
Boise, ID 83720

Dear Mr. Kisabeth:

Recently I met with the Lava Hot Springs Foundation about the request of Hydropower Management, Inc. to bury a penstock across from the Foundation property.

In my opinion it is totally irresponsible to disrupt the ecology of the Portneuf River in that area and the landscape and present site of the Foundation. Further, in lieu of the present available over-production of power in the State of Idaho, it makes no sense to disrupt this site to produce the few kilowatts of electrricity that is being planned.

I am not a lawyer, but from the way I interpret the charge of the Lava Hot Springs Foundation, this property is under authority of the Board to supervise and control. If this is the case, I think their decision to not allow a hydo-power project that would involve using Foundation property for easement or construction should be respected and considered.

I hope you as the hearing officer and the Land Board in particular will concur with the decision of the Lava Hot Springs Foundation Board of Directors.

Thank you for your attention to this matter.

Sincerely,

AL JOHNSON
Representative, Dist. 27

cc: Governor Andrus
Karen Keller
Archie Service

js

January 16, 1988

Dear State Land Board Members:

I would like to state my opposition to the proposed dam on the Portneuf River near Lava Hot Springs. The natural and unhindered beauty of this river, coursing through this scenic and charming village, was a major factor in my decision to purchase a home here.

A coalition of volunteers has, over the past several years, expended a considerable amount of money and effort in the attempt to restore its banks and the fish population to its past bountiful condition. In the face of these massive efforts by a highly concerned citizenry, the construction of such a dam would be considered as an insult to the people, an assault upon the environment, and possibly felonious in its consequences.

I strongly urge that you deny this and all future proposals for such construction on the Portneuf River.

Thank you for your consideration.

Sincerely,

Clifford Bryan

Clifford Bryan
123 W. Booth
Box 142
Lava Hot Springs, ID

January 19, 1988

To The State Land Board,

I am a resident and business person of Lava Hot Springs, Idaho, and would like to voice my opinion concerning the construction of a Hydro Power Plant in Lava, on the Portneuf River.

Lava is a quaint and scenic town which attracts people, as residents and visitors, because it has abundant natural resources and untainted beauty. The Portneuf River, with its display of waterfalls, runs through the middle of town and is visible for all to enjoy. A Hydro Power Plant installed on the river would be noisey, lower the water level in a portion of the river, possibly alter the waterfalls, as well as being a concrete eyesore. It is time for mankind to preserve nature rather than deface it.

Idaho is reknowned for its abundance of wilderness areas. Many tourists visit our State to enjoy its natural beauty. Lava is surrounded by forest land and State Parks. The economic base of Lava is greatly dependent on the tourist influx. We strive to provide an atmosphere conducive to those seeking pleasure in recreation and scenery associated with wilderness and nature. The imposition of a Hydro Power Plant on the Portneuf River, in Lava, would be contrary to the aesthetic theme of our town. It is my opinion that the Hydro Power Plant could jeopardize the already tenuous economy of our business community.

I offer this letter as written testimony of my opposition to the installation of a Hydro Power Plant in Lava, on the Portneuf River.

Sincerely,

Cathy L. Sher

Cathy L. Sher
Box 403,
Lava Hot Springs,
Idaho, 83246

FEB 12 REC'D

MICHAEL J. NORKEVICH
JOELLEN NORKEVICH
COTTONWOOD FAMILY CAMPGROUND
P.O. BOX 307
LAVA HOT SPRINGS, IDAHO 83246
FEBRUARY 11, 1987

MS. KAREN KELLER; DIRECTOR
LAVA HOT SPRINGS FOUNDATION
405 EAST MAIN STREET
LAVA HOT SPRINGS, IDAHO 83246

RE: PORTNEUF RIVER HYDROELECTRIC PROJECT

DEAR MS. KELLER:

WE AS CURRENT LESSEES OF THAT FOUNDATION LAND COMMONLY KNOWN AS COTTONWOOD FAMILY CAMPGROUND LOCATED ON THE PORTEUF RIVER IN LAVA HOT SPRINGS, WISH TO EXPRESS OUR DEEP CONCERN REGARDING THE EXPECTED LOSS OF REVENUE, THE POSSIBLE CANCELATION OF OUR INSURANCE COVERAGE AND THE CONSIDERABLE INCONVENIENCE TO OUR CLIENTELE DUE TO NOISE, DUST, RIVER POLUTION AND POSSIBLE BLASTING THAT WOULD RESULT FROM THE PROPOSED HYDROELECTRIC PROJECT SLATED TO BE IN THE CONSTRUCTION PHASE DURING OUR UPCOMING SUMMER SEASON.

PEOPLE COME TO LAVA TO REST, RELAX AND REJUVENATE. JUST LAST WEEK WE FINALIZED PLANS ALONG WITH THE CHAMBER OF COMMERCE AND CITY COUNCIL TO HOST THE ANNUAL RALLY OF THE GOLD WING ROAD RUNNERS ASSOCIATION ON FATHER'S DAY WEEKEND HENCE. THIS YEAR WE ARE EXPECTING UPWARDS OF 400 RIDERS WHO HAVE INVITED THE CITIZENS OF LAVA TO VIEW THEIR PARADE OF LIGHTS, PARTICIPATE IN THEIR STREET DANCE WITH LIVE MUSIC AND ALSO IN THEIR CATERED BREAKFAST AND DINNER ON SATURDAY JUNE 18TH. IN ADDITION THEY ARE PLANNING A POKER WALK WHICH WILL MAKE THEM ASSESSABLE TO OUR MAIN STREET BUSINESS PEOPLE. THEY HAVE SPECIFICLY REQUESTED THE USE OF THE UPPER

SECTION OF THE CAMPGROUND BECAUSE OF THE AVAILABLE SOLITUDE WHICH IS OF COURSE THE SITE OF THE CONSTRUCTION PROJECT.

WE HOPE TO HEAR SOON FROM A SQUARE DANCE GROUP KNOWN AS THE ROLLIN' SQUARES. FOR THE LAST TWO YEARS THEY HAVE PATRONIZED ANOTHER LOCAL CAMPGROUND DUE TO PROBLEMS INCURRED HERE WITH THE PREVIOUS OWNERS. IF OUR EFFORTS ARE SUCCESSFUL THEY REPRESENT AN ADDITIONAL 40 CAMPING RIGS FOR THE SAME FATHER'S DAY WEEKEND WHICH WOULD VIRTUALLY FILL THE CAMPGROUND FOR THREE DAYS. OUR NEXT THREE DAY WEEKEND WILL BE JULY 4TH FOLLOWED BY THE JULY 24TH HOLIDAY AND MOST OF OUR REUNIONS ARE SCHEDULED FOR AUGUST. ALL 40 FULL HOOK-UP SITES IN THE LOWER CAMPING AREA HAVE BEEN RESERVED FOR LABOR DAY SINCE LAST SEPTEMBER. CONSEQUENTLY ALL WE HAVE LEFT TO OFFER THE PUBLIC FOR THE LAST BIG SUMMER WEEKEND IS THE UPPER CAMPGROUND FOR WHICH THE HYDRO PROJECT IS SLATED. IT SHOULD BE OBVIOUS THAT ANY DISRUPTION OF THIS CAMP GROUND WILL JEOPARDIZE OUR FINANCIAL POSITION THRU-OUT THE WINTER SEASON WHEN CAMPING REVENUES ARE VIRTUALLY NON-EXISTANT IN OUR AREA

WHEN WE MOVED HERE IN JULY OF 1987,

WE DID SO FEELING THE COTTONWOOD WAS AT ITS NADIR AND THAT WITH SOME GENUINE EFFORT WE COULD RESTORE MUCH OF THE CAMPGROUNDS PREVIOUS INTEGRITY. WE FEEL THAT THERE IS A POTENTIAL OF 40 TO 50 PER CENT MORE INCOME TO A LEVEL OF AT LEAST $140,000 DOLLARS PER YEAR IN TOTAL REVENUE.

OUR DECISION TO ASSUME THE LEASE MAY WELL HAVE BEEN DIFFERENT HAD WE BEEN INFORMED OF THE EXISTENCE OF THE FERC LICENSE WHICH WAS ISSUED ON DECEMBER 29, 1986. ON THE FIRST PAGE OF THE LICENSE THERE IS A MENTION OF THE FOUNDATION'S CONCERN ABOUT ADVERSE ENVIRONMENTAL IMPACTS BEING DISCUSSED IN THE ENVIRONMENTAL ASSESSMENT. INDEED THE FOUNDATION SHOULD BE CONCERNED ABOUT POSSIBLE DAMAGE TO THE AQUIFER THAT SUPPLYS THE HOT BATHS, WITHOUT WHICH WE WOULD SCARCELY NEED THE FOUNDATION NOR ENJOY THE LARGE INFLUX OF TOURISTS.

YET AFTER READING THE ASSESMENT THERE APPEARS TO BE MUCH CONCERN EXPRESSED BY THE IDAHO DEPARTMENT OF FISH AND GAME REGARDING VEGETATION AND WILDLIFE HABITAT BUT NO MENTION WHATSOEVER OF THE FOUNDATION. WHETHER THIS IS A DIRECT OMISSION OR A LACK OF CONCERN BY THE FOUNDATION IS INDEED PUZZLING. SECTION G-

LISTS 12 IMPACTS AT ISSUE AND THE APPLICANT HAS A RESPONSE TO ONLY 6 OF THEM.

TO DATE WE HAVE NO WRITTEN ASSURANCE THAT THE CAMPGROUND WILL BE RETURNED TO ITS FULLY USABLE STATUS. WE AS CARETAKERS OF FOUNDATION LAND ARE EXPRESSLY CONCERNED WITH THE RESTORATION OF THE CAMPGROUND AS SHOULD BE THE FOUNDATION AND THE LAND BOARD SINCE THIS MAY CONSTITUTE A VIOLATION OF THE LEASE CONSIDERING THE FACT THAT FOUNDATION LAND IS TO BE USED FOR RECREATIONAL AND THERAPUTIC PURPOSES. HYDRO-ELECTRIC GENERATORS ARE NEITHER RECREATIONAL NOR THERAPUTIC.

ADDITIONALLY, WE HAVE NO ASSURANCE THAT THE WATERSLIDE COMPLEX WILL EVER BE USEABLE OR INSURABLE AGAIN. THE PENSTOCK WILL PASS DIRECTLY UNDERNEATH THE CENTER OF THE STRUCTURE AND WE HAVE BEEN TOLD BY A REPRESENTATIVE OF THE DEVELOPER THAT THEY COULD SIMPLY KNOCK IT DOWN WITH A BULDOZER! THE PENSTOCK WILL RUN THROUGH THE FULL-HOOK-UP SECTION OF THE CAMPGROUND AND WILL BE SUPPORTING THE WEIGHT OF LARGE CAMPING VEHICLES. THE DEVELOPER CONCURRED AT THE RECENT HEARING OF THE LAND BOARD IN POCATELLO THAT PENSTOCKS HAVE BEEN KNOWN TO COLLAPSE. WE QUESTION

WHO WOULD BE LIABLE IF LOSSES WERE SUFFERED BY OUR CAMPERS TO THESE OFTEN VERY EXPENSIVE VEHICLES.

WE FEEL THERE ARE MANY MORE QUESTIONS LEFT UNANSWERED, NOTWITHSTANDING THE FINANCIAL IMPACT ON THE BUSINESSES WITHIN THE CITY OF LAVA HOT SPRINGS IF OUR CAMPGROUND WERE FORCED TO CLOSE DUE TO THE UNAVAILABILITY OF INSURANCE, POTENTIAL LAWSUITS OR THE UNAVAILABILITY OF THE 74 CAMPSITES IN THE CONSTRUCTION AREA DURING THE HEIGHT OF THE TOURIST SEASON. TO SAY THE LEAST THE FINANCIAL BURDEN PLACED ON US WITH RESPECT TO MEETING OUR OPERATING EXPENSES AND MORTGAGE OBLIGATIONS WOULD BE DEVASTATING LEAVING BANKRUPTCY AS A LAST OPTION.

TOURISM IS OUR LIFEBLOOD IN THIS AREA AND WE INDEED HAVE AN ABUNDANCE OF POWER PROJECTED TO LAST BEYOND THE YEAR 2000. WE COMMEND THE GOVERNOR AND MR. JOE WILLIAMS ON THEIR FORESIGHT. WE THANK THE LAVA FOUNDATION FOR THEIR HELP AND GRATEFULLY ACKNOWLEDGE THE SUPPORT FROM THE CITIZENS OF LAVA IN SIGNING OUR PETITIONS.

AS FOR JIM JONES, JERRY EVANS AND PETE CENARUSSA WHO MAY OR MAY NOT EVER COME TO LAVA, IF THIS IS THEIR IDEA OF HELPING A DEPRESSED AREA, IT IS OUR FERVANT HOPE THEY NEVER TRY TO HURT US.

Michael J. Norkevich

Jo Ellen Norkevich - Lessees

LAVA HOT SPRINGS CHAMBER OF COMMERCE
P.O. BOX 238
LAVA HOT SPRINGS, IDAHO, 83246

January 13, 1988

TO THE STATE LAND BOARD,

The Lava Hot Springs Chamber of Commerce discussed, during our January 12 meeting, the proposed installation of a Hydro Power Plant. This facility is to be located within or adjacent to Lava Hot Springs, Idaho, on State owned property, approximately twenty feet above the waterfalls on the Portneuf River, at the east end of town.

We, the Lava Hot Springs Chamber of Commerce, are unanimously opposed to the installation of such a Hydro Power Plant. We take pride in our scenic and tranquil village, the Portneuf River being the central focus of our natural resources. This river, with its abundant beautv, also acts as the core of recreational activity and is responsible for bringing many tourists to our town. We are concerned that the drone of mechanized noise pollution, along with other problems, caused by the Hydro Power Plant would threaten the charm and serenity of our village. This would create a negative impact on our community economically as well as aesthetically.

It is the Chamber's opinion that the detrimental effects of the proposed Hydro Power Plant would greatly outweigh any alleged economic benefits our community might receive. We, the Lava Hot Springs Chamber of Commerce, submit this letter as written testimony of our opposition to the installation of any Hydro Power Plant in or adjacent to our town.

Sincerely,
The Lava Hot Springs Chamber of Commerce

Janice R. Cisneros
Janice R. Cisneros, President

Christine Cunningham
Christine Cunningham, Vice President

We, the undersigned members of the community of Lava Hot Springs, join the Chamber of Commerce in opposition to the proposed installation of a Hydro Power Plant on the Portneuf River, in or adjacent to the city of Lava Hot Springs, Idaho.

NAME	ADDRESS	PHONE
Lyl Kreppen	Lava Hot Springs Id	
[illegible]	Lava	7765521
[illegible]	Lava	776-5333
Frank M. Cisneros	Lava Hot Springs	776-5853
Paul Nichell	210 West Main Lava	
Ruth M Ramsey	Lava Hot Springs Idaho	776 5504
Leonard C Hainline	#5 Portneuf Road Lava Hot Spring	776-5291
Linda R. Page	12717 Dempsey Cr. Rd. Lava Hot Spr	776 5624
Harry J Page	PO Box 417 Lava Hot Spring Id	
Elva Parris	P.O. Box 517 Lava, Idaho 83246	
Jim Voblit	P.O. Box 634 Lava Hot Spr	
Joyce Hainline	P.O Box 691 Lava Hot Sprs	776-5291
Phil Beeson	P.O. Box 703 Lava Hot Springs	-6-5481
Lee Ann Beeson	Box 703 Lava Idaho	776-5481
H. Shapiro	P.O. BOX 505 Lava Hot Sp.	254-3410

LAVA HOT SPRINGS CHAMBER OF COMMERCE
P.O. BOX 238
LAVA HOT SPRINGS, IDAHO, 83246

January 13, 1988

TO THE STATE LAND BOARD,

The Lava Hot Springs Chamber of Commerce discussed, during our January 12 meeting, the proposed installation of a Hydro Power Plant. This facility is to be located within or adjacent to Lava Hot Springs, Idaho, on State owned property, approximately twenty feet above the waterfalls on the Portneuf River, at the east end of town.

We, the Lava Hot Springs Chamber of Commerce, are unanimously opposed to the installation of such a Hydro Power Plant. We take pride in our scenic and tranquil village, the Portneuf River being the central focus of our natural resources. This river, with its abundant beauty, also acts as the core of recreational activity and is responsible for bringing many tourists to our town. We are concerned that the drone of mechanized noise pollution, along with other problems, caused by the Hydro Power Plant would threaten the charm and serenity of our village. This would create a negative impact on our community economically as well as aesthetically.

It is the Chamber's opinion that the detrimental effects of the proposed Hydro Power Plant would greatly outweigh any alleged economic benefits our community might receive. We, the Lava Hot Springs Chamber of Commerce, submit this letter as written testimony of our opposition to the installation of any Hydro Power Plant in or adjacent to our town.

Sincerely,
The Lava Hot Springs Chamber of Commerce
Janice R. Cisneros
Janice R. Cisneros, President
Christine Cunningham
Christine Cunningham, Vice President

We, the undersigned members of the community of Lava Hot Springs, join the Chamber of Commerce in opposition to the proposed installation of a Hydro Power Plant on the Portneuf River, in or adjacent to the city of Lava Hot Springs, Idaho.

NAME	ADDRESS	PHONE
[illegible]	PO Box 1588 Grace	435-3147
Jeff Leonard	1797 E 800 So Preston	852-1570
Ed Hamlin	P.O. Box 691 Lava Hot Springs	
Floyd E. Butterfield	P.O. Box 15 Lava Hot Springs	776-5842
Valoy S. Butterfield	P.O. Box 15 Lava Hot Spgs. Ida.	776-5842
Boyd Christensen	272 Lava Ht Spgs	
Lindsay Harris	104 Center St McCammon Ida.	254-3284
Jim Orgill	114 Center St Lava Hot Springs	
Chas [illegible]	Lava Box 332	
Max Miller	50 So. 200 West	Hyrum Utah
George F. Wilkinson	1191 Sumac	Logan, Utah
Mike Hall	P.O. Box 185 Lava Hot Spri	208-776-5512
[illegible]	Box 303 Lava Hot Springs, Ida.	83246

LAVA HOT SPRINGS CHAMBER OF COMMERCE
P.O. BOX 258
LAVA HOT SPRINGS, IDAHO 83246

January 13, 1988

STATE OF IDAHO WATER RESOURCES BOARD

TO WHOM IT MAY CONCERN:

The Lava Hot Springs Chamber of Commerce discussed during our January meeting the proposed installation of a Hydro Power Plant. This facility to be located in, or adjacent to Lava Hot Springs, Idaho on State property, twenty feet above the waterfalls of the Portneuf River at the east end of town.

We, the Lava Hot Springs Chamber of Commerce, are unanimously opposed to the installati of such a hydro plant in our town. We pride ourselves on being a scenic and tranquil village, with the Portneuf River as the central focus of our natural resources. This rive with its natural beauty, is also the core of recreational activities and responsible for drawing many tourists to our town. We are concerned that the drone of mechanized noise pollution created by the hydro plant would threaten the charm and tranquility which attrac tourists to our town. This would create a negative impact on our community aesthetically as well as economically.

It is the Chambers opinion that the detrimental effects of the proposed hydro power plant would greatly outweigh any alleged economical benefits to our community. We The Lava Hot Springs Chamber of Commerce, submit this letter as written testimony of our opposition to the installation of any Hydro Power Plant to be located in our town.

Sincerely,

The Lava Hot Springs Chamber of Commerce

Janice R. Cisneros

Janice R. Cisneros, President

Christine Cunningham

Christine Cunningham, Vice President

We the undersigned members of the community of Lava Hot Springs, join the Chamber of Commerce in opposition to the proposed Hydro Power Plant being installed on the Portneuf River in or adjacent to the community of Lava Hot Springs, Idaho.

NAME	ADDRESS	PHONE
Curtis A. Keller	17 N 3rd AVE West	776-5501
Kathie A. Keller	17th No 3rd Ave West Lava	776-5501

LAVA HOT SPRINGS CHAMBER OF COMMERCE
P.O. BOX 238
LAVA HOT SPRINGS, IDAHO, 83246

January 13, 1988

TO THE STATE LAND BOARD,

The Lava Hot Springs Chamber of Commerce discussed, during our January 12 meeting, the proposed installation of a Hydro Power Plant. This facility is to be located within or adjacent to Lava Hot Springs, Idaho, on State owned property, approximately twenty feet above the waterfalls on the Portneuf River, at the east end of town.

We, the Lava Hot Springs Chamber of Commerce, are unanimously opposed to the installation of such a Hydro Power Plant. We take pride in our scenic and tranquil village, the Portneuf River being the central focus of our natural resources. This river, with its abundant beauty, also acts as the core of recreational activity and is responsible for bringing many tourists to our town. We are concerned that the drone of mechanized noise pollution, along with other problems, caused by the Hydro Power Plant would threaten the charm and serenity of our village. This would create a negative impact on our community economically as well as aesthetically.

It is the Chamber's opinion that the detrimental effects of the proposed Hydro Power Plant would greatly outweigh any alleged economic benefits our community might receive. We, the Lava Hot Springs Chamber of Commerce, submit this letter as written testimony of our opposition to the installation of any Hydro Power Plant in or adjacent to our town.

Sincerely,
The Lava Hot Springs Chamber of Commerce

Janice R. Cisneros

Janice R. Cisneros, President

Christine Cunningham

Christine Cunningham, Vice President

We, the undersigned members of the community of Lava Hot Springs, join the Chamber of Commerce in opposition to the proposed installation of a Hydro Power Plant on the Portneuf River, in or adjacent to the city of Lava Hot Springs, Idaho.

NAME	ADDRESS	PHONE
Kim Warner	209 W. Elm	6-5335
Amelia Nelson	Box 131	6 5490
Ralph Rossiter	Box 607 - 518 W. 1st E	776-5448
Carol Brayer	Box 142 - Lava	6-5601
M. J. Sisters	Box 412 Lava	776-5218
Frank H. Sisters	Box 41 or Lava	776 5218

LAVA HOT SPRINGS CHAMBER OF COMMERCE
P.O. BOX 238
LAVA HOT SPRINGS, IDAHO, 83246

January 13, 1988

TO THE STATE LAND BOARD,

The Lava Hot Springs Chamber of Commerce discussed, during our January 12 meeting, the proposed installation of a Hydro Power Plant. This facility is to be located within or adjacent to Lava Hot Springs, Idaho, on State owned property, approximately twenty feet above the waterfalls on the Portneuf River, at the east end of town.

We, the Lava Hot Springs Chamber of Commerce, are unanimously opposed to the installation of such a Hydro Power Plant. We take pride in our scenic and tranquil village, the Portneuf River being the central focus of our natural resources. This river, with its abundant beautv, also acts as the core of recreational activity and is responsible for bringing many tourists to our town. We are concerned that the drone of mechanized noise pollution, along with other problems, caused by the Hydro Power Plant would threaten the charm and serenity of our village. This would create a negative impact on our community economically as well as aesthetically.

It is the Chamber's opinion that the detrimental effects of the proposed Hydro Power Plant would greatly outweigh any alleged economic benefits our community might receive. We, the Lava Hot Springs Chamber of Commerce, submit this letter as written testimony of our opposition to the installation of any Hydro Power Plant in or adjacent to our town.

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Christine Cunningham
Christine Cunningham, Vice President

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NAME	ADDRESS	PHONE
James Pellegrinetti	Box 696 Lava H. Springs	776-5539
Sandra Mangelson	Box 4 Lava H. Springs	776-5286
Miriam Mausseau	Box 7 Lava H. Springs	776-5632
Julie W. Clark	506 11th St. McCammon	254-3648
Julie Patterson	Box 181 Lava	776-5513
Janet Anderson	PO Box 176 Lava	776-5854
John Sandrus	Lava	776 5438
Virginia Settles	PO Box 504 Lava	776-5650
Marilyn Stanford	#14 Lava	776-5575
Lucy Otero	220 Elm st Lava Hot Springs	776-5527
Ernest Otero	220 Elm st Lava Hot Springs	776-5527
Jodi Sullivan	Box 275 McCammon Ida	254-3132

LAVA HOT SPRINGS CHAMBER OF COMMERCE
P.O. BOX 238
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January 13, 1988

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NAME	ADDRESS	PHONE
Leah Haworth	119 E. Main Lava	776-5659
Curtis Haworth	119 E Main Lava	776-5659
Glen Poole	12 N 3rd West Lava	776-5330
Aimee McBride	Box 291 Lava	776-5532
Dorothy Reese	Box 251 Lava	
Larry Allen	Lava Hot Springs	
Dorothy Fuller	Lava Hot Spr	
[illegible]	LAVA H.S. Id	776-5627
Cis Frandsen	Box 357 Lava	776-5325
Florence M Butt	Lava	
A. Hutton	Box 174 Lava	

LAVA HOT SPRINGS CHAMBER OF COMMERCE
P.O. BOX 238
LAVA HOT SPRINGS, IDAHO, 83246

January I3, I988

TO THE STATE LAND BOARD,

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Christine Cunningham, Vice President

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NAME	ADDRESS	PHONE
Matt Campbell	Lava Hot Springs ID.	776-5209
Bill Kreven	Lava Hot Springs Id	
Bob Fieber	Box 374 Lava Hot Spring	776-5508
Andrew Sorensen	BOX 277 LAVA	776-5602
Vernon Willson	LAVA HOT SPRINGS, ID	
Rod Willson	P.O. BX 544, LAVA HOT SPRINGS, IDAHO.	
Jeanne M. Beddoes	Box 45 Lava	
[illegible]	PO Bx 45 Lava	
David Simpson	Box 685 Lava	776-5414
[illegible]	Lava Hot Springs Property Owner 707 Birch Pocatello Idaho 83201	232 6575
Sandra L. Dexter	P.O. Box 402 Lava Hot Springs Id	776-5304 83246
Leo D. Lippe	P.O. Box 665 100 Fife St Lava Hot Springs Idaho	83246
Ruth Ann Olson	PO Box 644 Lava Hot Springs, Id 83246	

LAVA HOT SPRINGS CHAMBER OF COMMERCE
P.O. BOX 238
LAVA HOT SPRINGS, IDAHO, 83246

January 13, 1988

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Janice R. Cisneros, President

Christine Cunningham
Christine Cunningham, Vice President

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NAME	ADDRESS	PHONE
Marie DeLuca	206 E. Main	776 5439
Richard Marsceau	P.O. 7	776-5632
Julie Patterson	Box 181	776-5573
[illegible]	1929 East 1950 So. S.L.C. Ut.	
[illegible]	Box 191	
Carol L. Flynn	506 So. 7th	Pocatello Id 83201
Craig Perry	506 So. 7th	Poc. Id.
Molly Hatch	122 So. 5th E	648-7745 Banerofada

LAVA HOT SPRINGS CHAMBER OF COMMERCE
P.O. BOX 238
LAVA HOT SPRINGS, IDAHO, 83246

January 13, 1988

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Janice R. Cisneros, President

Christine Cunningham
Christine Cunningham, Vice President

We, the undersigned members of the community of Lava Hot Springs, join the Chamber of Commerce in opposition to the proposed installation of a Hydro Power Plant on the Portneuf River, in or adjacent to the city of Lava Hot Springs, Idaho.

NAME	ADDRESS		PHONE
Jeff Bower	HC 20 Box 2600	Soda Springs	547 2286
Brad Leavitt	213 E 200 S	Soda Springs	547-4022
Sherri Wigington	P.O. Box 363	Lava Hot Springs	
[illegible]	12102 Hwy 34	[illegible] Id	
Mark Gantenbein	PO Box 351	Lava	776 5643
Barbara Crelton	PO Box 115	Lava	776-5421
Lisa Joly	4E. main	Lava	776-5216
Dan Dimsch		Lava	776-5834
Scott Brown	Box 602	LAVA	776-5544

LAVA HOT SPRINGS CHAMBER OF COMMERCE
P.O. BOX 238
LAVA HOT SPRINGS, IDAHO 83246

January 13, 1988

STATE OF IDAHO WATER RESOURCES BOARD

TO WHOM IT MAY CONCERN:

The Lava Hot Springs Chamber of Commerce discussed during our January meeting the proposed installation of a Hydro Power Plant. This facility to be located in, or adjacent to Lava Hot Springs, Idaho on State property, twenty feet above the waterfalls of the Portneuf River at the east end of town.

We, the Lava Hot Springs Chamber of Commerce, are unanimously opposed to the installati of such a hydro plant in our town. We pride ourselves on being a scenic and tranquil village, with the Portneuf River as the central focus of our natural resources. This river with its natural beauty, is also the core of recreational activities and responsible for drawing many tourists to our town. We are concerned that the drone of mechanized noise pollution created by the hydro plant would threaten the charm and tranquility which attract tourists to our town. This would create a negative impact on our community aesthetically as well as economically.

It is the Chamber's opinion that the detrimental effects of the proposed hydro power plant would greatly outweigh any alleged economical benefits to our community. We, The Lava Hot Springs Chamber of Commerce, submit this letter as written testimony of our opposition to the installation of any Hydro Power Plant to be located in our town.

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Christine Cunningham

Christine Cunningham, Vice President

We the undersigned members of the community of Lava Hot Springs, join the Chamber of Commerce in opposition to the proposed Hydro Power Plant being installed on the Portneuf River in or adjacent to the community of Lava Hot Springs, Idaho.

NAME	ADDRESS	PHONE
Ruth E. Bergeson	15 W. Elm	7765455
Phyllis L. Christensen	3 Elm West	776-5302
Margary Bell	10½ W. Elm	776-5210
Rose Anderson	502 Spring	776-5890
Mary L. King	Spring Street	776-5242
Margaret Roberds	Rivers Edge Trailer Court	776-5545

LAVA HOT SPRINGS CHAMBER OF COMMERCE
P.O. BOX 238
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NAME	ADDRESS	PHONE
Paul A Boiey	PO Box 205 Lava	776 5426
Fred P. Hay	Spring St, PO Box 157 Lava	776-5242
Ed Anderson	Box 26 Lava	776-5890
Robert Roath	box 32 Lava	776 5455
Thayne Hacking	Box 634 - LAVA	776-5530

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P.O. BOX 238
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NAME	ADDRESS	PHONE
Jim D. Buxton	P.O. Bx 485 Lava	776 5411
George Egley	P.O. Box 25 Lava	776 5456
R Ben Fisher	P.O. Box 321 Lava	776-5556
Russell V. Anderson	P.O. Box 366 Lava	776-5610
Dennis G Lanier	P.O Box 297 Lava	776-5523
Sheri Tillotson	P.O. Box 261 Lava	776-5267
Brent Cunningham	P.O. Box 305 LAVA	776-5589

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NAME	ADDRESS	PHONE
Ronald L. Smith	5 E. Main St. (Box 552)	776-5536
Buster H Smith	RR Box 92 Bancroft	648-7517

LAVA HOT SPRINGS CHAMBER OF COMMERCE
P.O. BOX 238
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January I3, I988

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NAME	ADDRESS	PHONE
Earl H. Smith	9589 E Maughn Rd	776-5348
Gerald Porter	S.N. Center	776-5509
Shane Rollinger	SN Center	776-5509
Paul Brennan PAC	Box 104 Lava	776 5682
Wendy Holeson	P.O. Box 635	776-5232

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P.O. BOX 238
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NAME	ADDRESS	PHONE
Richard L. Martin	212 W. Booth #6	776-5337
[illegible]	390 S Center	776-5332
[illegible]	P.O Box 636	776 5633
T.C. Poole	Box 85 Lava	776-5330
Deanna Koford	Bx 43 Lava	776 5895
[illegible]	8893 E. Maughan Rd	776-5428
Gary Koford	Bx 43 Lava	776-5895
[illegible]	Box 295 Lava	776-5670

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NAME	ADDRESS	PHONE
Bruce E. Hansen	P.O. Box 2 Lava	776-5867
Mark Campbell	Box 343 Lava Hot Springs	776-5364
Eleanor Campbell	Box 343 Lava Hot Springs	776-5364
C. J. Weeks	Bx 447 LAVA. Id	776-5294

BEFORE THE DEPARTMENT OF WATER RESOURCES

OF THE STATE OF IDAHO

IN THE MATTER OF PERMIT NO. 29-07699 IN THE NAME OF COMMERCIAL ENERGY MANAGEMENT, INC.

PRELIMINARY ORDER

On July 20, 1988, the Department of Water Resources (department) issued Permit No. 29-07699 (permit) with the following condition of approval:

> 6. Prior to diversion of any water, a measuring device and lockable controlling works of a type acceptable to the department shall be permanently installed and maintained as part of the diverting works. Also, a measuring device with a continuous strip chart recorder (or other recording device) as approved by the department shall be installed and maintained on the natural channel to measure the flow in the bypassed reach. Records from the bypass channel shall be sent to the department within thirty (30) days of collection.

The department has determined that a less stringent reporting requirement is appropriate.

ORDER

IT IS THEREFORE, HEREBY ORDERED that the above described condition be changed to read as follows:

> 6. Prior to diversion of any water, a measuring device and lockable controlling works of a type acceptable to the department shall be permanently installed and maintained as part of the diverting works. Also, a measuring device with a continuous strip chart recorder (or other recording device) as approved by the department shall be installed and maintained on the natural channel to measure the flow in the bypassed reach. Records of bypass flows shall be sent to the department upon specific request of the department but not more frequent than 30 days after collection.

Dated this 24th day of September, 1997.

L. Glen Saxton

L. GLEN SAXTON, Chief
Water Allocation Bureau

Form 217
11/91

RECEIVED
JUL 26 1993
Department of Water Resources

OFFICE USE ONLY
Amt. of Fee $ 600
Date 7-27-93
Receipt No. CO28229
Receipt by CA

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES

PROOF OF BENEFICIAL USE

The Idaho Department of Water Resources considers this form a statement that the permit holder(s) has/have completed all development that will occur under this permit and that water has been applied according to the provisions of the permit for the beneficial use(s) described below. This form must be accompanied by a license examination fee, when necessary, or a completed field examination report prepared by a certified water right examiner who has been appointed by the department.

1. Permit No. 29-7699 Telephone No. (208) 237-8184

2. Name(s) of Permit Holder(s): Commercial Energy Management, Inc.

3. Mailing Address: P.O. Box 4518, Pocatello, Idaho 83205-4518

4. Source of Water: Portneuf River

   If **GROUNDWATER**, Well Driller's Name: _____ Date Drilled: _____

   OPTIONAL:
   Pump horsepower: _____ Pressure (psi): _____ Dynamic pumping level (ft.): _____

5. Extent of Use (as authorized by the permit):

   Domestic _____ (No. of households) Stockwater _____ (No. and type of stock)

   Irrigation _____ (No. of acres) Other Hydroelectric Power Plant

6. Total rate and/or volume for which proof is submitted 210 cfs **OR** _____ acre/feet

7. Refer to the approval conditions on your permit and respond accordingly:
   Lockable * - Not required - HCJ *
   Measuring device: Required? ___ Yes __*__ No Installed? ___ Yes ___ No
   OR
   Flow Measurement Port: Required? X Yes ___ No Installed? X Yes ___ No

8. Fee Enclosed: $ 600.00 (See License Fee Schedule on back of Instruction Sheet)

9. Person to contact to accompany the Department representative during field examination of the water system.

   Maher F. Wissa (208) 237-8184
   Name Telephone No.

   P.O. Box 4518, Pocatello, ID 83205-4518
   Address

10. The above information is my true statement of the extent to which the above numbered permit has been developed and I relinquish any undeveloped portion of the permit to the state of Idaho.

7/23/1993 Maher F. Wissa, President
Date Signature (and title, if on behalf of a company or organization)

* Smartman Canal Control can be operated by computer for gate level. HCJ

Form 204
4/86

RECEIVED
JUN 21 1991
Department of Water Resources

STATE OF IDAHO

DEPARTMENT OF WATER RESOURCES

For Office Use Only
$15 FEE Receipted by JC
Date 6/21/91
Receipt # 020232

REQUEST FOR EXTENSION OF TIME

TO PROVIDE ADDITIONAL TIME IN WHICH TO SUBMIT PROOF OF BENEFICIAL USE FOR A WATER RIGHT PERMIT

The Idaho Department of Water Resources will consider this form as a request that the permit holder(s) be granted an additional period of time in which to complete development of a water right under the provisions of Section 42-204, Idaho Code.

Permit No. 29-07699

Name(s) of Permit Holder: Commercial Energy Management, Inc.

Post Office Address: 4518 Pocatello

Idaho 83205 Telephone No. (208) 237-8184

Date Proof is Due: August 01, 1991

Describe what work has been completed toward the development of this water right: 1) Completed the design of phases I and II, the last phase III is currently in design stage, 2) Obtained Governmental agencies's approvals on several permits, including Project Easement, Building construction permits for Phases I and II, and commencement of construction (see attached Status of Project Permits), and 3)placed an order for the design and supply of major equipment (turbine/generator), see attached FERC's letter recognizing the commencement of construction. Also, secured project Finance from local bank.

(This must be filled out! If no work has been completed, show "none".)

Costing $ 437,000.00

The permit holder(s) has been unable to complete the remainder of the work for the following reasons:

1) Lease condemnation proceedings (starting date: June 02, 1989, and ending date: June 12, 1991), under Civil Case No. 89-4072, see attached copy of Federal Court Stipulation and Order for final settlement and closing the case

Permit holder(s) request an extension to August 01, 1994.
(1 yr. minimum)

(Signature)*

*IF OTHER THAN PERMIT HOLDER, POWER OF ATTORNEY MUST BE SUPPLIED.

FEE: $15.00

ACTION OF THE DEPARTMENT OF WATER RESOURCES

IT IS HEREBY ORDERED that the above request for extension of time be APPROVED and the time within which to submit proof of beneficial use is extended to August 1, 1993.

Signed this 2nd day of July, 1991.

Chief, Water Allocation Bureau

BEFORE THE DIRECTOR OF THE DEPARTMENT

OF WATER RESOURCES OF THE

STATE OF IDAHO

IN THE MATTER OF APPLICATION FOR PERMIT NO. 29-7699 IN THE NAME OF HYDRO POWER MANAGEMENT, INC.	ORDER ADOPTING PROPOSED MEMORANDUM DECISION AND ORDER

The Director of the Department of Water Resources, R. Keith Higginson, on June 10, 1988 issued and served on the parties a Proposed Memorandum Decision and Order on Application for Permit No. 29-7699, pursuant to Section 67-5211, IDAHO CODE.

The parties were allowed fifteen days to file exceptions to the Proposed Decision and Order and exceptions were received from the applicant within the fifteen day period. Neither exceptions nor responses to the exceptions of the applicant were submitted by the protestant.

The applicant took exception to including Condition No. 6 and Condition No. 15 in the order. Condition No. 6 requires the applicant to install a recording device to measure the amount of water being bypassed and flowing in the natural stream. The applicant requests that a staff gauge be required since a staff gauge is required by the Idaho Department of Fish and Game. Condition No. 15 requires that the facility be constructed so that water can be released from the penstock near the powerhouse without passing through the generator.

The exception to Condition No. 6 is rejected since a more complete record of the bypass flows is needed than is possible to obtain from the occasional viewing of a staff gauge. The exception to Condition No. 15 is also rejected since the penstock outlet near the powerhouse is needed as well as the diversion weir structure that is a part of the present design.

IT IS HEREBY ORDERED that both exceptions of the applicant are rejected.

IT IS FURTHER HEREBY ORDERED that the Proposed Memorandum Decision and Order be adopted and issued as the Final Decision and Order and that the time within which to submit proof of construction of works and application of water to beneficial use shall be submitted on or before August 1, 1991.

Dated this 20th day of July, 1988.

R. KEITH HIGGINSON
Director

BEFORE THE DEPARTMENT OF WATER RESOURCES

OF THE STATE OF IDAHO

IN THE MATTER OF APPLICATION FOR PERMIT 29-7699	SOURCE: Portneuf River
	TRIBUTARY: Snake River
HYDRO POWER MANAGEMENT, INC. Applicant,	COUNTY: Bannock
LAVA HOT SPRINGS FOUNDATION Intervenor.	

PROPOSED MEMORANDUM DECISION AND ORDER
APPROVING APPLICATION FOR A PERMIT

BY HEARING OFFICER BOBBY D. FLEENOR

Marlon Bird having filed with the Department of Water Resources an Application for a Permit; intervention having been granted; the application having been conveyed to Hydro Power Management, Inc. (applicant); and a hearing having been held, the Department finds, concludes and orders as follows:

FINDINGS OF FACT

The Application

1. On May 9, 1983 Marlon Bird filed with the Department of Water Resources Application for Permit No. 29-7699 requesting the year around appropriation of 250 cubic feet per second (cfs) from the Portneuf River to generate 694 kilowatts of power. The application proposed diverting water in the SW1/4SW1/4 Sec. 22, T. 9S, R. 38E. B.M. Bannock County, and conveying it by penstock to the powerhouse located in the same 40 acre tract.

Protest and Intervention

2. The legal notice for the application was published in the Idaho

State Journal, Pocatello, Idaho on April 28 and May 5, 1983. A protest by the Idaho Department of Fish and Game was received on May 2, 1983 objecting to issuance of the permit because available information was insufficient to provide a basis for evaluating potential impacts of the project.

3. On June 10, 1983, the Lava Hot Springs Foundation petitioned to intervene and on July 25, 1983, the Department granted intervention to Lava Hot Springs Foundation, which administers the land were construction of the project is proposed.

Assignment and Amendment

4. The application was assigned to Commercial Energy Management, Inc. on September 3, 1985. Marlon Bird was the secretary/treasurer of Commercial Energy Management, Inc.

5. On June 11, 1985, Commercial Energy Management, Inc. amended Application for Permit No. 29-7699 reducing the quantity of water to 210 cfs and changing the location of the point of diversion and place of use to Lot 9 (NE1/4SW1/4) Sec. 22 T. 9S, R. 38E.

6. Legal notice of the amended application was published statewide on March 21 and 28, 1985. No additional protests were submitted to the Department.

7. On October 26, 1987, Commercial Energy Management, Inc. assigned its interest in amended Application No. 29-7699 to Hydro Power Management, Inc.

8. On October 30, 1987, the Department received an Affidavit for Water Rights to be Used for Power Purposes identifying Bob Nestor as the designated registered agent of Hydro Power Management, Inc. The affidavit also states Hydro Power Management, Inc. is a corporation qualified to do business in the State of Idaho.

Withdrawal of Protest

9. Subsequent to the amended application, on March 3, 1987, the

Department of Fish and Game withdrew its protest objecting to issuance of the permit.

Hearing

10. On February 23, 1988, the Department conducted a hearing to consider the issues raised by intervenor, Lava Hot Springs Foundation. Hydro Power Management, Inc., was represented by Bob and Cindy Nestor, owners, and also Monte Whittier, Attorney at Law. Lava Hot Springs Foundation was represented by Attorney Archie Service.

11. Evidence admitted at the hearing included the following:

A. Applicant's Exhibit #1: Federal Energy Regulatory Commission's (FERC), Order Issuing License, to construct, operate and maintain the Portneuf River Hydroelectric Project No. 7447-002 in the name of Commercial Energy Management, Inc.

B. Applicant's Exhibit #2: General Engineering Plans of Project No. 7447-002.

C. Applicant's Exhibit #3: Letter dated February 11, 1988 from Stanley F. Hamilton.

D. Applicant's Exhibit #4: Findings of Fact in the matter of easement application to construct project No. 7447-002 on state lands administered by the Lava Hot Springs Foundation dated February 4, 1988 signed by Fred A. Kisabeth, Hearing Officer.

E. Protestant's Exhibit A: Letter dated August 5, 1985 addressed to Commercial Energy Management signed by the four board members of Lava Hot Springs Foundation.

F. Protestant's Exhibit B: Nine (9) letters objecting to construction of the hydroelectric project.

Local Public Interest

12. One of the provisions in the FERC license requires a continual bypass flow at the point of diversion of 40 cfs. This flow was established through consultation with the Department of Fish and Game and U.S. Fish and Wildlife Service for the protection and maintenance of adult trout spawning and aquatic habitat.

13. The applicant testified that Utah Power and Light (U.P. & L.) generates electricity from coal fired power plants at a cost of about 50 mils/kw-hr and sells the power for approximately 80 mils/kw-hr. If the proposed hydropower project goes on line in 1988 U.P. & L. will purchase the power for 40.4 mils/kw-hr.

14. One employee will be hired to operate and maintain the hydropower facility.

15. The powerhouse will be underground on three sides and the top.

16. The Portneuf River, between the point where the water is diverted and where the water returns to the stream after passing through the powerhouse, flows adjacent to a campground. The stream channel is used for recreation by the community and visitors.

17. The penstock will be buried as it crosses through the existing campground. The project is located about one-half mile upstream from the City of Lava Hot Springs.

Financial Resources

18. The applicant projects the project can be constructed at a cost of 1.2 million dollars.

19. Financial statements for Bob and Cindy Nestor, the owners of Hydro Power Management, Inc. dated December 31, 1987 show a net worth of 1.67 million dollars with total assets of 1.79 million dollars.

Delay or Speculation

20. The proposed hydroelectric project described by Application for Permit 29-7699 is the same project covered by FERC License No. 7447-002.

21. The applicant's power house, penstock and possibly the diversion structure will be situated on land administered by the Lava Hot Springs Foundation.

22. The State Board of Land Commissioners of the Idaho Department of Lands approved the easement application to construct the hydroelectric project.

Sufficient Water Supply

23. The current project design specified use of one turbine with a flow range of 80 to 210 cfs.

24. A summary of stream flow data contained in the Environmental Assessment section of Order Issuing License (Applicant's Exhibit #1) reveals that 90% of the time the flow in the Portneuf River will exceed 110 cfs with an average flow of 208 cfs.

Injury to Other Water Rights

25. There is a 1300 to 1400 feet length of river channel separating the point of diversion and point where water diverted through the system will be returned to the river.

26. No other water rights are diverted from the river in the reach between the point of diversion and point where the water will be returned to the stream.

27. Diversions along the river in the area of this project are subject to regulation by the watermaster of Water District #29, Portneuf River.

28. The water from the springs used by the Lava Hot Springs Foundation has a much higher temperature than the water in the Portneuf River.

29. Subsequent to the hearing, an assignment of the application back to Commercial Energy Management, Inc. was received by the Department. Following the issuance for the final decision, action will be taken on the proposed assignment.

CONCLUSIONS OF LAW

Applicable Legal Principles

1. Idaho Code, Sec. 42-203A, para. (5) (Supp. 1987) states in part as

follows:

> In all applications whether protested or not protested, where the proposed use is such (a) that it will reduce the quantity of water under existing water rights, or (b) that the water supply itself is insufficient for the purpose for which it is sought to be appropriated, or (c) where it appears to the satisfaction of the department that such application is not make in good faith, is made for delay or speculative purposes, or (d) that the applicant has not sufficient financial resources with which to complete the work involved therein, or (e) that it will conflict with the local public interest, where the local public interest is defined as the affairs of the people in the area directly affected by the proposed use; the director of the department of water resources may reject such application and refuse issuance of a permit therefor, or may partially approve and grant a permit for a smaller quantity or water than applied for, or may grant a permit upon conditions.

Application of Legal Principles

Sufficient Water

2. There is sufficient flow in the Portneuf River at the proposed point of diversion for the project to be operational about ninety (90) per cent of the time.

Potential Injury to Existing Rights

3. The evidence available indicates that the construction and operation of this project would not impact the flow of hot water springs utilized by the intervenor.

4. No water right diversions exist between the proposed point of diversion and place of use.

5. The diversion of water under this permit is subject to regulation by the watermaster of Water District #29, Portneuf River.

Delay or Speculation

6. The Federal Energy Regulatory Commission has issued a license for

the construction of the hydroelectric project.

7. The State Land Board has issued to Hydro Power Management, Inc. an easement to Construct a Hydroelectric Facility on State Lands administered by the Lava Hot Springs Foundation.

8. Hydro Power Management, Inc. is a corporation qualified to do business in the State of Idaho under the laws of the State of Idaho.

Financial Resources

9. A statement of finances for Bob Nestor, registered agent for Hydro Power Management, Inc.,and his wife Cindy Nestor showed they have sufficient assets to fund construction of the project.

Local Public Interest

10. The marketing of electricity generated by this project is not expected to cause an increase in utility rates presently charged by Utah Power and Light.

11. Identified impacts to the aquatic environment will be mitigated by conditions contained in the FERC license.

12. The project must be designed so that the reach of the Portneuf River between the diversion structure and the powerhouse will not be subject to large, rapid fluctuations of water flow. The project must also be designed to avoid large fluctuations of water downstream from the powerhouse. To accomplish these goals, the penstock must be designed so the water can flow from the penstock to the Portneuf River without passing through the generator.

13. The location and the alignment of the penstock are of concern from a safety aspect. To minimize the safety hazard, the project must be designed and constructed under the direction of a professional engineer licensed by the state of Idaho.

Discussion on Motion

At the conclusion of the hearing Archie Service motioned for a continuance of the hearing so arrangements could be made to have witnesses for Lava Hot Springs Foundation present. Monte Whittier objected to granting the motion. The hearing officer reserved ruling on the motion.

After reviewing the notice given and the record of events leading to the hearing, the motion for continuance is denied. Department records reveal that notice of the conference and/or hearing was received by both parties in a timely manner. Prior to the hearing, the Department did not receive any requests for postponement. Considering the lapsed time between the application filing date and hearing date there was ample time for preparation by the intervenor, Lave Hot Springs Foundation.

ORDER

IT IS, THEREFORE, HEREBY ORDERED and Application for Permit No. 29-7699 is APPROVED subject to the following conditions:

1. Subject to all prior water rights.

2. Proof of construction of works and application of water to beneficial use shall be submitted on or before the date specified in the final Order.

3. Water used under this permit, if discharged into a natural channel, shall meet Idaho Water Quality Standards upon return to the natural stream channel.

4. This permit is subject to the provisions of Sections 42-205 through 42-210, Idaho Code, restricting the sale, transfer, assignment, or mortgage of this permit. Failure to comply with these provisions is cause for immediate cancellation of the permit.

5. The issuance of the permit in no way grants any right-of-way or easement across the land of another.

6. Prior to diversion of any water, a measuring device and lockable controlling works of a type acceptable to the Department shall be permanently installed and maintained as part of the diverting works. Also, a measuring device with a continuous strip chart recorder (or other recording device) as approved by the department shall be installed and maintained on the natural channel to measure the flow in the bypassed reach. Records from the bypass channel shall be sent to the department within thirty (30) days of collection.

7. The diversion and use of water under this permit and any license subsequently issued is subject to review by the Director on the date(s) of expiration of any license issued by the Federal Energy Regulatory Commission. Upon appropriate findings relative to the interest of the public, the Director may cancel all or any part of the use authorized herein and may revise, delete or add conditions under which the right may be exercised.

8. The water right acquired under this permit for hydropower purposes shall be junior and subordinate to all rights to the use of water, other than hydropower, within the State of Idaho that are initiated later in time than the priority of this permit and shall not give rise to any right or claim against future rights to the use of water, other than hydropower, within the State of Idaho initiated later in time than the priority of the permit.

9. This permit does not constitute Idaho Public Utilities Commission or Federal Energy Regulatory Commission approval that may be required.

10. Use of water under this permit shall be non-consumptive.

11. A separate stream alteration permit from the IDWR is required for any activity in the stream channel other than construction and/or maintenance of the diversion structure. If the proposed construction or operation involves construction of an outfall or any other work in the stream channel other than a water diversion, you must contact the Department and obtain a Stream Channel

Alteration permit prior to the start of construction.

12. Use of water under this permit is subject to control by the watermaster of State Water District No. 29, Portneuf River.

13. A bypass flow of no less then 40 cfs shall remain in the natural stream channel at the point of diversion at all times the project is operating.

14. Design, construction, and operation procedures must be certified as to adequacy and safety by an Idaho licensed engineer prior to commencing construction of the project. As-built plans certified by an Idaho licensed engineer shall be submitted to the department no less then 30 days after project construction is complete.

15. The project shall be designed so that water can be released from the penstock to the Portneuf River near the powerhouse without passing through the generator.

Date this 10 day of June, 1988.

Bobby D. Fleenor

BOBBY D. FLEENOR
Hearing Officer

Form 202
3/78

Ident. No. 29-7699

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
APPLICATION FOR PERMIT

AMENDED AMENDED

To appropriate the public waters of the State of Idaho

ASSIGNED Hydro Power Management, Inc.

1. Name of applicant ~~Commercial Energy~~ Management, Inc. Phone ~~745-7625~~
   Post office address c/o Bob Nestor, 4950 Valenty Road, Chubbuck, ID 83202 ~~175 LaBelle Drive, Rigby, ID 83442~~

2. Source of water supply Portneuf River which is a tributary of Snake River

3. Location of point of diversion is Lot 9 (NE¼SW¼)* ¼ of ¼ of Section 22 Township 9S
   Range 38E B.M. Bannock County, additional points of diversion if any:

4. Water will be used for the following purposes:
   Amount 210.0cfs (cfs ~~or acre-feet per annum~~) for Power Generation purposes from 1-1 to 12-31 (both dates inclusive)
   Amount _____ (cfs or acre-feet per annum) for _____ purposes from _____ to _____ (both dates inclusive)
   Amount _____ (cfs or acre-feet per annum) for _____ purposes from _____ to _____ (both dates inclusive)
   Amount _____ (cfs or acre-feet per annum) for _____ purposes from _____ to _____ (both dates inclusive)

5. Total quantity to be appropriated:
   a. 210.0 cubic feet per second and/or b. _____ acre-feet per annum.

6. Proposed diverting works:
   a. Description of ditches, flumes, pumps, headgates, etc. reinforced concrete weir 40' long, 4' high; reinforced concrete penstock intake & 1,350 ft. long penstock
   b. Height of storage dam _____ feet, active reservoir capacity _____ acre-feet; total reservoir capacity _____ acre-feet, materials used in storage dam: _____
   Period of year when water will be diverted to storage _____ (Month/Day) to _____ (Month/Day) inclusive.
   c. Proposed well diameter is _____ inches; proposed depth of well is _____ feet.

7. Time required for the completion of the works and application of the water to the proposed beneficial use is 5 years *(minimum 1 year – maximum 5 years).*

8. Description of proposed uses:
   a. If water is **not** for irrigation:
   (1) Give the place of use of water: Lot 9 ¼ of (NE¼SW¼)* ¼ of Section 22 Township 9S
   Range 38E B.M.
   (2) Amount of power to be generated: 744 kw ~~horsepower~~ under 49.2 feet of head.
   (3) List number of each kind of livestock to be watered _____
   (4) Name of municipality to be served _____, or number of families to be supplied with domestic water _____.
   (5) If water is to be used for other purposes describe: _____

*kw 4/7/1987

b. If water is for irrigation, indicate acreage in each subdivision in the tabulation below:

TWP	RANGE	SEC.	NE¼				NW¼				SW¼				SE¼				TOTALS
			NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	

Total number of acres to be irrigated _____

c. Describe any other water rights used for the same purposes as described above. None

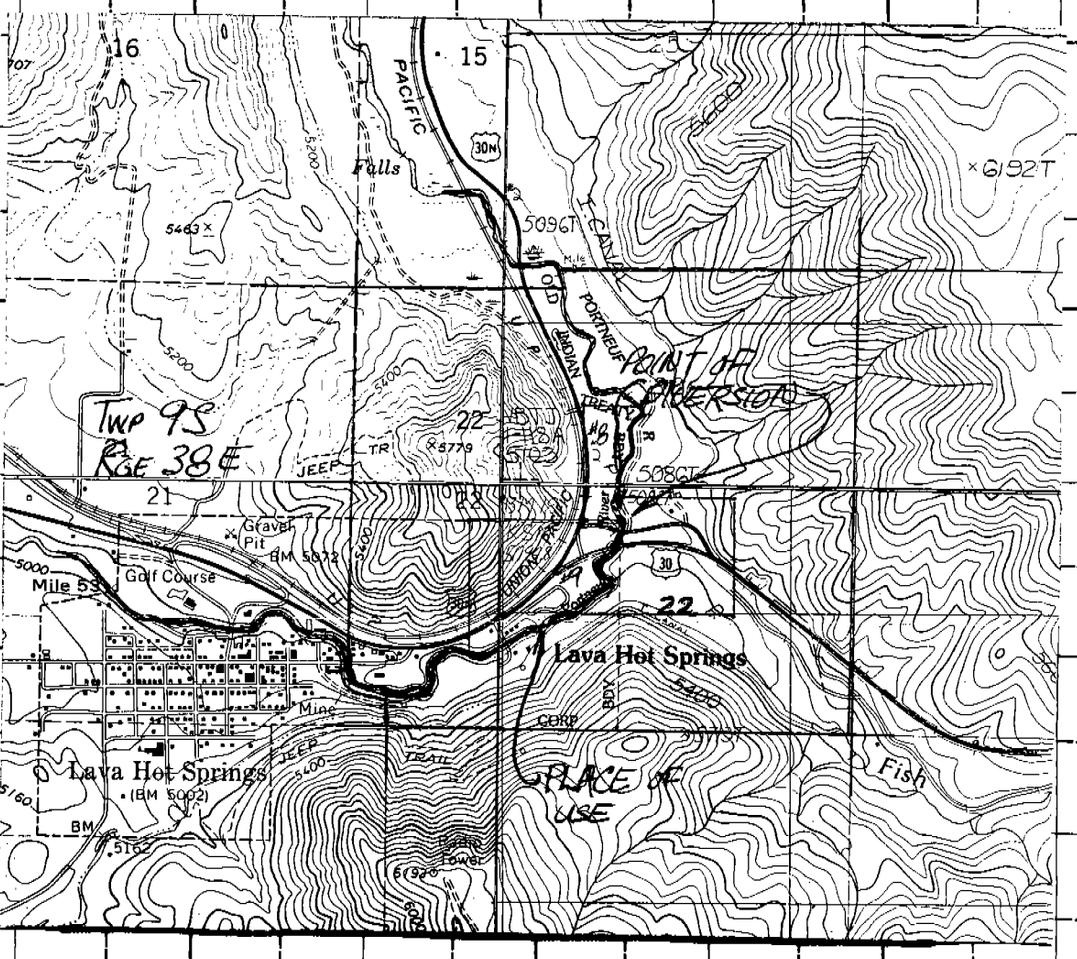
9. a. Who owns the property at the point of diversion State of Idaho

b. Who owns the land to be irrigated or place of use State of Idaho

c. If the property is owned by a person other than the applicant, describe the arrangement enabling the applicant to make this filing Applicant will have to secure easement from State of Idaho

10. Remarks Project facilities are entirely on lands administered by the Lava Hot Springs Foundation.

11. Map of proposed project: show clearly the proposed point of diversion, place of use, section number, township and range number.



Scale: 2 inches equal 1 mile.

BE IT KNOWN that the undersigned hereby makes application for permit to appropriate the public waters of the State of Idaho as herein set forth.

(Applicant)

Secretary Treasurer

Assisted by EMC 9/13/85

Received by CW Date 11-06-85 Time 11:30 A.

Preliminary check by _____ Fee $ 20.00

Receipted by CW Date 11-08-85 #35527

Publication prepared by CW Date _____

Published in TIMES NEWS, LEWISTON TRIB., IDAHO STATESMAN

Publication dates 11/21 & 11/28/85

Publication approved CW Date 12-5-85

Protests filed by: FISH & GAME

Copies of protests forwarded by _____

Hearing held by _____ Date _____

Recommended for approval denial by EMC

ACTION OF THE DIRECTOR, DEPARTMENT OF WATER RESOURCES

This is to certify that I have examined Application for Permit to appropriate the public waters of the State of Idaho No. 29-7699, and said application is hereby APPROVED.

1. ~~Approval of said application is subject to the following limitations and conditions:~~

a. SUBJECT TO ALL PRIOR WATER RIGHTS.

b. Proof of construction of works and application of water to beneficial use shall be submitted on or before August 1, 19 91.

c. The rate of diversion, if water is to be used for irrigation under this permit, when combined with all other water rights for the same land shall not exceed 0.02 cubic feet per second for each acre of land.

d. Other:

PURSUANT TO PROPOSED MEMORANDUM DECISION AND ORDER AND ORDER ADOPTING PROPOSED MEMORANDUM DECISION AND ORDER.

Dated this 20TH day of July, 1988.

R. KEITH HIGGINSON, DIRECTOR

CERTIFICATE OF MAILING

I HEREBY CERTIFY That on this the 29th day of July, 1988, a true and correct copy of the foregoing ORDER ADOPTING PROPOSED DECISION AND ORDER was mailed, postage prepaid to:

Hydro Power Management, Inc.
c/o Bob Nestor
4950 Valenty Rd.
Chubbuck, ID 83202

Maher F. Wissa, P. E.
Commercial Energy Management, Inc.
P. O. Box 4518
Pocatello, ID 83205

Archie W. Service
Green, Service, Gasser & Kerl
P. O. Box 4883
Pocatello, ID 83205-4883

Karen Keller
Lava Hot Springs Foundation
Lava Hot Springs, ID 83246

Monte Whittier
635 E. Center
Pocatello, ID 83205

Rita O. Fleck

RITA I. FLECK
Secretary/Records Manager

BEFORE THE DIRECTOR OF THE DEPARTMENT

OF WATER RESOURCES OF THE

STATE OF IDAHO

IN THE MATTER OF APPLICATION FOR PERMIT NO. 29-7699 IN THE NAME OF HYDRO POWER MANAGEMENT, INC.	ORDER ISSUING PROPOSED MEMORANDUM DECISION

R. Keith Higginson, Director of the Department of Water Resources, having reviewed the attached proposed decision prepared by his appointee, Bobby D. Fleenor, who conducted the hearing or who has read the record in the this case, hereby approves the same as a proposed decision pursuant to Idaho Code, Sec. 67-5211.

Each party to these proceedings who appeared at the hearing is given the opportunity, pursuant to Idaho Code, Sec. 42-1701A and 67-5211, to file exceptions to the proposed decision and to present briefs and oral arguments. If no timely and proper exceptions are received, an order by the Director will be entered adopting the proposed decision as his final decision.

I.
EXCEPTIONS

A. To be considered by the Director, exceptions must:

1. be received by the Director on or before the 15th day following the day of service of this Order and the proposed decision,

2. specifically identify the portions of the proposed decision to which exceptions are made and specifically state the grounds for those exceptions, and

3. be sent to each of the parties who appeared or their attorneys.

II.
BRIEFS

A. Any briefs in support of exceptions to the proposed decision shall be filed with the Director at the same time that party's exceptions are filed with the Director.

B. All response briefs to the exceptions must be filed with the Director within 15 days after the exceptions were served upon the responding party.

III.

A. No oral arguments before the Director on the proposed decision will be held unless specifically requested by a party filing exceptions to the proposed decision and unless that request is filed with the Director concurrently with the filing of that party's exception.

B. If oral arguments have been properly requested by a party filing exceptions, any other party, upon reasonable notice to the Director, shall have the right to present oral argument in response to the exceptions filed.

C. Oral arguments before the Director on exceptions to the proposed decision shall be heard at the discretion of the Director, pursuant to Idaho Code, Sec. 42-1701A. If oral arguments are to be heard, the Director will, within a reasonable time, notify each party of the place, date and hour the oral arguments will take place and of the period of time allocated for the arguments of this case. Unless the Director orders otherwise, all oral arguments shall be heard in Boise, Idaho.

IV.

CERTIFICATE OF SERVICE

All exceptions, briefs, requests oral arguments and other matters filed with the Director in connection with the proposed decision shall be served on all other parties to these proceedings in accordance with Rule 7.2.

V.

FINAL DECISION

Following the submission of all exceptions, briefs and oral arguments, if they are heard, the Director shall issue a final decision adopting, modifying or rejecting and replacing the proposed decision. Copies of the decision and order shall be served on all parties.

Dated this 10th day of June, 1988.

R. KEITH HIGGINSON
Director

Certificate of Mailing

I HEREBY CERTIFY That on this the 10th day of June, 1988, a true and correct copy of the foregoing ORDER ISSUING PROPOSED DECISION and PROPOSED MEMORANDUM DECISION AN ORDER were mailed, postage prepaid to:

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Secretary/Records Manager

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635 E. Center
Pocatello, ID 83205

Rita I. Fleck

RITA I. FLECK
Secretary/Records Manager

State of Idaho

Department of Water Resources

RECEIVED
OCT 30 1987
Department of Water Resources

ASSIGNMENT OF PERMIT

I, Marlon Bird, President of Commercial Energy Management, Inc., hereby assign to Hydro Power Management, Inc.

of 4950 Valenty Road, Chubbuck, Idaho 83202
Address

CHECK ONE

☒ All my right, title, and interest in and to Permit No. 29-7699 to appropriate the public waters of the State of Idaho.

☐ The following described portion of my right, title, and interest in and to Permit No. _____ to appropriate the public waters of the State of Idaho.

(Describe that portion of the permit being assigned by listing the acreage within each 40 acre subdivision, the point of diversion and the amount of water in cubic feet per second for direct diversion, or acre feet for storage)

Made this 26th day of October, 19 87.

Permit Holder Commercial Energy Management, Inc.
By: Marlon Bird

Spouse of Permit Holder

State of Idaho)
ss.
County of Jefferson)

On this 26th day of October, 19 87, personally appeared before me the signer(s) of the above instrument, who duly acknowledged to me that he (she) (they) executed the same.

seal

Susan Burr
Notary Public residing at Idaho Falls, ID

My commission expires:
2/21/92

Department of Water Resources
Eastern District of Idaho

Form 205/206
4/85

State of Idaho
Department of Water Resources

RECEIVED
OCT 30 1987
Department of Water Resources

29-7699
Water Right No.

AFFIDAVIT FOR WATER RIGHTS TO BE USED FOR POWER PURPOSES

A. **Establishment of Residency:** *(Complete either 1, or 2).*

1. Individual Applicant or Individual Members of a Partnership:

I, _____ of _____,
(name) *(city)*,

County of _____, State of Idaho, being duly sworn, do hereby certify that I am a bona fide resident of the State of Idaho.

2. Corporation:

I, Bob Nestor of Pocatello,
(name) *(city)*,

County of Bannock, State of Idaho, being duly sworn, depose and say: That I am the designated registered agent of the Hydro Power Management, Inc.
(name of corporation): that as such I am in charge of the registered office of the said corporation as required by Section 30-1-12, **Idaho Code**, at Pocatello
(city)
Idaho, wherein are kept the corporate records required by Section 30-1-52, **Idaho Code**: and that Hydro Power Management, Inc.
(name of corporation) is a corporation qualified to do business in the State of Idaho under the laws of the State of Idaho.

B. **Ownership of Facilities:** *(To be completed for hydropower projects only)*

The hydropower facility to be developed pursuant to the attached Application for Permit:

(check one)

☒ Will **not** utilize existing man-made irrigation facilities such as a dam or a canal.

☐ Will utilize existing man-made irrigation facilities such as a dam or a canal, and permission of the owner is documented in an affidavit attached hereto.

☐ Will utilize existing man-made irrigation facilities such as a dam or a canal, and the owner of the facilities is the signee of this affidavit.

Bob J Nestor
Applicant HYDRO/POWER MANAGEMENT, INC.
By: Bob Nestor

State of Idaho)
County of Bannock) ss.

On this 2nd day of October, 1987, personally appeared before me the signer(s) of the above instrument, who duly acknowledged to me that he (she) (they) executed the same.

NOTARY PUBLIC
MONTE WHITTIER
Seal
STATE OF IDAHO

Monte Whittier
Notary Public residing at
Pocatello Idaho

My commission expires:
3/15/87

RECEIVED
NOV 3 1987
Department of Water Resources
Eastern District Office

State of Idaho

Department of Water Resources
150 Shoup Suite 15 27. 83402
ASSIGNMENT OF PERMIT

RECEIVED
SEP 5 1985
Department of Water Resources
Eastern District Office

I, Marlon Bird, hereby assign to Commercial Energy Management Inc.
of 175 LaBelle Drive Rigby, Idaho 83442
Address

CHECK ONE

☒ All my right, title, and interest in and to ~~Permit~~ Application No. 29-7699 to appropriate the public waters of the State of Idaho.

☐ The following described portion of my right, title, and interest in and to Permit No. _____ to appropriate the public waters of the State of Idaho.

(Describe that portion of the permit being assigned by listing the acreage within each 40 acre subdivision, the point of diversion and the amount of water in cubic feet per second for direct diversion, or acre feet for storage)

Made this 3rd day of Sept., 19 85.

Permit Holder

Spouse of Permit Holder

State of Idaho)
ss.
County of Jefferson)

On this 3rd day of Sept., 19 85, personally appeared before me the signer(s) of the above instrument, who duly acknowledged to me that he (she) (they) executed the same.

seal

Notary Public residing at
Rigby Idaho

My commission expires:
Life

Form 202
3/78

Void - see amended application

Ident. No. 29 7699

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
APPLICATION FOR PERMIT

To appropriate the public waters of the State of Idaho

1. Name of applicant Marlon Bird Phone 745-7625

Post office address 175 Labelle Drive, Rigby, Idaho 83442

2. Source of water supply Portneuf River which is a tributary of Snake River

3. Location of point of diversion is SW ¼ of SW ¼ of Section 22 Township 9S

Range 38E B.M. Bannock County, additional points of diversion if any: ____

4. Water will be used for the following purposes:

Amount 250 (cfs ~~or acre-feet per annum~~) for Power purposes from 1-1 to 12-31 (both dates inclusive)

Amount ____ (cfs or acre-feet per annum) for ____ purposes from ____ to ____ (both dates inclusive)

Amount ____ (cfs or acre-feet per annum) for ____ purposes from ____ to ____ (both dates inclusive)

Amount ____ (cfs or acre-feet per annum) for ____ purposes from ____ to ____ (both dates inclusive)

5. Total quantity to be appropriated:

a. 250 cubic feet per second and/or b. ____ acre-feet per annum.

6. Proposed diverting works:

a. Description of ditches, flumes, pumps, headgates, etc. Diversion dam across river to penstock to turbines.

b. Height of storage dam ____ feet, active reservoir capacity ____ acre-feet; total reservoir capacity ____ acre-feet, materials used in storage dam: ____

Period of year when water will be diverted to storage ____ (Month/Day) to ____ (Month/Day) inclusive.

c. Proposed well diameter is ____ inches; proposed depth of well is ____ feet.

7. Time required for the completion of the works and application of the water to the proposed beneficial use is 5 years *(minimum 1 year – maximum 5 years).*

8. Description of proposed uses:
   a. If water is **not** for irrigation:
      (1) Give the place of use of water: SW ¼ of SW ¼ of Section 22 Township 9S Range 38E B.M.

      (2) Amount of power to be generated: 694 KW ~~horsepower~~ under 41 feet of head.

      (3) List number of each kind of livestock to be watered ____

      (4) Name of municipality to be served ____, or number of families to be supplied with domestic water ____.

      (5) If water is to be used for other purposes describe: ____

b. If water is for irrigation, indicate acreage in each subdivision in the tabulation below:

TWP	RANGE	SEC.	NE¼				NW¼				SW¼				SE¼				TOTALS
			NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	NE¼	NW¼	SW¼	SE¼	
9S	38E	22											X						

Total number of acres to be irrigated _____

c. Describe any other water rights used for the same purposes as described above. None

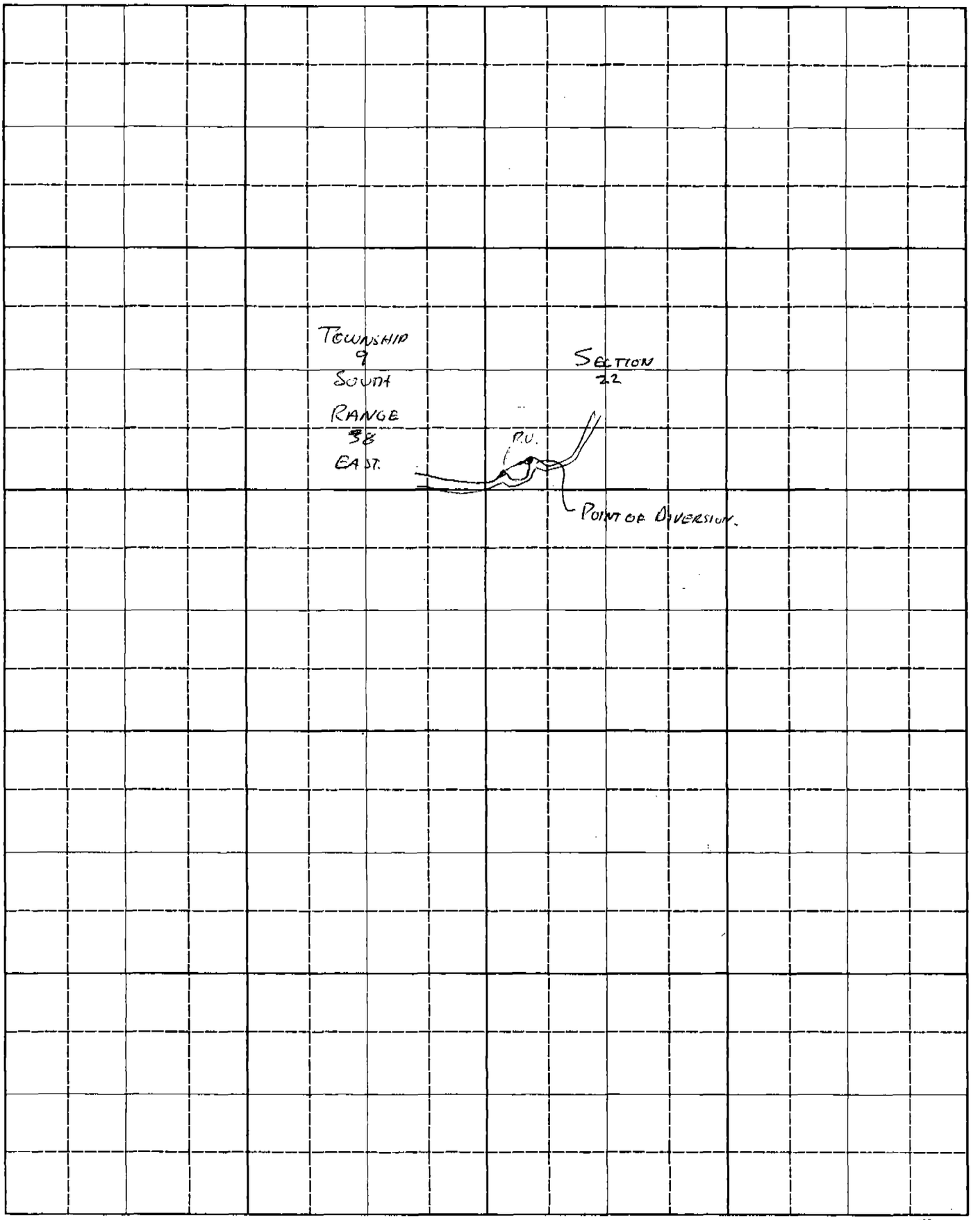
9. a. Who owns the property at the point of diversion Owner, State of Idaho, Dept. of Lands

b. Who owns the land to be irrigated or place of use Same as 9a.

c. If the property is owned by a person other than the applicant, describe the arrangement enabling the applicant to make this filing _____

10. Remarks _____

11. Map of proposed project: show clearly the proposed point of diversion, place of use, section number, township and range number.



Scale: 2 inches equal 1 mile.

BE IT KNOWN that the undersigned hereby makes application for permit to appropriate the public waters of the State of Idaho as herein set forth.

(Applicant)

Priority reduced: 5/9/83 EMC

Received by SM Date 4/14/83 Time 10:00am

Preliminary check by KW Fee $ $1,975.00

Receipted by BP Date 4/14/83 # 28040

Publication prepared by BP Date 4/20/83

Published in Idaho State Journal

Publication dates 4/28 & 5/5/83

Publication approved CW Date 5-9-83

Protests filed by: F & G

Copies of protests forwarded by CW

Hearing held by _____ Date _____

Recommended for approval denial by _____

ACTION OF THE DIRECTOR, DEPARTMENT OF WATER RESOURCES

This is to certify that I have examined Application for Permit to appropriate the public waters of the State of Idaho No. _____ , and said application is hereby _____ .

1. Approval of said application is subject to the following limitations and conditions:
   a. SUBJECT TO ALL PRIOR WATER RIGHTS.
   b. Proof of construction of works and application of water to beneficial use shall be submitted on or before _____ , 19____ .
   c. The rate of diversion, if water is to be used for irrigation under this permit, when combined with all other water rights for the same land shall not exceed 0.02 cubic feet per second for each acre of land.
   d. Other:

Form 205/206
7/81

Ident. No. 29-7699

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
AFFIDAVIT FOR WATER RIGHTS TO BE USED
FOR POWER PURPOSES

RECEIVED
MAY 9 1983
Department of Water Resources
Eastern District Office

A. Establishment of Residency: (Complete either 1, or 2).

1. Individual Applicant or Individual Members of a Partnership:

I, Marlon Bird (name) of Rigby (city),

county of Jefferson, State of Idaho, being duly sworn, do hereby certify that I am a bona fide resident of the State of Idaho.

2. Corporation:

I, _____ (name) of _____ (city),

County of _____, State of Idaho, being duly sworn, depose and say: That I am the designated registered agent of the _____ (name of corporation): that as such I am in charge of the registered office of the said corporation as required by Section 30-1-12, Idaho Code, at _____ (city) Idaho, wherein are kept the corporate records required by Section 30-1-52, Idaho Code: and that _____ (name of corporation) is a corporation qualified to do business in the State of Idaho under the laws of the State of Idaho.

B. Ownership of Facilities: (To be completed for hydropower projects only)

The hydropower facility to be developed pursuant to the attached Application for Permit:

(check one)

- [x] Will not utilize existing man-made irrigation facilities such as a dam or a canal.
- [ ] Will utilize existing man-made irrigation facilities such as a dam or a canal, and permission of the owner is documented in an affidavit attached hereto.
- [ ] Will utilize existing man-made irrigation facilities such as a dam or a canal and the owner of the facilities is the signee of this affidavit.

Marlon Bird
Applicant

State of Idaho)
County of Bonneville) ss.

On this 9th day of May, 19 83, personally appeared before me the signer(s) of the above instrument, who duly acknowledged to me that he (she) (they) executed the same.

seal

Melissa Wray
Notary Public residing at
Idaho Falls

My commission expires:

2-15-85

Weekly Insertion

Company Name Id[redacted]ater Resources, East
Account Number I00564
Cost: $ 31.64

STATE OF IDAHO)
) ss.
COUNTY OF ADA)

Laura Gay Barnes, being duly sworn, deposes and says: That she is the Principal Clerk of The Idaho Statesman, a daily newspaper printed and published at Boise, Ada County, State of Idaho, and having a general circulation therein and which said newspaper has been continuously and uninterruptedly published in said County during a period of twelve consecutive months prior to the first publication of the notice, a copy of which is attached hereto; that said notice was published in The Idaho Statesman in conformity with Section 60-108, Idaho Code as amended, for Two (2) consecutive weekly insertions, beginning with the issue of

November 21, 1985, and ending with the issue of November 28, 1985.

Laura Gay Barnes

Subscribed and sworn to before me this 29th day of November, 1985.

Jeanne M Hawke

Notary Public for Idaho, Residing at Boise, Idaho.

RECEIVED
DEC 5 1985
Department of Water Resources
Eastern District Office

NOTICE OF AMENDED APPLICATION FOR WATER RIGHT

The following application has been filed to appropriate the public waters of the State of Idaho:

29-7699
Commercial Energy Management, Inc.
175 Labelle Drive
Rigby, ID 83442
Source: Portneuf River trib Snake River
Diversion Pt: Lot 9 Sec. 22 T 09S R 38E
Use: Power (210.0 CFS)
In: Lot 9 Sec 22 T 09S R 38E

The permits will be subject to all prior water rights. Protests may be submitted based on the criteria of Sec. 42-203A, Idaho Code, and/or the new public interest criteria of Sec. 42-203C, Idaho Code. Protests must be filed with the Director, Dept. of Water Resources, 150 Shoup Ave., Suite 15, Idaho Falls, Idaho, 83402 on, or before, December 9, 1985.

KEN DUNN
Director

Pub. Nov. 21, 28, 1985 9663

NOTICE OF AMENDED APPLICATION FOR WATER RIGHT

The following application has been filed to appropriate the public waters of the State of Idaho:

29-7699
COMMERCIAL ENERGY MANAGEMENT, INC.
175 LABELLE DRIVE
RIGBY, IDAHO 83442
Source: PORTNEUF RIVER trib SNAKE RIVER
Diversion Pt: LOT 9 Sec 22 T 09S R 38E
Use: POWER (210.0 cfs)
In: LOT 9 Sec 22 T 09S R 38E

The permits will be subject to all prior water rights. Protests may be submitted based on the criteria of Sec. 42-203A, Idaho Code and/or the new public interest criteria of Sec. 42-203C, Idaho Code. Protests must be filed with the Director, Dept. of Water Resources, 150 Shoup Ave., Suite 15, Idaho Falls, Idaho, 83402 on or before December 9, 1985.

KEN DUNN
Director

PUBLISH: Thursday, November 21, and 28, 1985.

Affidavit of Publication

RECEIVED
DEC 18 1985
Department of Water Resources
Eastern District Office

STATE OF IDAHO,)
COUNTY OF TWIN FALLS) ss.

I, Linda Capps McGuire being first duly sworn upon oath, depose and say that I am Princ. Clerk of the TIMES-NEWS, published daily, at Twin Falls, Idaho, and do solemnly swear that a copy of the notice of advertisement, as per clipping attached, was published in the regular and entire issue of said newspaper, and not in any supplement thereof, for Two consecutive Weeks, commencing with the issue dated November 21, 1985, and ending with the issue dated November 28, 1985.

And I do further certify that said newspaper is a consolidation, effective February 16, 1942, of the Idaho Evening Times, published theretofore daily except Sunday, and the Twin Falls News, published theretofore daily except Monday, both of which newspapers prior to consolidation had been published under said names in said city and county continuously and uninterruptedly during a period of more than twelve consecutive months, and said TIMES-NEWS, since such consolidation, has been published as a daily newspaper except Saturday, until July 31, 1978, at which time said newspaper began daily publication under said name in said city and county continuously and uninterruptedly.

And I further certify that pursuant to Section 60-108 Idaho Code, Thursday of each week has been designated as the day on which legal notice by law or by order of any court of competent jurisdiction within the state of Idaho, to be published weekly, will be published; and that at the head of the editorial column of said combined newspapers, and in each issue thereof, Thursday is announced as the day on which said legal notices will be published.

Linda Capps McGuire

Subscribed and sworn to before me on this 28 day of November 1985.

Diana Kruse

Notary Public in and for the County of Twin Falls, State of Idaho, residing at Twin Falls, Idaho

TRIBUNE PUBLISHING COMPANY, INC.
The Lewiston Morning Tribune
505 C St., P.O. Box 957
Lewiston, Idaho 83501
(208) 743-9411

Date 112885 INVOICE No. L00062483

Account No. 44660

Description 62483NOTIC

Times 2 Lines 29

Tab Lines

LEGAL ADVERTISING
INVOICE

SOLD TO: STATE OF IDAHO
DEPT. OF WATER RESOURCES
150 SHOUP AVE. SUITE 15
IDAHO FALLS
ID 83402

$ 25.35

NOTICE:This is an invoice of Purchase made by you. Statement will be rendered the first of the month.
Please Retain This Invoice as Your Statement Will Refer To Invoice by No. Only.

AFFIDAVIT OF PUBLICATION

STATE OF IDAHO, ss.
County of Nez Perce

62483

NOTICE OF AMENDED APPLICATION FOR WATER RIGHT

The following application has been filed to appropriate the public waters of the state of Idaho:

29-7699

COMMERCIAL ENERGY MANAGEMENT, INC.
175 LABELLE DRIVE, RIGBY, ID 83442

Source: PORTNEUF RIVER trib SNAKE RIVER
Diversion Pt: LOT 9 Sec 22 T 09S R 38E
Use: POWER (210.0 cfs)
In: LOT 9 Sec 22 T 09S R 38E

The permits will be subject to all prior water rights. Protests may be submitted based on the criteria of Sec. 42-203A, Idaho Code and/or the new public interest criteria of Sec. 42-203C, Idaho Code. Protests may be filed with the Director, Dept. of Water Resources, 150 Shoup Ave., Suite 15, Idaho Falls, Idaho, 83402 on or before December 9, 1985.

KEN DUNN
Director

RECEIVED
DEC 4 1985
Department of Water Resources
Eastern District Office

S. L. Stone, being duly sworn, deposes and says, I am the Legal Clerk of the Tribune Publishing Company, a corporation organized and existing under and by virtue of the laws of the State of Idaho, publishers of the LEWISTON MORNING TRIBUNE, a newspaper of general circulation published at Lewiston, Nez Perce County, Idaho; That the said Lewiston Morning Tribune is an established paper and has been published regularly and issued regularly at least once a day for more than 21 consecutive years next immediately preceding the first publication of this notice, and has been so published uninterrupted for said period; that the

NOTICE OF AMENDED APPLICATION FOR

attached hereto and which is made a part of this affidavit was published in the said Lewiston Morning Tribune, 2 time(s). Publication being on 112185, or once a week for two consecutive week, the first publication thereof being on the 112185, and the last publication thereof being on the 112885, and said NOTICE OF AMENDED APPLICATION FOR was so published in the regular and entire issue of said newspaper and not in a supplement thereof and was so published in every issue and number of the said paper, during the period and times of publication as set forth above.

S. L. Stone

SUBSCRIBED AND SWORN BEFORE ME THIS THE 29th day of November 1985

Juletta J. Hamilton
Notary Public in and for the State of Idaho, residing at Lewiston, therein.

PROOF OF PUBLICATION

RECEIVED
DEC 2 1985
Department of Water Resources
Eastern District Office

STATE OF IDAHO
County of Bannock } ss.

NOTICE OF AMENDED APPLICATION FOR WATER PERMIT

Notice is hereby given that Application for permit No. 29-7699 in the name of Marlon Bird, Rigby, Idaho was filed for the diversion of 250 cfs of water from the Portneuf River tributary of Snake River, the point of diversion is within the SWSW Sec 22 T 09S R 38E BM, Bannock County. The water is used from January 1 to December 31 for power generating purposes within the SWSW Sec 22 T 09S R 38E BM.

The applicant now proposes to amend Application No. 29 7699 amending the name to Commercial Energy Management, Inc., Rigby, Idaho, and requesting 210.0 cfs of water. The point of diversion and place of use is within Lot 9 Sec 22 T 09S R 38E BM.

Any protest to the proposed amending of the application must be filed with the Idaho Department of Water Resources, 150 Shoup Avenue, Suite 15, Idaho Falls, Idaho, 83402, on or before December 9, 1985.

S/A. Kenneth Dunn
Director
November 21, 28, 1985
No. 610

Sandra K. Herald

being first duly sworn on oath deposes and says: That she was at all times herein mentioned a citizen of the United States of America, more than 21 years of age, and the Principal Clerk of THE IDAHO STATE JOURNAL, a daily newspaper, printed and published at Pocatello, Bannock County, Idaho, and having a general circulation therein.

That the document or notice, a true copy of which is attached, was published in the said IDAHO STATE JOURNAL, on the following dates, to-wit:

November 21, 1985	, 19
November 28, 1985	, 19
, 19	, 19
, 19	, 19
, 19	, 19

That said paper has been continuously and uninterruptedly published in said County for a period of seventy-eight weeks prior to the publication of said notice or advertisement and is a newspaper within the meaning of the laws of Idaho.

Sandra K Herald

Subscribed and sworn to before me this 29th day of November, 1985

Jeri L Larsen

Notary Public, State of Idaho
Residence: Pocatello, Idaho

PROOF OF PUBLICATION

RECEIVED
MAY 9 1983
Department of Water Resources
Eastern District Office

STATE OF IDAHO
County of Bannock } ss.

Jeri Larsen

being first duly sworn on oath deposes and says: That she was at all times herein mentioned a citizen of the United States of America, more than 21 years of age, and the Principal Clerk of THE IDAHO STATE JOURNAL, a daily newspaper, printed and published at Pocatello, Bannock County, Idaho, and having a general circulation therein.

That the document or notice, a true copy of which is attached, was published in the said IDAHO STATE JOURNAL, on the following dates, to-wit:

April 28, 1983	, 19
May 5, 1983	, 19
, 19	, 19
, 19	, 19
, 19	, 19

That said paper has been continuously and uninterruptedly published in said County for a period of seventy-eight weeks prior to the publication of said notice or advertisement and is a newspaper within the meaning of the laws of Idaho.

Jeri Larsen

Subscribed and sworn to before me this 6th day of May, 1983

Notary Public, State of Idaho
Residence: Pocatello, Idaho

NOTICE OF APPLICATION
FOR WATER RIGHT

The following application(s) have been filed to appropriate the public waters of the State of Idaho.

29-7699

BIRD, MARLON
175 LABELLE DRIVE, RIGBY, ID 83442
Source: PORTNEUF RIVER trib. to SNAKE RIVER
Date Filed: 04-14-1983
Diversion Pt: SWSW Sec 22 T 09S R 38E
Use: POWER (250.00 CFS)
In: SWSW Sec 22 T 09S R 38E
The permit(s) will be subject to all prior water rights. Protests must be filed with the Director, Dept. of Water Resources, 150 Shoup Ave., Suite 15, Idaho Falls, Idaho 83402 on or before MAY 16, 1983.
S/KEN DUNN, Dir.
April 28, May 5, 1983
No. 873

CEM COMMERCIAL ENERGY MGMT, INC.
P.O. Box 4518 • Pocatello, Idaho 83205 • Telephone (208) 237-3563 • Fax (208) 237-3563

October 21, 1997
Ref: CEM/1100

RECEIVED
OCT 2 3 1997
Department of Water Resources

Mr. L. GLEN SAXTON
Chief, Water Allocation Bureau
State of Idaho, Department of Water Resources
1301 North Orchard Street
P.O. Box 83720
Boise, Idaho 83720-0098

Subject: Portneuf River Hydroelectric Project
Lava Hot Springs, Idaho
Permit No. 29-07699

Dear Mr. Saxton:

Thank you for your letter dated September 24, 1997, in regard to the Preliminary Order revising the submittal requirement of the records of the bypass channel flow.

As per our telephone conversation, today, we are in agreement with the change in the flow record submittal requirement. We understand from the last sentence of item 6 of the Preliminary Order, that in the future the records of bypass flow will be only submitted to the department upon the department specific request, rather than the present requirement of frequent submittals.

Again thank you very much for your cooperation in finalizing the Preliminary Order which relaxes the reporting condition of flows in the bypass channel.

Sincerely,

Maher F. Wissa, P.E.
President

CEM COMMERCIAL ENERGY MGMT, INC.

P.O. Box 4518 • Pocatello, Idaho 83205 • Telephone (208) 237-3563 • Fax (208) 237-3563

September 18, 1995
Ref: CEM/1049

Mr. L. GLEN SAXTON
Chief, Water Allocation Bureau
State of Idaho, Department of Water Resources
1301 North Orchard Street
Statehouse Mail
Boise, ID 83720-9000

RECEIVED
SEP 21 1995
Department of Water Resources

Subject: Portneuf River Hydroelectric Project
Lava Hot Springs, Idaho
FERC Project No. 7447-002
Permit No. 29-7699

Dear Mr. Saxton:

Attached please find a copy of the bypass channel flow records for the Month of August, 1995.

Sincerely,

Maher F. Wissa
President

Attachments: 8 sheets

DATE 08-31-95

TIME	LEVEL	FLOW
23:00:00	46.2	42.6
22:00:00	46.0	41.6
21:00:00	45.8	40.7
20:00:00	45.7	40.2
19:00:00	45.7	40.2
18:00:00	45.7	40.2
17:00:00	45.7	40.2
16:00:00	45.7	40.2
15:00:00	45.7	40.2
14:00:00	45.7	40.2
13:00:00	45.7	40.2
12:00:00	45.9	41.1
11:00:00	46.2	42.6
10:00:00	45.7	40.2
09:00:00	45.9	41.1
08:00:00	46.7	45.0
07:00:00	45.6	39.7
06:00:00	45.7	40.2
05:00:00	45.7	40.2
04:00:00	45.6	39.7
03:00:00	46.2	42.6
02:00:00	46.0	41.6
01:00:00	45.7	40.2
00:00:00	46.0	41.6

DATE 08-30-95

TIME	LEVEL	FLOW
23:00:00	46.1	42.1
22:00:00	46.0	41.6
21:00:00	45.9	41.1
20:00:00	45.7	40.2
19:00:00	45.7	40.2
18:00:00	45.7	40.2
17:00:00	45.7	40.2
16:00:00	45.7	40.2
15:00:00	45.6	39.7
14:00:00	45.8	40.7
13:00:00	45.9	41.1
12:00:00	45.9	41.1
11:00:00	45.8	40.7
10:00:00	45.6	39.7
09:00:00	45.9	41.1
08:00:00	46.2	42.6
07:00:00	45.6	39.7
06:00:00	46.1	42.1
05:00:00	45.8	40.7
04:00:00	45.8	40.7
03:00:00	45.6	39.7
02:00:00	45.9	41.1
01:00:00	46.3	43.0
00:00:00	45.7	40.2

DATE 08-29-95

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.9	41.1
21:00:00	45.8	40.7
20:00:00	45.7	40.2
19:00:00	45.7	40.2
18:00:00	45.7	40.2
17:00:00	45.9	41.1
16:00:00	45.9	41.1
15:00:00	45.8	40.7
14:00:00	45.7	40.2
13:00:00	45.7	40.2
12:00:00	46.1	42.1
11:00:00	46.0	41.6
10:00:00	46.1	42.1
09:00:00	46.1	42.1
08:00:00	45.8	40.7
07:00:00	45.6	39.7
06:00:00	46.1	42.1
05:00:00	46.0	41.6
04:00:00	46.0	41.6
03:00:00	46.0	41.6
02:00:00	46.0	41.6
01:00:00	46.1	42.1
00:00:00	46.1	42.1

DATE 08-28-95

TIME	LEVEL	FLOW
23:00:00	46.0	41.6
22:00:00	46.0	41.6
21:00:00	45.7	40.2
20:00:00	45.8	40.7
19:00:00	45.8	41.1
18:00:00	45.7	40.2
17:00:00	45.8	40.7
16:00:00	45.8	40.7
15:00:00	45.6	39.7
14:00:00	45.8	40.7
13:00:00	46.0	41.6
12:00:00	46.1	42.1
11:00:00	46.1	42.1
10:00:00	46.1	42.1
09:00:00	46.1	42.1
08:00:00	46.1	42.1
07:00:00	46.0	41.6
06:00:00	45.9	41.1
05:00:00	46.0	41.6
04:00:00	46.2	42.6
03:00:00	46.0	41.6
02:00:00	46.0	41.6
01:00:00	46.1	42.1
00:00:00	46.2	42.6

DATE 08-27-95

TIME	LEVEL	FLOW
23:00:00	46.0	41.6
22:00:00	45.8	40.7
21:00:00	45.8	40.7
20:00:00	45.7	40.2
19:00:00	45.7	40.2
18:00:00	45.7	40.2
17:00:00	45.7	40.2
16:00:00	45.7	40.2
15:00:00	45.7	40.2
14:00:00	45.7	40.2
13:00:00	45.7	40.2
12:00:00	45.7	40.2
11:00:00	45.7	40.2
10:00:00	45.7	40.2
09:00:00	45.7	40.2
08:00:00	45.7	40.2
07:00:00	45.7	40.2
06:00:00	45.6	39.7
05:00:00	45.8	40.7
04:00:00	45.9	41.1
03:00:00	46.1	42.1
02:00:00	46.0	41.6
01:00:00	46.1	42.1
00:00:00	46.1	42.1

DATE 08-26-95

TIME	LEVEL	FLOW
23:00:00	46.1	42.1
22:00:00	46.1	42.1
21:00:00	46.0	41.6
20:00:00	45.9	41.1
19:00:00	45.8	40.7
18:00:00	45.8	40.7
17:00:00	45.6	39.7
16:00:00	45.7	40.2
15:00:00	45.7	40.2
14:00:00	45.7	40.2
13:00:00	45.7	40.2
12:00:00	45.8	40.7
11:00:00	45.9	41.1
10:00:00	46.0	41.6
09:00:00	46.1	42.1
08:00:00	46.1	42.1
07:00:00	46.0	41.6
06:00:00	46.0	41.6
05:00:00	46.0	41.6
04:00:00	45.9	41.1
03:00:00	45.9	41.1
02:00:00	45.9	41.1
01:00:00	46.0	41.6
00:00:00	46.1	42.1

DATE 08-25-95

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	45.8	40.7
21:00:00	45.8	40.7
20:00:00	45.8	40.7
19:00:00	45.8	40.7
18:00:00	45.7	40.2
17:00:00	45.8	40.7
16:00:00	45.7	40.2
15:00:00	45.7	40.2
14:00:00	45.7	40.2
13:00:00	45.7	40.2
12:00:00	45.7	40.2
11:00:00	45.7	40.2
10:00:00	45.8	40.7
09:00:00	45.9	41.1
08:00:00	45.9	41.1
07:00:00	45.9	41.1
06:00:00	45.9	41.1
05:00:00	45.7	40.2
04:00:00	45.8	40.7
03:00:00	45.8	40.7
02:00:00	45.7	40.2
01:00:00	45.7	40.2
00:00:00	45.7	40.2

DATE 08-24-95

TIME	LEVEL	FLOW	
23:00:00	45.8	40.7	
22:00:00	46.0	41.6	
21:00:00	46.1	42.1	
20:00:00	46.0	41.6	
19:00:00	46.0	41.6	
18:00:00	46.0	41.6	
17:00:00	45.7	40.2	
16:00:00	45.8	40.7	
15:00:00	46.5	44.0	
14:00:00	45.7	40.2	
13:00:00	46.1	42.1	
12:00:00	45.7	40.2	
11:00:00	46.4	43.5	← Turbine restarted
10:00:00	47.6	49.5	← Turbine stopped
09:00:00	46.1	42.1	
08:00:00	46.1	42.1	
07:00:00	46.0	41.6	
06:00:00	46.0	41.6	
05:00:00	46.1	42.1	
04:00:00	46.0	41.6	
03:00:00	46.0	41.6	
02:00:00	46.2	42.6	
01:00:00	46.0	41.6	
00:00:00	45.9	41.1	

DATE 08-23-95

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	45.7	40.2
21:00:00	46.1	42.1
20:00:00	45.7	40.2
19:00:00	45.7	40.2
18:00:00	46.2	42.6
17:00:00	45.7	40.2
16:00:00	45.9	41.1
15:00:00	47.2	47.5
14:00:00	46.6	44.5
13:00:00	45.9	41.1
12:00:00	45.7	40.2
11:00:00	45.7	40.2
10:00:00	45.7	40.2
09:00:00	45.9	41.1
08:00:00	46.2	42.6
07:00:00	46.0	41.6
06:00:00	45.6	39.7
05:00:00	45.9	41.1
04:00:00	46.1	42.1
03:00:00	45.6	39.7
02:00:00	45.9	41.1
01:00:00	46.2	42.6
00:00:00	45.7	40.2

DATE 08-22-95

TIME	LEVEL	FLOW	
23:00:00	46.2	42.6	
22:00:00	46.0	41.6	
21:00:00	45.8	40.7	
20:00:00	45.8	40.7	
19:00:00	45.7	40.2	
18:00:00	45.8	40.7	
17:00:00	46.2	42.6	
16:00:00	45.8	40.7	
15:00:00	45.7	40.2	
14:00:00	46.0	41.6	
13:00:00	46.2	42.6	← Turbine restarted
12:00:00	49.5	73.5	← Turbine Stopped
11:00:00	45.8	40.7	
10:00:00	45.8	40.7	
09:00:00	45.7	40.2	
08:00:00	45.8	40.7	
07:00:00	45.7	40.2	
06:00:00	46.1	42.1	
05:00:00	45.8	40.7	
04:00:00	45.7	40.2	
03:00:00	45.8	40.7	
02:00:00	45.7	40.2	
01:00:00	46.2	42.6	
00:00:00	45.9	41.1	

DATE 08-21-95

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.7	40.2
21:00:00	45.8	40.7
20:00:00	45.8	40.7
19:00:00	45.7	40.2
18:00:00	45.7	40.2
17:00:00	45.8	40.7
16:00:00	45.8	40.7
15:00:00	45.8	40.7
14:00:00	45.7	40.2
13:00:00	45.7	40.2
12:00:00	45.8	40.7
11:00:00	45.9	41.1
10:00:00	46.1	42.1
09:00:00	46.1	42.1
08:00:00	46.1	42.1
07:00:00	45.9	41.1
06:00:00	45.6	39.7
05:00:00	45.6	39.7
04:00:00	46.2	42.6
03:00:00	46.0	41.6
02:00:00	45.8	40.7
01:00:00	45.7	40.2
00:00:00	46.3	43.0

DATE 08-20-95

TIME	LEVEL	FLOW
23:00:00	46.0	41.6
22:00:00	46.1	42.1
21:00:00	45.9	41.1
20:00:00	45.7	40.2
19:00:00	45.6	39.7
18:00:00	45.9	41.1
17:00:00	46.0	41.6
16:00:00	45.8	40.7
15:00:00	45.7	40.2
14:00:00	46.2	42.6
13:00:00	45.7	40.2
12:00:00	46.1	42.1
11:00:00	46.1	42.1
10:00:00	46.0	41.6
09:00:00	45.6	39.7
08:00:00	46.2	42.6
07:00:00	45.8	40.7
06:00:00	45.7	40.2
05:00:00	45.8	40.7
04:00:00	46.1	42.1
03:00:00	46.1	42.1
02:00:00	46.2	42.6
01:00:00	46.1	42.1
00:00:00	46.2	42.6

DATE 08-19-95

TIME	LEVEL	FLOW	
23:00:00	46.0	41.6	
22:00:00	46.0	41.6	
21:00:00	46.0	41.6	
20:00:00	46.0	41.6	
19:00:00	45.9	41.1	
18:00:00	45.7	40.2	
17:00:00	45.7	40.2	
16:00:00	45.7	40.2	
15:00:00	45.8	40.7	
14:00:00	45.8	40.7	
13:00:00	45.9	41.1	
12:00:00	46.0	41.6	← Turbine restarted
11:00:00	47.7	50.0	← Turbine stopped
10:00:00	45.8	40.7	
09:00:00	46.0	41.6	
08:00:00	45.9	41.1	
07:00:00	45.8	40.7	
06:00:00	45.8	40.7	
05:00:00	45.8	40.7	
04:00:00	45.6	39.7	
03:00:00	45.9	41.1	
02:00:00	45.6	39.7	
01:00:00	46.1	42.1	
00:00:00	46.1	42.1	

DATE 08-18-95

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	45.8	40.7
21:00:00	45.8	40.7
20:00:00	45.8	40.7
19:00:00	45.7	40.2
18:00:00	45.7	40.2
17:00:00	45.7	40.2
16:00:00	45.8	40.7
15:00:00	45.9	41.1
14:00:00	45.8	40.7
13:00:00	45.6	39.7
12:00:00	45.8	40.7
11:00:00	46.0	41.6
10:00:00	45.7	40.2
09:00:00	45.9	41.1
08:00:00	46.0	41.6
07:00:00	45.6	39.7
06:00:00	45.7	40.2
05:00:00	45.7	40.2
04:00:00	45.7	40.2
03:00:00	45.9	41.1
02:00:00	46.3	43.0
01:00:00	46.1	42.1
00:00:00	46.1	42.1

DATE 08-17-95

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	45.7	40.2
21:00:00	45.6	39.7
20:00:00	46.1	42.1
19:00:00	46.2	42.6
18:00:00	45.8	40.7
17:00:00	45.6	39.7
16:00:00	45.6	39.7
15:00:00	45.7	40.2
14:00:00	46.3	43.0
13:00:00	46.0	41.6
12:00:00	45.6	39.7
11:00:00	46.0	41.6
10:00:00	46.1	42.1
09:00:00	45.6	39.7
08:00:00	46.1	42.1
07:00:00	45.6	39.7
06:00:00	46.0	41.6
05:00:00	46.1	42.1
04:00:00	46.0	41.6
03:00:00	46.0	41.6
02:00:00	46.1	42.1
01:00:00	45.6	39.7
00:00:00	45.7	40.2

DATE 08-16-95

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	46.2	42.6
21:00:00	45.7	40.2
20:00:00	46.0	41.6
19:00:00	46.6	44.5
18:00:00	45.6	39.7
17:00:00	46.0	41.6
16:00:00	46.2	42.6
15:00:00	45.8	40.7
14:00:00	45.6	39.7
13:00:00	46.0	41.6
12:00:00	45.9	41.1
11:00:00	45.9	41.1
10:00:00	45.8	40.7
09:00:00	45.9	41.1
08:00:00	46.1	42.1
07:00:00	45.9	41.1
06:00:00	45.7	40.2
05:00:00	45.7	40.2
04:00:00	45.7	40.2
03:00:00	45.8	40.7
02:00:00	46.0	41.6
01:00:00	46.0	41.6
00:00:00	45.8	40.7

DATE 08-15-95

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.7	40.2
21:00:00	45.7	40.2
20:00:00	45.8	40.7
19:00:00	46.2	42.6
18:00:00	45.9	41.1
17:00:00	46.4	43.5
16:00:00	45.9	41.1
15:00:00	45.7	40.2
14:00:00	45.6	39.7
13:00:00	45.6	39.7
12:00:00	45.9	41.1
11:00:00	45.9	41.1
10:00:00	45.7	40.2
09:00:00	45.9	41.1
08:00:00	46.1	42.1
07:00:00	45.9	41.1
06:00:00	45.6	39.7
05:00:00	45.8	40.7
04:00:00	46.1	42.1
03:00:00	45.6	39.7
02:00:00	46.0	41.6
01:00:00	46.1	42.1
00:00:00	45.6	39.7

DATE 08-14-95

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	46.1	42.1
21:00:00	45.9	41.1
20:00:00	46.0	41.6
19:00:00	45.7	40.2
18:00:00	46.1	42.1
17:00:00	45.9	41.1
16:00:00	45.6	39.7
15:00:00	46.2	42.6
14:00:00	45.6	39.7
13:00:00	45.8	40.7
12:00:00	46.3	43.0
11:00:00	45.7	40.2
10:00:00	46.0	41.6
09:00:00	45.8	40.7
08:00:00	45.9	41.1
07:00:00	46.0	41.6
06:00:00	45.7	40.2
05:00:00	46.2	42.6
04:00:00	46.0	41.6
03:00:00	46.1	42.1
02:00:00	45.7	40.2
01:00:00	46.1	42.1
00:00:00	45.8	40.7

DATE 08-13-95

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.7	40.2
21:00:00	45.8	40.7
20:00:00	45.9	41.1
19:00:00	45.9	41.1
18:00:00	45.9	41.1
17:00:00	45.7	40.2
16:00:00	45.7	40.2
15:00:00	45.8	40.7
14:00:00	45.8	40.7
13:00:00	45.6	39.7
12:00:00	45.7	40.2
11:00:00	45.8	40.7
10:00:00	46.1	42.1
09:00:00	46.1	42.1
08:00:00	45.9	41.1
07:00:00	45.6	39.7
06:00:00	45.9	41.1
05:00:00	45.7	40.2
04:00:00	45.9	41.1
03:00:00	46.0	41.6
02:00:00	45.6	39.7
01:00:00	45.7	40.2
00:00:00	45.9	41.1

DATE 08-12-95

TIME	LEVEL	FLOW
23:00:00	46.1	42.1
22:00:00	45.9	41.1
21:00:00	45.9	41.1
20:00:00	45.9	41.1
19:00:00	45.9	41.1
18:00:00	45.6	39.7
17:00:00	46.1	42.1
16:00:00	45.6	39.7
15:00:00	45.8	40.7
14:00:00	45.9	41.1
13:00:00	46.1	42.1
12:00:00	46.0	41.6
11:00:00	45.7	40.2
10:00:00	46.0	41.6
09:00:00	46.0	41.6
08:00:00	46.1	42.1
07:00:00	45.9	41.1
06:00:00	45.8	40.7
05:00:00	45.7	40.2
04:00:00	45.8	40.7
03:00:00	45.8	40.7
02:00:00	45.7	40.2
01:00:00	45.7	40.2
00:00:00	45.8	40.7

DATE 08-11-95

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.6	39.7
21:00:00	45.8	40.7
20:00:00	45.8	40.7
19:00:00	45.6	39.7
18:00:00	45.7	40.2
17:00:00	45.6	39.7
16:00:00	45.8	40.7
15:00:00	45.9	41.1
14:00:00	45.6	39.7
13:00:00	45.9	41.1
12:00:00	45.9	41.1
11:00:00	45.9	41.1
10:00:00	45.9	41.1
09:00:00	45.9	41.1
08:00:00	46.0	41.6
07:00:00	46.0	41.6
06:00:00	46.2	42.6
05:00:00	45.9	41.1
04:00:00	45.7	40.2
03:00:00	46.1	42.1
02:00:00	46.0	41.6
01:00:00	45.8	40.7
00:00:00	45.7	40.2

DATE 08-10-95

TIME	LEVEL	FLOW
23:00:00	46.1	42.1
22:00:00	46.0	41.6
21:00:00	45.7	40.2
20:00:00	45.7	40.2
19:00:00	45.8	40.7
18:00:00	46.1	42.1
17:00:00	45.8	40.7
16:00:00	45.7	40.2
15:00:00	45.7	40.2
14:00:00	45.6	39.7
13:00:00	45.8	40.7
12:00:00	46.2	42.6
11:00:00	45.9	41.1
10:00:00	45.7	40.2
09:00:00	46.0	41.6
08:00:00	46.1	42.1
07:00:00	46.0	41.6
06:00:00	45.9	41.1
05:00:00	45.7	40.2
04:00:00	45.8	40.7
03:00:00	46.2	42.6
02:00:00	45.7	40.2
01:00:00	45.9	41.1
00:00:00	45.8	40.7

DATE 08-09-95

TIME	LEVEL	FLOW
23:00:00	46.1	42.1
22:00:00	45.6	39.7
21:00:00	45.8	40.7
20:00:00	46.1	42.1
19:00:00	45.9	41.1
18:00:00	45.6	39.7
17:00:00	46.0	41.6
16:00:00	46.0	41.6
15:00:00	45.8	40.7
14:00:00	45.8	40.7
13:00:00	45.6	39.7
12:00:00	46.2	42.6
11:00:00	45.8	40.7
10:00:00	45.7	40.2
09:00:00	46.0	41.6
08:00:00	46.1	42.1
07:00:00	46.0	41.6
06:00:00	46.0	41.6
05:00:00	45.8	40.7
04:00:00	45.7	40.2
03:00:00	46.2	42.6
02:00:00	45.7	40.2
01:00:00	45.6	39.7
00:00:00	46.1	42.1

DATE 08-08-95

TIME	LEVEL	FLOW	
23:00:00	45.7	40.2	
22:00:00	45.6	39.7	
21:00:00	45.7	40.2	← Turbine restarted
20:00:00	47.4	48.5	← Turbine stopped
19:00:00	45.7	40.2	
18:00:00	46.2	42.6	
17:00:00	46.0	41.6	
16:00:00	45.8	40.7	
15:00:00	45.9	41.1	
14:00:00	45.7	40.2	
13:00:00	46.0	41.6	
12:00:00	45.7	40.2	
11:00:00	46.0	41.6	
10:00:00	46.0	41.6	
09:00:00	45.7	40.2	
08:00:00	45.9	41.1	
07:00:00	46.0	41.6	
06:00:00	46.0	41.6	
05:00:00	46.0	41.6	
04:00:00	46.2	42.6	
03:00:00	46.1	42.1	
02:00:00	46.0	41.6	
01:00:00	46.0	41.6	
00:00:00	45.7	40.2	

DATE 08-07-95

TIME	LEVEL	FLOW
23:00:00	46.0	41.6
22:00:00	45.9	41.1
21:00:00	45.7	40.2
20:00:00	45.8	40.7
19:00:00	45.9	41.1
18:00:00	45.7	40.2
17:00:00	45.6	39.7
16:00:00	45.9	41.1
15:00:00	45.9	41.1
14:00:00	45.9	41.1
13:00:00	45.6	39.7
12:00:00	45.7	40.2
11:00:00	46.1	42.1
10:00:00	45.9	41.1
09:00:00	45.6	39.7
08:00:00	46.2	42.6
07:00:00	45.9	41.1
06:00:00	45.8	40.7
05:00:00	45.8	40.7
04:00:00	45.7	40.2
03:00:00	45.8	40.7
02:00:00	46.1	42.1
01:00:00	45.9	41.1
00:00:00	45.9	41.1

DATE 08-06-95

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	45.8	40.7
21:00:00	45.8	40.7
20:00:00	46.1	42.1
19:00:00	46.1	42.1
18:00:00	46.2	42.6
17:00:00	45.6	39.7
16:00:00	46.0	41.6
15:00:00	45.7	40.2
14:00:00	45.9	41.1
13:00:00	46.0	41.6
12:00:00	46.1	42.1
11:00:00	46.2	42.6
10:00:00	45.9	41.1
09:00:00	45.6	39.7
08:00:00	46.1	42.1
07:00:00	46.1	42.1
06:00:00	46.0	41.6
05:00:00	45.7	40.2
04:00:00	45.9	41.1
03:00:00	46.0	41.6
02:00:00	46.1	42.1
01:00:00	46.0	41.6
00:00:00	45.7	40.2

DATE 08-05-95

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.7	40.2
21:00:00	45.8	40.7
20:00:00	45.8	40.7
19:00:00	45.9	41.1
18:00:00	45.9	41.1
17:00:00	45.9	41.1
16:00:00	45.8	40.7
15:00:00	46.2	42.6
14:00:00	45.6	39.7
13:00:00	45.8	40.7
12:00:00	45.9	41.1
11:00:00	46.0	41.6
10:00:00	46.0	41.6
09:00:00	45.9	41.1
08:00:00	45.8	40.7
07:00:00	45.7	40.2
06:00:00	45.7	40.2
05:00:00	46.0	41.6
04:00:00	46.0	41.6
03:00:00	45.9	41.1
02:00:00	45.9	41.1
01:00:00	45.8	40.7
00:00:00	45.7	40.2

DATE 08-04-95

TIME	LEVEL	FLOW	
23:00:00	45.7	40.2	
22:00:00	45.8	40.7	
21:00:00	46.0	41.6	
20:00:00	46.1	42.1	
19:00:00	46.1	42.1	
18:00:00	46.0	41.6	
17:00:00	45.6	39.7	
16:00:00	45.8	40.7	
15:00:00	46.5	44.0	
14:00:00	46.5	44.0	← Turbine restarted
13:00:00	48.4	57.4	← Turbine Stopped
12:00:00	45.7	40.2	
11:00:00	46.1	42.1	
10:00:00	45.8	40.7	
09:00:00	45.9	41.1	
08:00:00	45.9	41.1	
07:00:00	45.9	41.1	
06:00:00	46.0	41.6	
05:00:00	46.1	42.1	
04:00:00	45.9	41.1	
03:00:00	46.2	42.6	
02:00:00	45.7	40.2	
01:00:00	46.1	42.1	
00:00:00	45.9	41.1	

DATE 08-03-95

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.8	40.7
21:00:00	46.0	41.6
20:00:00	46.0	41.6
19:00:00	45.7	40.2
18:00:00	45.9	41.1
17:00:00	46.0	41.6
16:00:00	45.7	40.2
15:00:00	45.9	41.1
14:00:00	45.9	41.1
13:00:00	46.1	42.1
12:00:00	45.8	40.7
11:00:00	45.7	40.2
10:00:00	46.3	43.0
09:00:00	46.0	41.6
08:00:00	46.1	42.1
07:00:00	46.0	41.6
06:00:00	46.1	42.1
05:00:00	46.2	42.6
04:00:00	46.0	41.6
03:00:00	45.6	39.7
02:00:00	46.2	42.6
01:00:00	46.2	42.6
00:00:00	45.8	40.7

DATE 08-02-95

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	45.6	39.7
21:00:00	46.2	42.6
20:00:00	45.6	39.7
19:00:00	46.0	41.6
18:00:00	45.8	40.7
17:00:00	45.7	40.2
16:00:00	46.1	42.1
15:00:00	45.9	41.1
14:00:00	46.2	42.6
13:00:00	46.0	41.6
12:00:00	45.7	40.2
11:00:00	45.7	40.2
10:00:00	45.8	40.7
09:00:00	45.8	40.7
08:00:00	45.9	41.1
07:00:00	46.0	41.6
06:00:00	45.6	39.7
05:00:00	45.7	40.2
04:00:00	45.7	40.2
03:00:00	45.7	40.2
02:00:00	46.0	41.6
01:00:00	46.1	42.1
00:00:00	46.0	41.6

DATE 08-01-95

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	45.9	41.1
21:00:00	45.7	40.2
20:00:00	46.0	41.6
19:00:00	45.8	40.7
18:00:00	45.7	40.2
17:00:00	46.0	41.6
16:00:00	45.9	41.1
15:00:00	45.9	41.1
14:00:00	45.8	40.7
13:00:00	46.0	41.6
12:00:00	46.1	42.1
11:00:00	46.0	41.6
10:00:00	45.7	40.2
09:00:00	45.9	41.1
08:00:00	46.1	42.1
07:00:00	45.9	41.1
06:00:00	45.7	40.2
05:00:00	45.8	40.7
04:00:00	46.1	42.1
03:00:00	46.0	41.6
02:00:00	46.1	42.1
01:00:00	45.8	40.7
00:00:00	45.7	40.2

CEM COMMERCIAL ENERGY MGMT, INC.

P.O. Box 4518 • Pocatello, Idaho 83205 • Telephone (208) 237-3563 • Fax (208) 237-3563

August 24, 1995
Ref: CEM/1047

RECEIVED
AUG 28 1995
Department of Water Resources

Mr. L. GLEN SAXTON
Chief, Water Allocation Bureau
State of Idaho, Department of Water Resources
1301 North Orchard Street
Statehouse Mail
Boise, ID 83720-9000

Subject: Portneuf River Hydroelectric Project
Lava Hot Springs, Idaho
FERC Project No. 7447-002
Permit No. 29-7699

Dear Mr. Saxton:

Attached please find a copy of the bypass channel flow records for the Month of July, 1995.

Sincerely,

Maher F. Wissa
President

Attachments: 8 sheets

DATE 07-31-95

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.7	40.2
21:00:00	46.4	43.5
20:00:00	45.6	39.7
19:00:00	45.7	40.2
18:00:00	46.0	41.6
17:00:00	46.0	41.6
16:00:00	45.9	41.1
15:00:00	45.6	39.7
14:00:00	45.7	40.2
13:00:00	45.8	40.7
12:00:00	45.7	40.2
11:00:00	45.7	40.2
10:00:00	45.8	40.7
09:00:00	45.9	41.1
08:00:00	45.9	41.1
07:00:00	45.8	40.7
06:00:00	45.7	40.2
05:00:00	45.7	40.2
04:00:00	45.8	40.7
03:00:00	45.9	41.1
02:00:00	46.1	42.1
01:00:00	46.1	42.1
00:00:00	45.9	41.1

DATE 07-30-95

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	46.0	41.6
21:00:00	46.0	41.6
20:00:00	46.1	42.1
19:00:00	46.0	41.6
18:00:00	46.1	42.1
17:00:00	46.0	41.6
16:00:00	45.9	41.1
15:00:00	45.8	40.7
14:00:00	46.0	41.6
13:00:00	45.7	40.2
12:00:00	46.1	42.1
11:00:00	46.0	41.6
10:00:00	46.0	41.6
09:00:00	45.9	41.1
08:00:00	46.0	41.6
07:00:00	46.1	42.1
06:00:00	45.9	41.1
05:00:00	46.0	41.6
04:00:00	46.1	42.1
03:00:00	46.1	42.1
02:00:00	46.2	42.6
01:00:00	45.9	41.1
00:00:00	45.7	40.2

DATE 07-29-95

TIME	LEVEL	FLOW
23:00:00	46.3	43.0
22:00:00	45.7	40.2
21:00:00	45.8	40.7
20:00:00	45.7	40.2
19:00:00	45.9	41.1
18:00:00	45.6	39.7
17:00:00	45.6	39.7
16:00:00	46.2	42.6
15:00:00	45.7	40.2
14:00:00	45.8	40.7
13:00:00	46.0	41.6
12:00:00	46.2	42.6
11:00:00	45.7	40.2
10:00:00	45.6	39.7
09:00:00	46.0	41.6
08:00:00	45.7	40.2
07:00:00	45.7	40.2
06:00:00	45.8	40.7
05:00:00	46.0	41.6
04:00:00	45.8	40.7
03:00:00	45.7	40.2
02:00:00	46.0	41.6
01:00:00	46.2	42.6
00:00:00	46.0	41.6

DATE 07-28-95

TIME	LEVEL	FLOW
23:00:00	46.1	42.1
22:00:00	45.8	40.7
21:00:00	45.7	40.2
20:00:00	46.0	41.6
19:00:00	46.2	42.6
18:00:00	45.7	40.2
17:00:00	45.8	40.7
16:00:00	46.0	41.6
15:00:00	46.1	42.1
14:00:00	46.1	42.1
13:00:00	45.6	39.7
12:00:00	45.7	40.2
11:00:00	45.8	40.7
10:00:00	45.8	40.7
09:00:00	45.7	40.2
08:00:00	46.0	41.6
07:00:00	45.8	40.7
06:00:00	45.6	39.7
05:00:00	46.0	41.6
04:00:00	46.0	41.6
03:00:00	45.9	41.1
02:00:00	45.9	41.1
01:00:00	45.7	40.2
00:00:00	45.7	40.2

DATE 07-27-95

TIME	LEVEL	FLOW
23:00:00	46.2	42.6
22:00:00	46.0	41.6
21:00:00	45.9	41.1
20:00:00	45.9	41.1
19:00:00	45.8	40.7
18:00:00	45.9	41.1
17:00:00	45.8	40.7
16:00:00	45.7	40.2
15:00:00	46.0	41.6
14:00:00	46.0	41.6
13:00:00	45.7	40.2
12:00:00	45.9	41.1
11:00:00	45.8	40.7
10:00:00	45.6	39.7
09:00:00	45.8	40.7
08:00:00	45.7	40.2
07:00:00	45.8	40.7
06:00:00	45.8	40.7
05:00:00	46.2	42.6
04:00:00	46.0	41.6
03:00:00	45.8	40.7
02:00:00	45.8	40.7
01:00:00	45.8	40.7
00:00:00	45.7	40.2

DATE 07-26-95

TIME	LEVEL	FLOW
23:00:00	46.0	41.6
22:00:00	46.1	42.1
21:00:00	46.1	42.1
20:00:00	46.1	42.1
19:00:00	46.2	42.6
18:00:00	45.7	40.2
17:00:00	45.6	39.7
16:00:00	45.7	40.2
15:00:00	45.9	41.1
14:00:00	45.6	39.7
13:00:00	45.7	40.2
12:00:00	46.3	43.0
11:00:00	46.0	41.6
10:00:00	45.9	41.1
09:00:00	46.1	42.1
08:00:00	45.9	41.1
07:00:00	45.9	41.1
06:00:00	46.0	41.6
05:00:00	45.9	41.1
04:00:00	45.7	40.2
03:00:00	46.1	42.1
02:00:00	46.0	41.6
01:00:00	46.1	42.1
00:00:00	46.0	41.6

DATE 07-25-95

TIME	LEVEL	FLOW
23:00:00	45.6	39.7
22:00:00	46.2	42.6
21:00:00	45.9	41.1
20:00:00	45.7	40.2
19:00:00	45.9	41.1
18:00:00	46.1	42.1
17:00:00	45.7	40.2
16:00:00	45.9	41.1
15:00:00	46.1	42.1
14:00:00	45.6	39.7
13:00:00	45.9	41.1
12:00:00	45.6	39.7
11:00:00	45.8	40.7
10:00:00	45.7	40.2
09:00:00	46.1	42.1
08:00:00	45.7	40.2
07:00:00	45.6	39.7
06:00:00	46.1	42.1
05:00:00	45.7	40.2
04:00:00	45.9	41.1
03:00:00	45.9	41.1
02:00:00	46.3	43.0
01:00:00	45.8	40.7
00:00:00	46.1	42.1

DATE 07-24-95

TIME	LEVEL	FLOW
23:00:00	46.0	41.6
22:00:00	45.6	39.7
21:00:00	46.0	41.6
20:00:00	46.0	41.6
19:00:00	46.1	42.1
18:00:00	45.7	40.2
17:00:00	45.7	40.2
16:00:00	45.9	41.1
15:00:00	46.0	41.6
14:00:00	46.1	42.1
13:00:00	45.9	41.1
12:00:00	45.8	40.7
11:00:00	45.9	41.1
10:00:00	46.0	41.6
09:00:00	46.0	41.6
08:00:00	46.0	41.6
07:00:00	46.0	41.6
06:00:00	46.0	41.6
05:00:00	46.2	42.6
04:00:00	46.0	41.6
03:00:00	45.6	39.7
02:00:00	45.8	40.7
01:00:00	46.0	41.6
00:00:00	45.9	41.1

DATE 07-23-95

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.8	40.7
21:00:00	45.8	40.7
20:00:00	46.2	42.6
19:00:00	45.8	40.7
18:00:00	45.6	39.7
17:00:00	45.9	41.1
16:00:00	46.0	41.6
15:00:00	45.7	40.2
14:00:00	45.9	41.1
13:00:00	46.1	42.1
12:00:00	45.6	39.7
11:00:00	46.0	41.6
10:00:00	45.8	40.7
09:00:00	45.6	39.7
08:00:00	46.0	41.6
07:00:00	46.0	41.6
06:00:00	46.0	41.6
05:00:00	46.0	41.6
04:00:00	46.0	41.6
03:00:00	46.1	42.1
02:00:00	46.2	42.6
01:00:00	46.1	42.1
00:00:00	46.0	41.6

DATE 07-22-95

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	45.8	40.7
21:00:00	45.8	40.7
20:00:00	46.0	41.6
19:00:00	45.9	41.1
18:00:00	46.0	41.6
17:00:00	45.9	41.1
16:00:00	45.8	40.7
15:00:00	45.9	41.1
14:00:00	46.0	41.6
13:00:00	45.7	40.2
12:00:00	45.9	41.1
11:00:00	46.0	41.6
10:00:00	46.1	42.1
09:00:00	46.1	42.1
08:00:00	46.1	42.1
07:00:00	46.0	41.6
06:00:00	46.0	41.6
05:00:00	45.9	41.1
04:00:00	46.0	41.6
03:00:00	46.1	42.1
02:00:00	46.0	41.6
01:00:00	45.7	40.2
00:00:00	45.9	41.1

DATE 07-21-95

TIME	LEVEL	FLOW
23:00:00	46.1	42.1
22:00:00	45.7	40.2
21:00:00	45.8	41.1
20:00:00	46.0	41.6
19:00:00	45.8	40.7
18:00:00	45.9	41.1
17:00:00	45.9	41.1
16:00:00	45.7	40.2
15:00:00	45.6	39.7
14:00:00	45.8	40.7
13:00:00	45.9	41.1
12:00:00	45.8	40.7
11:00:00	45.7	40.2
10:00:00	45.8	40.7
09:00:00	45.7	40.2
08:00:00	45.8	40.7
07:00:00	45.9	41.1
06:00:00	46.1	42.1
05:00:00	46.0	41.6
04:00:00	45.7	40.2
03:00:00	45.8	40.7
02:00:00	46.3	43.0
01:00:00	46.0	41.6
00:00:00	46.0	41.6

DATE 07-20-95

TIME	LEVEL	FLOW
23:00:00	46.2	42.6
22:00:00	45.7	40.2
21:00:00	46.1	42.1
20:00:00	46.0	41.6
19:00:00	45.9	41.1
18:00:00	45.8	40.7
17:00:00	45.9	41.1
16:00:00	45.6	39.7
15:00:00	45.8	40.7
14:00:00	45.7	40.2
13:00:00	45.7	40.2
12:00:00	45.8	40.7
11:00:00	45.9	41.1
10:00:00	46.1	42.1
09:00:00	45.9	41.1
08:00:00	46.0	41.6
07:00:00	46.2	42.6
06:00:00	46.1	42.1
05:00:00	46.1	42.1
04:00:00	45.9	41.1
03:00:00	45.8	40.7
02:00:00	46.0	41.6
01:00:00	46.2	42.6
00:00:00	45.7	40.2

DATE 07-19-95

TIME	LEVEL	FLOW
23:00:00	46.0	41.6
22:00:00	45.6	39.7
21:00:00	46.0	41.6
20:00:00	46.0	41.6
19:00:00	46.2	42.6
18:00:00	46.0	41.6
17:00:00	45.9	41.1
16:00:00	45.7	40.2
15:00:00	46.0	41.6
14:00:00	46.0	41.6
13:00:00	45.9	41.1
12:00:00	45.8	40.7
11:00:00	45.8	40.7
10:00:00	45.7	40.2
09:00:00	46.1	42.1
08:00:00	45.9	41.1
07:00:00	45.7	40.2
06:00:00	45.9	41.1
05:00:00	45.9	41.1
04:00:00	45.7	40.2
03:00:00	45.7	40.2
02:00:00	45.8	40.7
01:00:00	45.8	40.7
00:00:00	45.6	39.7

DATE 07-18-95

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	46.1	42.1
21:00:00	45.8	40.7
20:00:00	45.6	39.7
19:00:00	45.8	40.7
18:00:00	45.9	41.1
17:00:00	45.7	40.2
16:00:00	45.7	40.2
15:00:00	46.3	43.0
14:00:00	46.1	42.1
13:00:00	46.1	42.1
12:00:00	45.9	41.1
11:00:00	45.6	39.7
10:00:00	45.8	40.7
09:00:00	45.9	41.1
08:00:00	46.0	41.6
07:00:00	46.0	41.6
06:00:00	46.1	42.1
05:00:00	46.1	42.1
04:00:00	45.6	39.7
03:00:00	46.0	41.6
02:00:00	46.0	41.6
01:00:00	45.7	40.2
00:00:00	46.0	41.6

DATE 07-17-95

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	45.8	40.7
21:00:00	46.0	41.6
20:00:00	46.0	41.6
19:00:00	45.6	39.7
18:00:00	45.8	40.7
17:00:00	45.7	40.2
16:00:00	46.2	42.6
15:00:00	45.9	41.1
14:00:00	45.6	39.7
13:00:00	46.2	42.6
12:00:00	45.8	40.7
11:00:00	45.7	40.2
10:00:00	45.8	40.7
09:00:00	45.6	39.7
08:00:00	46.1	42.1
07:00:00	45.7	40.2
06:00:00	45.9	41.1
05:00:00	46.1	42.1
04:00:00	45.7	40.2
03:00:00	45.8	40.7
02:00:00	46.0	41.6
01:00:00	45.9	41.1
00:00:00	45.8	40.7

DATE 07-16-95

TIME	LEVEL	FLOW
23:00:00	46.1	42.1
22:00:00	46.0	41.6
21:00:00	45.9	41.1
20:00:00	45.9	41.1
19:00:00	45.9	41.1
18:00:00	46.0	41.6
17:00:00	46.1	42.1
16:00:00	46.1	42.1
15:00:00	45.9	41.1
14:00:00	45.6	39.7
13:00:00	46.2	42.6
12:00:00	46.1	42.1
11:00:00	45.7	40.2
10:00:00	45.8	40.7
09:00:00	45.6	39.7
08:00:00	45.7	40.2
07:00:00	45.7	40.2
06:00:00	45.7	40.2
05:00:00	45.8	40.7
04:00:00	45.9	41.1
03:00:00	46.2	42.6
02:00:00	45.8	40.7
01:00:00	45.8	40.7
00:00:00	46.1	42.1

DATE 07-15-95

TIME	LEVEL	FLOW
23:00:00	46.0	41.6
22:00:00	45.7	40.2
21:00:00	45.9	41.1
20:00:00	46.0	41.6
19:00:00	45.6	39.7
18:00:00	45.7	40.2
17:00:00	45.9	41.1
16:00:00	45.9	41.1
15:00:00	45.6	39.7
14:00:00	46.5	44.0
13:00:00	53.0	126.5
12:00:00	46.4	43.5
11:00:00	45.8	40.7
10:00:00	45.7	40.2
09:00:00	45.8	40.7
08:00:00	45.8	40.7
07:00:00	45.8	40.7
06:00:00	45.8	40.7
05:00:00	45.8	40.7
04:00:00	45.8	40.7
03:00:00	46.0	41.6
02:00:00	45.9	41.1
01:00:00	45.8	40.7
00:00:00	45.6	39.7

DATE 07-14-95

TIME	LEVEL	FLOW
23:00:00	46.2	42.6
22:00:00	45.9	41.1
21:00:00	45.6	39.7
20:00:00	45.9	41.1
19:00:00	46.1	42.1
18:00:00	45.7	40.2
17:00:00	45.8	40.7
16:00:00	45.9	41.1
15:00:00	45.8	40.7
14:00:00	45.6	39.7
13:00:00	45.8	40.7
12:00:00	46.0	41.6
11:00:00	46.1	42.1
10:00:00	45.9	41.1
09:00:00	46.1	42.1
08:00:00	46.0	41.6
07:00:00	45.9	41.1
06:00:00	45.8	40.7
05:00:00	45.9	41.1
04:00:00	45.9	41.1
03:00:00	45.7	40.2
02:00:00	45.8	40.7
01:00:00	46.1	42.1
00:00:00	45.8	40.7

DATE 07-13-95

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	46.3	43.0
21:00:00	45.7	40.2
20:00:00	45.7	40.2
19:00:00	46.0	41.6
18:00:00	45.9	41.1
17:00:00	45.7	40.2
16:00:00	45.8	40.7
15:00:00	45.9	41.1
14:00:00	45.6	39.7
13:00:00	46.0	41.6
12:00:00	46.0	41.6
11:00:00	46.0	41.6
10:00:00	45.8	40.7
09:00:00	45.7	40.2
08:00:00	45.8	40.7
07:00:00	46.0	41.6
06:00:00	45.6	39.7
05:00:00	46.1	42.1
04:00:00	46.2	42.6
03:00:00	45.8	40.7
02:00:00	45.9	41.1
01:00:00	45.9	41.1
00:00:00	45.7	40.2

DATE 07-12-95

TIME	LEVEL	FLOW
23:00:00	46.1	42.1
22:00:00	45.6	39.7
21:00:00	45.8	40.7
20:00:00	46.2	42.6
19:00:00	45.9	41.1
18:00:00	46.3	43.0
17:00:00	45.6	39.7
16:00:00	46.0	41.6
15:00:00	45.9	41.1
14:00:00	45.7	40.2
13:00:00	46.2	42.6
12:00:00	46.0	41.6
11:00:00	45.7	40.2
10:00:00	45.9	41.1
09:00:00	45.9	41.1
08:00:00	45.7	40.2
07:00:00	46.0	41.6
06:00:00	46.1	42.1
05:00:00	46.1	42.1
04:00:00	46.0	41.6
03:00:00	45.9	41.1
02:00:00	45.8	40.7
01:00:00	46.0	41.6
00:00:00	45.8	40.7

DATE 07-11-95

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.7	40.2
21:00:00	45.9	41.1
20:00:00	45.7	40.2
19:00:00	45.9	41.1
18:00:00	45.7	40.2
17:00:00	45.6	39.7
16:00:00	45.8	40.7
15:00:00	45.7	40.2
14:00:00	45.7	40.2
13:00:00	45.6	39.7
12:00:00	45.8	40.7
11:00:00	45.9	41.1
10:00:00	45.6	39.7
09:00:00	46.1	42.1
08:00:00	46.2	42.6
07:00:00	46.0	41.6
06:00:00	46.2	42.1
05:00:00	46.1	42.1
04:00:00	46.1	42.1
03:00:00	46.2	42.6
02:00:00	45.6	39.7
01:00:00	45.6	39.7
00:00:00	45.7	40.2

DATE 07-10-95

TIME	LEVEL	FLOW
23:00:00	46.1	42.1
22:00:00	45.7	40.2
21:00:00	45.9	41.1
20:00:00	46.0	41.6
19:00:00	45.6	39.7
18:00:00	46.5	44.0
17:00:00	45.6	39.7
16:00:00	45.9	41.1
15:00:00	45.7	40.2
14:00:00	46.1	42.1
13:00:00	45.9	41.1
12:00:00	45.7	40.2
11:00:00	46.0	41.6
10:00:00	45.9	41.1
09:00:00	46.0	41.6
08:00:00	47.3	48.0
07:00:00	46.1	42.1
06:00:00	46.0	41.6
05:00:00	46.1	42.1
04:00:00	45.6	39.7
03:00:00	45.9	41.1
02:00:00	45.8	40.7
01:00:00	45.8	40.7
00:00:00	45.7	40.2

DATE 07-09-95

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	46.1	42.1
21:00:00	45.9	41.1
20:00:00	45.9	41.1
19:00:00	46.1	42.1
18:00:00	45.7	40.2
17:00:00	45.8	40.7
16:00:00	46.2	42.6
15:00:00	46.0	41.6
14:00:00	45.8	40.7
13:00:00	45.8	40.7
12:00:00	46.0	41.6
11:00:00	46.1	42.1
10:00:00	45.8	40.7
09:00:00	45.9	41.1
08:00:00	46.1	42.1
07:00:00	46.2	42.6
06:00:00	46.0	41.6
05:00:00	46.1	42.1
04:00:00	46.0	41.6
03:00:00	46.1	42.1
02:00:00	46.1	42.1
01:00:00	46.0	41.6
00:00:00	45.9	41.1

DATE 07-08-95

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.8	40.7
21:00:00	45.7	40.2
20:00:00	45.8	40.7
19:00:00	45.8	40.7
18:00:00	45.9	41.1
17:00:00	46.1	42.1
16:00:00	46.0	41.6
15:00:00	45.6	39.7
14:00:00	45.7	40.2
13:00:00	45.8	40.7
12:00:00	45.7	40.2
11:00:00	45.8	40.7
10:00:00	45.7	40.2
09:00:00	45.8	40.7
08:00:00	45.9	41.1
07:00:00	45.8	40.7
06:00:00	45.7	40.2
05:00:00	45.7	40.2
04:00:00	46.1	42.1
03:00:00	46.1	42.1
02:00:00	45.9	41.1
01:00:00	45.8	40.7
00:00:00	45.7	40.2

DATE 07-07-95

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.9	41.1
21:00:00	45.8	40.7
20:00:00	45.8	40.7
19:00:00	45.8	40.7
18:00:00	46.1	42.1
17:00:00	46.0	41.6
16:00:00	45.6	39.7
15:00:00	45.8	40.7
14:00:00	46.0	41.6
13:00:00	45.7	40.2
12:00:00	46.0	41.6
11:00:00	45.7	40.2
10:00:00	51.9	109.6
09:00:00	45.7	40.2
08:00:00	46.6	44.5
07:00:00	46.0	41.6
06:00:00	46.1	42.1
05:00:00	45.8	40.7
04:00:00	45.7	40.2
03:00:00	45.7	40.2
02:00:00	45.7	40.2
01:00:00	45.7	40.2
00:00:00	45.7	40.2

DATE 07-06-95

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	45.6	39.7
21:00:00	46.2	42.6
20:00:00	45.9	41.1
19:00:00	45.9	41.1
18:00:00	46.1	42.1
17:00:00	45.7	40.2
16:00:00	46.3	43.0
15:00:00	46.1	42.1
14:00:00	45.6	39.7
13:00:00	46.1	42.1
12:00:00	45.9	41.1
11:00:00	45.7	40.2
10:00:00	45.7	40.2
09:00:00	45.7	40.2
08:00:00	45.7	40.2
07:00:00	45.9	41.1
06:00:00	46.1	42.1
05:00:00	46.0	41.6
04:00:00	45.9	41.1
03:00:00	45.7	40.2
02:00:00	45.9	41.1
01:00:00	45.9	41.1
00:00:00	45.9	41.1

DATE 07-01-95

TIME	LEVEL	FLOW	
23:00:00	45.7	40.2	
22:00:00	49.0	66.2	← Turbine restarted
21:00:00	53.6	135.8	
20:00:00	50.1	82.5	↑ Turbine Stopped
19:00:00	45.7	40.2	
18:00:00	45.9	41.1	
17:00:00	45.9	41.1	
16:00:00	45.9	41.1	
15:00:00	45.7	40.2	
14:00:00	45.7	40.2	
13:00:00	46.1	42.1	
12:00:00	47.9	51.0	← Turbine restarted
11:00:00	51.0	96.0	← Turbine Stopped
10:00:00	45.8	40.7	
09:00:00	45.7	40.2	
08:00:00	46.0	41.6	
07:00:00	46.1	42.1	
06:00:00	45.9	41.1	
05:00:00	45.7	40.2	
04:00:00	45.9	41.1	
03:00:00	46.0	41.6	
02:00:00	46.2	42.6	
01:00:00	45.9	41.1	
00:00:00	45.8	40.7	

CEM COMMERCIAL ENERGY MGMT, INC.

P.O. Box 4518 • Pocatello, Idaho 83205 • Telephone (208) 237-3563 • Fax (208) 237-3563

July 27, 1995
Ref: CEM/1045

RECEIVED
JUL 31 1995
Department of Water Resources

Mr. L. GLEN SAXTON
Chief, Water Allocation Bureau
State of Idaho, Department of Water Resources
1301 North Orchard Street
Statehouse Mail
Boise, ID 83720-9000

Subject: Portneuf River Hydroelectric Project
Lava Hot Springs, Idaho
FERC Project ~~No.~~ 7447-002
Permit No. 29-7699

Dear Mr. Saxton:

Attached please find a copy of the bypass channel flow records for the Month of June, 1995.

Sincerely,

Maher F. Wissa
President

Attachments: 8 sheets

DATE 06-30-95

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	46.1	42.1
21:00:00	46.1	42.1
20:00:00	46.1	42.1
19:00:00	46.0	41.6
18:00:00	46.1	42.1
17:00:00	46.1	42.1
16:00:00	46.1	42.1
15:00:00	46.1	42.1
14:00:00	46.1	42.1
13:00:00	46.0	41.6
12:00:00	46.2	42.6
11:00:00	46.2	42.6
10:00:00	46.0	41.6
09:00:00	46.0	41.6
08:00:00	46.1	42.1
07:00:00	46.0	41.6
06:00:00	45.8	40.7
05:00:00	45.7	40.2
04:00:00	46.0	41.6
03:00:00	46.0	41.6
02:00:00	45.8	40.7
01:00:00	45.7	40.2
00:00:00	46.0	41.6

DATE 06-29-95

TIME	LEVEL	FLOW
23:00:00	46.1	42.1
22:00:00	46.1	42.1
21:00:00	46.0	41.6
20:00:00	45.9	41.1
19:00:00	46.1	42.1
18:00:00	46.0	41.6
17:00:00	46.1	42.1
16:00:00	45.9	41.1
15:00:00	46.1	42.1
14:00:00	46.0	41.6
13:00:00	46.0	41.6
12:00:00	46.0	41.6
11:00:00	46.0	41.6
10:00:00	45.9	41.1
09:00:00	45.7	40.2
08:00:00	46.1	42.1
07:00:00	45.9	41.1
06:00:00	45.7	40.2
05:00:00	46.1	42.1
04:00:00	46.1	42.1
03:00:00	46.0	41.6
02:00:00	46.0	41.6
01:00:00	46.0	41.6
00:00:00	46.1	42.1

DATE 06-28-95

TIME	LEVEL	FLOW	
23:00:00	46.0	41.6	
22:00:00	45.8	40.7	
21:00:00	45.7	40.2	
20:00:00	45.6	39.7	
19:00:00	45.7	40.2	
18:00:00	45.9	41.1	
17:00:00	46.1	42.1	
16:00:00	45.6	39.7	
15:00:00	45.8	40.7	
14:00:00	46.2	42.6	
13:00:00	46.0	41.6	
12:00:00	49.1	67.6 ↑	Turbine restarted
11:00:00	52.8	123.4	
10:00:00	52.4	117.3	
09:00:00	50.7	91.4	
08:00:00	49.9	79.5	
07:00:00	48.9	64.7	
06:00:00	46.1	42.1 ↑	Turbine stopped
05:00:00	45.8	40.7	
04:00:00	45.7	40.2	
03:00:00	45.8	40.7	
02:00:00	45.8	40.7	
01:00:00	45.7	40.2	
00:00:00	45.8	40.7	

DATE 06-27-95

TIME	LEVEL	FLOW
23:00:00	46.1	42.1
22:00:00	46.0	41.6
21:00:00	45.7	40.2
20:00:00	45.7	40.2
19:00:00	45.9	41.1
18:00:00	46.0	41.6
17:00:00	45.8	40.7
16:00:00	45.6	39.7
15:00:00	45.7	40.2
14:00:00	45.7	40.2
13:00:00	45.7	40.2
12:00:00	45.7	40.2
11:00:00	45.8	40.7
10:00:00	45.8	40.7
09:00:00	45.8	40.7
08:00:00	45.6	39.7
07:00:00	45.7	40.2
06:00:00	45.9	41.1
05:00:00	45.9	41.1
04:00:00	45.6	39.7
03:00:00	45.7	40.2
02:00:00	45.8	40.7
01:00:00	45.7	40.2
00:00:00	45.6	39.7

DATE 06-26-95

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	46.0	41.6
21:00:00	45.9	41.1
20:00:00	45.7	40.2
19:00:00	45.8	40.7
18:00:00	45.8	40.7
17:00:00	45.7	40.2
16:00:00	45.6	39.7
15:00:00	45.7	40.2
14:00:00	45.6	39.7
13:00:00	45.8	40.7
12:00:00	45.8	40.7
11:00:00	45.7	40.2
10:00:00	45.7	40.2
09:00:00	45.6	39.7
08:00:00	45.6	39.7
07:00:00	45.9	41.1
06:00:00	46.0	41.6
05:00:00	46.1	42.1
04:00:00	46.0	41.6
03:00:00	45.9	41.1
02:00:00	46.0	41.6
01:00:00	46.1	42.1
00:00:00	46.2	42.6

DATE 06-25-95

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.6	39.7
21:00:00	46.1	42.1
20:00:00	46.0	41.6
19:00:00	46.0	41.6
18:00:00	46.0	41.6
17:00:00	46.1	42.1
16:00:00	45.7	40.2
15:00:00	45.8	40.7
14:00:00	46.0	41.6
13:00:00	45.9	41.1
12:00:00	45.7	40.2
11:00:00	46.1	42.1
10:00:00	46.1	42.1
09:00:00	45.8	40.7
08:00:00	45.7	40.2
07:00:00	45.8	40.7
06:00:00	46.2	42.6
05:00:00	45.6	39.7
04:00:00	45.9	41.1
03:00:00	46.0	41.6
02:00:00	46.1	42.1
01:00:00	46.0	41.6
00:00:00	45.6	39.7

DATE 06-24-95

TIME	LEVEL	FLOW
23:00:00	46.5	44.0
22:00:00	45.8	40.7
21:00:00	46.2	42.6
20:00:00	45.8	40.7
19:00:00	46.2	42.6
18:00:00	46.0	41.6
17:00:00	46.1	42.1
16:00:00	45.9	41.1
15:00:00	46.0	41.6
14:00:00	45.9	41.1
13:00:00	45.6	39.7
12:00:00	46.0	41.6
11:00:00	45.9	41.1
10:00:00	45.6	39.7
09:00:00	46.0	41.6
08:00:00	46.1	42.1
07:00:00	45.9	41.1
06:00:00	45.7	40.2
05:00:00	45.8	40.7
04:00:00	46.2	42.6
03:00:00	46.0	41.6
02:00:00	46.0	41.6
01:00:00	46.1	42.1
00:00:00	45.8	40.7

DATE 06-23-95

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	46.2	42.6
21:00:00	45.8	40.7
20:00:00	45.7	40.2
19:00:00	45.8	40.7
18:00:00	46.0	41.6
17:00:00	46.0	41.6
16:00:00	45.6	39.7
15:00:00	45.9	41.1
14:00:00	45.8	40.7
13:00:00	45.9	41.1
12:00:00	46.0	41.6
11:00:00	45.6	39.7
10:00:00	46.0	41.6
09:00:00	45.9	41.1
08:00:00	45.7	40.2
07:00:00	46.2	42.6
06:00:00	45.7	40.2
05:00:00	45.8	40.7
04:00:00	45.8	40.7
03:00:00	45.7	40.2
02:00:00	45.7	40.2
01:00:00	45.8	40.7
00:00:00	45.7	40.2

DATE 06-22-95

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	46.3	43.0
21:00:00	45.9	41.1
20:00:00	45.9	41.1
19:00:00	45.8	40.7
18:00:00	45.7	40.2
17:00:00	45.6	39.7
16:00:00	45.7	40.2
15:00:00	45.9	41.1
14:00:00	46.1	42.1
13:00:00	45.7	40.2
12:00:00	45.9	41.1
11:00:00	46.0	41.6
10:00:00	45.7	40.2
09:00:00	46.0	41.6
08:00:00	45.9	41.1
07:00:00	46.2	42.6
06:00:00	46.1	42.1
05:00:00	46.1	42.1
04:00:00	45.9	41.1
03:00:00	46.0	41.6
02:00:00	45.6	39.7
01:00:00	46.3	43.0
00:00:00	46.0	41.6

DATE 06-21-95

TIME	LEVEL	FLOW	
23:00:00	45.6	39.7	
22:00:00	46.2	42.6	
21:00:00	45.8	40.7	
20:00:00	45.7	40.2	↑ Turbine restarted
19:00:00	54.1	143.6	
18:00:00	54.2	145.2	
17:00:00	54.2	145.2	
16:00:00	54.1	143.6	
15:00:00	53.9	140.5	
14:00:00	52.1	112.7	↑ Turbine stopped
13:00:00	46.0	41.6	
12:00:00	46.0	41.6	
11:00:00	45.8	40.7	
10:00:00	45.7	40.2	
09:00:00	45.8	40.7	
08:00:00	45.7	40.2	
07:00:00	45.6	39.7	
06:00:00	46.2	42.6	
05:00:00	45.9	41.1	
04:00:00	45.6	39.7	
03:00:00	45.7	40.2	
02:00:00	45.7	40.2	
01:00:00	45.8	40.7	
00:00:00	46.1	42.1	

DATE 06-20-95

TIME	LEVEL	FLOW
23:00:00	45.6	39.7
22:00:00	45.7	40.2
21:00:00	45.6	39.7
20:00:00	45.8	40.7
19:00:00	46.0	41.6
18:00:00	45.7	40.2
17:00:00	45.8	40.7
16:00:00	45.7	40.2
15:00:00	45.8	40.7
14:00:00	45.7	40.2
13:00:00	45.9	41.1
12:00:00	46.0	41.6
11:00:00	45.6	39.7
10:00:00	45.9	41.1
09:00:00	46.0	41.6
08:00:00	45.9	41.1
07:00:00	45.8	40.7
06:00:00	45.7	40.2
05:00:00	45.6	39.7
04:00:00	45.7	40.2
03:00:00	45.6	39.7
02:00:00	45.7	40.2
01:00:00	45.9	41.1
00:00:00	46.2	42.6

DATE 06-19-95

TIME	LEVEL	FLOW
23:00:00	46.0	41.6
22:00:00	46.1	42.1
21:00:00	46.0	41.6
20:00:00	46.1	42.1
19:00:00	46.1	42.1
18:00:00	45.8	40.7
17:00:00	45.6	39.7
16:00:00	45.7	40.2
15:00:00	45.9	41.1
14:00:00	46.1	42.1
13:00:00	45.8	40.7
12:00:00	45.7	40.2
11:00:00	45.6	39.7
10:00:00	45.8	40.7
09:00:00	46.1	42.1
08:00:00	45.6	39.7
07:00:00	45.7	40.2
06:00:00	45.7	40.2
05:00:00	45.6	39.7
04:00:00	45.6	39.7
03:00:00	45.7	40.2
02:00:00	45.9	41.1
01:00:00	46.1	42.1
00:00:00	45.7	40.2

DATE 06-18-95

TIME	LEVEL	FLOW
23:00:00	45.6	39.7
22:00:00	45.6	39.7
21:00:00	45.7	40.2
20:00:00	45.7	40.2
19:00:00	45.9	41.1
18:00:00	45.6	39.7
17:00:00	45.7	40.2
16:00:00	45.6	39.7
15:00:00	45.8	40.7
14:00:00	46.2	42.6
13:00:00	45.9	41.1
12:00:00	45.7	40.2
11:00:00	45.8	40.7
10:00:00	45.9	41.1
09:00:00	45.7	40.2
08:00:00	45.7	40.2
07:00:00	45.8	40.7
06:00:00	45.9	41.1
05:00:00	45.9	41.1
04:00:00	46.0	41.6
03:00:00	46.1	42.1
02:00:00	46.2	42.6
01:00:00	46.2	42.6
00:00:00	46.3	43.0

DATE 06-17-95

TIME	LEVEL	FLOW
23:00:00	46.5	44.0
22:00:00	46.7	45.0
21:00:00	46.8	45.5
20:00:00	46.6	44.5
19:00:00	46.9	46.0
18:00:00	47.1	47.0
17:00:00	47.3	48.0
16:00:00	47.5	49.0
15:00:00	47.5	49.0
14:00:00	47.8	50.5
13:00:00	47.9	51.0
12:00:00	48.0	51.5
11:00:00	47.9	51.0
10:00:00	48.4	57.4
09:00:00	48.5	58.8
08:00:00	48.3	55.9
07:00:00	48.3	55.9
06:00:00	48.3	55.9
05:00:00	48.3	55.9
04:00:00	48.1	53.0
03:00:00	48.2	54.5
02:00:00	48.2	54.5
01:00:00	48.1	53.0
00:00:00	47.3	48.0

DATE 06-16-95

TIME	LEVEL	FLOW	
23:00:00	47.4	48.5	
22:00:00	48.1	53.0 ↑	Turbine restarted
21:00:00	54.0	142.0 ↑	Turbine stopped
20:00:00	49.2	69.1	
19:00:00	49.3	70.6	
18:00:00	49.4	72.1	
17:00:00	49.4	72.1	
16:00:00	49.4	72.1	
15:00:00	49.4	72.1	
14:00:00	49.5	73.5	
13:00:00	49.6	75.0	
12:00:00	49.7	76.5	
11:00:00	49.8	78.0	
10:00:00	49.6	75.0	
09:00:00	50.4	86.9	
08:00:00	49.3	70.6	
07:00:00	49.2	69.1	
06:00:00	48.9	64.7	
05:00:00	48.6	60.3	
04:00:00	48.5	58.8	
03:00:00	48.5	58.8	
02:00:00	48.5	58.8	
01:00:00	48.5	58.8	
00:00:00	48.6	60.3	

DATE 06-15-95

TIME	LEVEL	FLOW
23:00:00	48.7	61.8
22:00:00	48.7	61.8
21:00:00	48.6	60.3
20:00:00	48.8	63.2
19:00:00	48.9	64.7
18:00:00	48.9	64.7
17:00:00	49.1	66.2
16:00:00	49.0	66.2
15:00:00	49.1	67.6
14:00:00	49.1	67.6
13:00:00	49.2	69.1
12:00:00	49.2	69.1
11:00:00	49.2	69.1
10:00:00	49.2	69.1
09:00:00	49.2	69.1
08:00:00	49.1	67.6
07:00:00	49.0	66.2
06:00:00	48.9	64.7
05:00:00	48.8	63.2
04:00:00	48.6	60.3
03:00:00	48.7	61.8
02:00:00	48.5	58.8
01:00:00	48.5	58.8
00:00:00	48.5	58.8

DATE 06-14-95

TIME	LEVEL	FLOW
23:00:00	48.5	58.8
22:00:00	48.5	58.8
21:00:00	48.5	58.8
20:00:00	48.6	60.3
19:00:00	48.6	60.3
18:00:00	48.6	60.3
17:00:00	48.7	61.8
16:00:00	48.8	63.2
15:00:00	48.8	63.2
14:00:00	49.0	66.2
13:00:00	49.0	66.2
12:00:00	49.5	73.5
11:00:00	49.5	73.5
10:00:00	49.4	72.1
09:00:00	49.3	70.6
08:00:00	49.3	70.6
07:00:00	49.0	66.2
06:00:00	49.2	69.1
05:00:00	49.1	67.6
04:00:00	48.8	63.2
03:00:00	48.7	61.8
02:00:00	48.7	61.8
01:00:00	48.5	58.8
00:00:00	48.4	57.4

DATE 06-13-95

TIME	LEVEL	FLOW
23:00:00	48.3	55.9
22:00:00	48.4	57.4
21:00:00	48.4	57.4
20:00:00	48.3	55.9
19:00:00	48.5	58.8
18:00:00	48.6	60.3
17:00:00	48.9	64.7
16:00:00	48.9	64.7
15:00:00	48.9	64.7
14:00:00	49.0	66.2
13:00:00	48.8	63.2
12:00:00	48.8	63.2
11:00:00	48.7	61.8
10:00:00	48.3	55.9
09:00:00	48.1	53.0
08:00:00	47.9	51.0
07:00:00	47.7	50.0
06:00:00	47.4	48.5
05:00:00	47.2	47.5
04:00:00	46.9	46.0
03:00:00	46.7	45.0
02:00:00	46.6	44.5
01:00:00	46.5	44.0
00:00:00	46.3	43.0

DATE 06-12-95

TIME	LEVEL	FLOW
23:00:00	46.2	42.6
22:00:00	45.8	40.7
21:00:00	46.0	41.6
20:00:00	46.2	42.6
19:00:00	47.7	50.0
18:00:00	49.4	72.1
17:00:00	46.3	43.0
16:00:00	47.2	47.5
15:00:00	46.2	42.6
14:00:00	46.3	43.0
13:00:00	46.4	43.5
12:00:00	46.4	43.5
11:00:00	46.4	43.5
10:00:00	46.3	43.0
09:00:00	46.3	43.0
08:00:00	46.4	43.5
07:00:00	47.3	48.0
06:00:00	47.4	48.5
05:00:00	47.5	49.0
04:00:00	47.6	49.5
03:00:00	47.6	49.5
02:00:00	47.9	51.0
01:00:00	48.7	61.8
00:00:00	50.9	94.5

DATE 06-11-95

TIME	LEVEL	FLOW
23:00:00	47.4	48.5
22:00:00	47.3	48.0
21:00:00	47.3	48.0
20:00:00	47.3	48.0
19:00:00	47.3	48.0
18:00:00	47.3	48.0
17:00:00	47.3	48.0
16:00:00	47.3	48.0
15:00:00	47.4	48.5
14:00:00	47.6	49.5
13:00:00	47.8	50.5
12:00:00	47.9	51.0
11:00:00	47.9	51.0
10:00:00	48.0	51.5
09:00:00	48.1	53.0
08:00:00	48.1	53.0
07:00:00	48.3	55.9
06:00:00	48.4	57.4
05:00:00	48.5	58.8
04:00:00	48.8	63.2
03:00:00	49.0	66.2
02:00:00	49.1	67.6
01:00:00	49.3	70.6
00:00:00	49.2	69.1

DATE 06-10-95

TIME	LEVEL	FLOW
23:00:00	49.0	66.2
22:00:00	48.9	64.7
21:00:00	48.3	55.9
20:00:00	48.1	53.0
19:00:00	48.1	53.0
18:00:00	48.3	55.9
17:00:00	48.4	57.4
16:00:00	48.6	60.3
15:00:00	48.8	63.2
14:00:00	48.9	64.7
13:00:00	49.1	67.6
12:00:00	49.2	69.1
11:00:00	49.3	70.6
10:00:00	49.3	70.6
09:00:00	49.5	73.5
08:00:00	49.6	75.0
07:00:00	49.5	73.5
06:00:00	49.6	75.0
05:00:00	49.5	73.5
04:00:00	49.6	75.0
03:00:00	49.7	76.5
02:00:00	49.7	76.5
01:00:00	49.9	79.5
00:00:00	49.9	79.5

DATE 06-09-95

TIME	LEVEL	FLOW	
23:00:00	50.3	85.4	
22:00:00	53.2	129.6	← Turbine restarted
21:00:00	56.0	173.6	↑ Turbine stopped
20:00:00	46.1	42.1	
19:00:00	46.0	41.6	
18:00:00	46.2	42.6	
17:00:00	46.4	43.5	
16:00:00	46.5	44.0	
15:00:00	46.7	45.0	
14:00:00	46.6	44.5	
13:00:00	46.7	45.0	
12:00:00	47.0	46.5	
11:00:00	47.0	46.5	
10:00:00	47.2	47.5	
09:00:00	47.6	49.5	
08:00:00	47.3	48.0	
07:00:00	47.0	46.5	
06:00:00	46.4	43.5	
05:00:00	45.8	40.7	
04:00:00	45.7	40.2	
03:00:00	46.9	46.0	
02:00:00	51.5	103.5	↑ Turbine restarted
01:00:00	56.7	184.8	
00:00:00	56.5	181.6	← Turbine is off

DATE 06-08-95

TIME	LEVEL	FLOW	
23:00:00	55.4	164.0	
22:00:00	55.1	159.3	⇑ Turbine stopped
21:00:00	48.5	58.8	
20:00:00	48.7	61.8	
19:00:00	48.7	61.8	
18:00:00	48.7	61.8	
17:00:00	48.8	63.2	
16:00:00	48.9	64.7	
15:00:00	49.1	67.6	
14:00:00	49.0	66.2	
13:00:00	48.6	60.3	
12:00:00	48.1	53.0	
11:00:00	47.6	49.5	
10:00:00	47.4	48.5	
09:00:00	47.2	47.5	
08:00:00	47.1	47.0	
07:00:00	47.1	47.0	
06:00:00	46.9	46.0	
05:00:00	46.4	43.5	
04:00:00	46.1	42.1	
03:00:00	46.0	41.6	
02:00:00	46.1	42.1	
01:00:00	46.1	42.1	
00:00:00	46.2	42.6	

DATE 06-07-95

TIME	LEVEL	FLOW	
23:00:00	45.9	41.1	
22:00:00	45.8	40.7	
21:00:00	45.7	40.2	
20:00:00	46.3	43.0	
19:00:00	45.7	40.2	
18:00:00	45.6	39.7	
17:00:00	46.8	45.5	
16:00:00	49.6	75.0	↑ Turbine started
15:00:00	55.7	168.8	
14:00:00	46.8	45.5	↑ Turbine stopped
13:00:00	45.9	41.1	
12:00:00	45.8	40.7	
11:00:00	45.7	40.2	
10:00:00	46.0	41.6	
09:00:00	45.6	39.7	
08:00:00	46.1	42.1	
07:00:00	46.3	43.0	
06:00:00	46.1	42.1	
05:00:00	45.7	40.2	
04:00:00	45.9	41.1	
03:00:00	46.2	42.6	
02:00:00	45.8	40.7	
01:00:00	45.6	39.7	
00:00:00	46.0	41.6	

DATE 06-06-95

TIME	LEVEL	FLOW
23:00:00	45.6	39.7
22:00:00	46.1	42.1
21:00:00	46.0	41.6
20:00:00	45.6	39.7
19:00:00	45.7	40.2
18:00:00	45.9	41.1
17:00:00	46.1	42.1
16:00:00	45.7	40.2
15:00:00	45.6	39.7
14:00:00	46.1	42.1
13:00:00	45.6	39.7
12:00:00	45.7	40.2
11:00:00	45.8	40.7
10:00:00	45.9	41.1
09:00:00	45.7	40.2
08:00:00	45.7	40.2
07:00:00	46.4	43.5
06:00:00	45.7	40.2
05:00:00	45.7	40.2
04:00:00	46.4	43.5
03:00:00	45.7	40.2
02:00:00	45.8	40.7
01:00:00	45.9	41.1
00:00:00	46.1	42.1

DATE 06-05-95

TIME	LEVEL	FLOW	
23:00:00	45.9	41.1	
22:00:00	46.8	45.5	
21:00:00	45.9	41.1	
20:00:00	45.7	40.2	← Turbine restarted
19:00:00	52.4	117.3	← Turbine is off
18:00:00	46.1	42.1	
17:00:00	46.0	41.6	
16:00:00	45.7	40.2	
15:00:00	46.2	42.6	
14:00:00	45.7	40.2	
13:00:00	46.2	42.6	
12:00:00	45.7	40.2	
11:00:00	46.0	41.6	
10:00:00	46.2	42.6	
09:00:00	46.0	41.6	
08:00:00	46.0	41.6	
07:00:00	46.2	42.6	
06:00:00	46.1	42.1	
05:00:00	46.0	41.6	
04:00:00	45.6	39.7	
03:00:00	45.7	40.2	
02:00:00	46.0	41.6	
01:00:00	46.3	43.0	
00:00:00	45.9	41.1	

DATE 06-04-95

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	45.7	40.2
21:00:00	45.7	40.2
20:00:00	45.6	39.7
19:00:00	46.2	42.6
18:00:00	45.7	40.2
17:00:00	45.8	40.7
16:00:00	46.0	41.6
15:00:00	45.6	39.7
14:00:00	46.3	43.0
13:00:00	45.6	39.7
12:00:00	45.7	40.2
11:00:00	45.8	40.7
10:00:00	45.7	40.2
09:00:00	45.7	40.2
08:00:00	46.0	41.6
07:00:00	46.2	42.6
06:00:00	46.0	41.6
05:00:00	46.0	41.6
04:00:00	46.0	41.6
03:00:00	46.0	41.6
02:00:00	45.9	41.1
01:00:00	45.6	39.7
00:00:00	45.7	40.2

DATE 06-03-95

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.8	40.7
21:00:00	45.9	41.1
20:00:00	45.7	40.2
19:00:00	45.7	40.2
18:00:00	45.8	40.7
17:00:00	46.4	43.5
16:00:00	46.2	42.6
15:00:00	46.2	42.6
14:00:00	45.9	41.1
13:00:00	46.3	43.0
12:00:00	45.7	40.2
11:00:00	45.9	41.1
10:00:00	46.3	43.0
09:00:00	45.9	41.1
08:00:00	46.0	41.6
07:00:00	46.2	42.6
06:00:00	46.1	42.1
05:00:00	45.8	40.7
04:00:00	45.7	40.2
03:00:00	46.2	42.6
02:00:00	46.0	41.6
01:00:00	45.9	41.1
00:00:00	46.2	42.6

DATE 06-02-95

TIME	LEVEL	FLOW	
23:00:00	45.6	39.7	
22:00:00	46.2	42.6	
21:00:00	45.6	39.7	
20:00:00	46.1	42.1	
19:00:00	45.7	40.2	
18:00:00	46.0	41.6	
17:00:00	46.4	43.5	
16:00:00	45.6	39.7	
15:00:00	51.2	99.0 ↑	Turbine restarted
14:00:00	45.7	40.2 ↑	Turbine stopped
13:00:00	45.7	40.2	
12:00:00	46.2	42.6	
11:00:00	45.7	40.2	
10:00:00	46.0	41.6	
09:00:00	45.8	40.7	
08:00:00	45.8	40.7	
07:00:00	45.8	40.7	
06:00:00	45.8	40.7	
05:00:00	46.1	42.1	
04:00:00	45.7	40.2	
03:00:00	46.2	42.6	
02:00:00	45.6	39.7	
01:00:00	46.0	41.6	
00:00:00	45.9	41.1	

DATE 06-01-95

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.6	39.7
21:00:00	45.7	40.2
20:00:00	45.9	41.1
19:00:00	46.0	41.6
18:00:00	45.7	40.2
17:00:00	45.8	40.7
16:00:00	46.5	44.0
15:00:00	45.8	40.7
14:00:00	45.9	41.1
13:00:00	45.6	39.7
12:00:00	46.1	42.1
11:00:00	46.0	41.6
10:00:00	46.0	41.6
09:00:00	46.0	41.6
08:00:00	46.3	43.0
07:00:00	46.7	45.0
06:00:00	45.9	41.1
05:00:00	46.2	42.6
04:00:00	45.9	41.1
03:00:00	45.6	39.7
02:00:00	46.3	43.0
01:00:00	45.6	39.7
00:00:00	46.1	42.1

CEM COMMERCIAL ENERGY MGMT, INC.
P.O. Box 4518 • Pocatello, Idaho 83205 • Telephone (208) 237-3563 • Fax (208) 237-3563

June 20, 1995
Ref: CEM/1043

Mr. L. GLEN SAXTON
Chief, Water Allocation Bureau
State of Idaho, Department of Water Resources
1301 North Orchard Street
Statehouse Mail
Boise, ID 83720-9000

RECEIVED
JUN 23 1995
Department of Water Resources

Subject: Portneuf River Hydroelectric Project
Lava Hot Springs, Idaho
FERC Project No. 7447-002
Permit No. 29-7699

Dear Mr. Saxton:

Attached please find a copy of the bypass channel flow records for the Month of May, 1995.

Sincerely,

Maher F. Wissa
President

Attachments: 8 sheets

DATE 05-31-95

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.7	40.2
21:00:00	46.0	41.6
20:00:00	45.7	40.2
19:00:00	46.0	41.6
18:00:00	45.6	39.7
17:00:00	45.8	40.7
16:00:00	46.0	41.6
15:00:00	45.7	40.2
14:00:00	46.0	41.6
13:00:00	46.1	42.1
12:00:00	46.0	41.6
11:00:00	46.0	41.6
10:00:00	46.1	42.1
09:00:00	46.0	41.6
08:00:00	46.0	41.6
07:00:00	46.2	42.6
06:00:00	46.0	41.6
05:00:00	45.7	40.2
04:00:00	45.8	40.7
03:00:00	45.8	40.7
02:00:00	46.0	41.6
01:00:00	46.1	42.1
00:00:00	46.0	41.6

DATE 05-30-95

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	46.2	42.6
21:00:00	45.9	41.1
20:00:00	45.7	40.2
19:00:00	46.2	42.6
18:00:00	45.6	39.7
17:00:00	45.8	40.7
16:00:00	46.1	42.1
15:00:00	46.2	42.6
14:00:00	46.0	41.6
13:00:00	45.9	41.1
12:00:00	45.9	41.1
11:00:00	46.2	42.6
10:00:00	45.6	39.7
09:00:00	45.7	40.2
08:00:00	46.2	42.6
07:00:00	45.8	40.7
06:00:00	45.8	40.7
05:00:00	46.1	42.1
04:00:00	46.0	41.6
03:00:00	45.8	40.7
02:00:00	45.7	40.2
01:00:00	46.2	42.6
00:00:00	46.0	41.6

DATE 05-29-95

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.8	40.7
21:00:00	45.8	40.7
20:00:00	45.8	40.7
19:00:00	45.7	40.2
18:00:00	45.8	40.7
17:00:00	45.7	40.2
16:00:00	45.6	39.7
15:00:00	46.0	41.6
14:00:00	46.0	41.6
13:00:00	46.0	41.6
12:00:00	46.0	41.6
11:00:00	45.9	40.7
10:00:00	45.8	40.7
09:00:00	45.8	40.7
08:00:00	45.7	40.2
07:00:00	46.1	42.1
06:00:00	45.9	41.1
05:00:00	45.7	40.2
04:00:00	45.9	41.1
03:00:00	45.8	40.7
02:00:00	45.8	40.7
01:00:00	45.7	40.2
00:00:00	45.7	40.2

DATE 05-28-95

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	45.7	40.2
21:00:00	45.9	41.1
20:00:00	45.9	41.1
19:00:00	45.9	41.1
18:00:00	45.9	41.1
17:00:00	45.7	40.2
16:00:00	45.8	40.7
15:00:00	46.0	41.6
14:00:00	45.7	40.2
13:00:00	45.9	41.1
12:00:00	46.0	41.6
11:00:00	45.9	41.1
10:00:00	45.9	41.1
09:00:00	45.7	40.2
08:00:00	45.8	40.7
07:00:00	45.9	41.1
06:00:00	45.9	41.1
05:00:00	45.9	41.1
04:00:00	46.0	41.6
03:00:00	45.9	41.1
02:00:00	45.7	40.2
01:00:00	45.7	40.2
00:00:00	45.7	40.2

DATE 05-27-95

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.8	40.7
21:00:00	46.0	41.6
20:00:00	45.7	40.2
19:00:00	45.7	40.2
18:00:00	46.1	42.1
17:00:00	45.9	41.1
16:00:00	45.7	40.2
15:00:00	46.1	42.1
14:00:00	45.9	41.1
13:00:00	45.7	40.2
12:00:00	45.9	41.1
11:00:00	46.2	42.6
10:00:00	45.7	40.2
09:00:00	46.1	42.1
08:00:00	46.1	42.1
07:00:00	46.0	41.6
06:00:00	45.9	41.1
05:00:00	45.9	41.1
04:00:00	45.9	41.1
03:00:00	45.7	40.2
02:00:00	45.8	40.7
01:00:00	45.7	40.2
00:00:00	45.7	40.2

DATE 05-26-95

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.7	40.2
21:00:00	46.2	42.6
20:00:00	45.9	41.1
19:00:00	46.0	41.6
18:00:00	45.7	40.2
17:00:00	46.3	43.0
16:00:00	45.7	40.2
15:00:00	45.8	40.7
14:00:00	45.8	40.7
13:00:00	45.7	40.2
12:00:00	45.6	39.7
11:00:00	45.7	40.2
10:00:00	45.7	40.2
09:00:00	45.8	40.7
08:00:00	46.0	41.6
07:00:00	45.6	39.7
06:00:00	45.8	40.7
05:00:00	45.7	40.2
04:00:00	46.2	42.6
03:00:00	45.9	41.1
02:00:00	45.9	41.1
01:00:00	46.0	41.6
00:00:00	46.0	41.6

DATE 05-25-95

TIME	LEVEL	FLOW
23:00:00	46.1	42.1
22:00:00	46.0	41.6
21:00:00	45.6	39.7
20:00:00	45.7	40.2
19:00:00	45.6	39.7
18:00:00	45.7	40.2
17:00:00	45.8	40.7
16:00:00	45.9	41.1
15:00:00	46.2	42.6
14:00:00	45.7	40.2
13:00:00	46.2	42.6
12:00:00	45.7	40.2
11:00:00	45.9	41.1
10:00:00	45.9	41.1
09:00:00	46.2	42.6
08:00:00	45.7	40.2
07:00:00	46.2	42.6
06:00:00	45.8	40.7
05:00:00	45.6	39.7
04:00:00	46.3	43.0
03:00:00	45.6	39.7
02:00:00	45.8	40.7
01:00:00	45.7	40.2
00:00:00	45.8	40.7

DATE 05-24-95

TIME	LEVEL	FLOW
23:00:00	46.0	41.6
22:00:00	45.6	39.7
21:00:00	46.4	43.5
20:00:00	45.7	40.2
19:00:00	46.1	42.1
18:00:00	45.7	40.2
17:00:00	46.1	42.1
16:00:00	46.0	41.6
15:00:00	45.6	39.7
14:00:00	45.7	40.2
13:00:00	46.0	41.6
12:00:00	46.0	41.6
11:00:00	46.0	41.6
10:00:00	45.7	40.2
09:00:00	45.7	40.2
08:00:00	45.7	40.2
07:00:00	45.8	40.7
06:00:00	46.1	42.1
05:00:00	45.7	40.2
04:00:00	46.0	41.6
03:00:00	45.9	41.1
02:00:00	46.1	42.1
01:00:00	45.9	41.1
00:00:00	45.7	40.2

DATE 05-23-95

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.7	40.2
21:00:00	45.7	40.2
20:00:00	45.7	40.2
19:00:00	45.6	39.7
18:00:00	45.7	40.2
17:00:00	46.1	42.1
16:00:00	46.1	42.1
15:00:00	45.9	41.1
14:00:00	45.8	40.7
13:00:00	45.8	40.7
12:00:00	46.0	41.6
11:00:00	46.1	42.1
10:00:00	45.9	41.1
09:00:00	45.6	39.7
08:00:00	45.9	41.1
07:00:00	45.7	40.2
06:00:00	45.7	40.2
05:00:00	45.7	40.2
04:00:00	45.7	40.2
03:00:00	45.9	41.1
02:00:00	46.1	42.1
01:00:00	45.8	40.7
00:00:00	45.7	40.2

DATE 05-22-95

TIME	LEVEL	FLOW
23:00:00	46.0	41.6
22:00:00	45.9	41.1
21:00:00	45.9	41.1
20:00:00	46.0	41.6
19:00:00	46.1	42.1
18:00:00	46.0	41.6
17:00:00	45.8	40.7
16:00:00	45.7	40.2
15:00:00	46.2	42.6
14:00:00	45.9	41.1
13:00:00	45.7	40.2
12:00:00	46.2	42.6
11:00:00	45.8	40.7
10:00:00	45.7	40.2
09:00:00	45.8	40.7
08:00:00	46.1	42.1
07:00:00	45.7	40.2
06:00:00	45.8	40.7
05:00:00	45.6	39.7
04:00:00	46.0	41.6
03:00:00	45.9	41.1
02:00:00	45.6	39.7
01:00:00	46.1	42.1
00:00:00	45.7	40.2

DATE 05-21-95

TIME	LEVEL	FLOW
23:00:00	46.1	42.1
22:00:00	45.8	40.7
21:00:00	45.8	40.7
20:00:00	45.7	40.2
19:00:00	45.7	40.2
18:00:00	45.7	40.2
17:00:00	45.7	40.2
16:00:00	46.0	41.6
15:00:00	46.0	41.6
14:00:00	45.9	41.1
13:00:00	45.9	41.1
12:00:00	45.9	41.1
11:00:00	46.1	42.1
10:00:00	46.2	42.6
09:00:00	46.1	42.1
08:00:00	46.1	42.1
07:00:00	45.9	41.1
06:00:00	46.0	41.6
05:00:00	46.1	42.1
04:00:00	46.1	42.1
03:00:00	45.8	40.7
02:00:00	45.8	40.7
01:00:00	46.1	42.1
00:00:00	45.7	40.2

DATE 05-20-95

TIME	LEVEL	FLOW
23:00:00	45.6	39.7
22:00:00	45.9	41.1
21:00:00	46.0	41.6
20:00:00	45.7	40.2
19:00:00	46.8	45.5
18:00:00	45.7	40.2
17:00:00	46.0	41.6
16:00:00	46.1	42.1
15:00:00	45.9	41.1
14:00:00	45.7	40.2
13:00:00	46.2	42.6
12:00:00	45.7	40.2
11:00:00	45.9	41.1
10:00:00	46.0	41.6
09:00:00	45.7	40.2
08:00:00	45.9	41.1
07:00:00	46.2	42.6
06:00:00	46.1	42.1
05:00:00	46.1	42.1
04:00:00	46.0	41.6
03:00:00	45.9	41.1
02:00:00	45.8	40.7
01:00:00	45.8	40.7
00:00:00	45.8	40.7

DATE 05-19-95

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.6	39.7
21:00:00	45.8	40.7
20:00:00	45.7	40.2
19:00:00	46.0	41.6
18:00:00	46.0	41.6
17:00:00	46.1	42.1
16:00:00	46.0	41.6
15:00:00	45.9	41.1
14:00:00	45.8	40.7
13:00:00	45.7	40.2
12:00:00	46.0	41.6
11:00:00	46.2	42.6
10:00:00	46.0	41.6
09:00:00	46.4	43.5
08:00:00	46.1	42.1
07:00:00	46.2	42.6
06:00:00	46.0	41.6
05:00:00	46.1	42.1
04:00:00	46.1	42.1
03:00:00	46.1	42.1
02:00:00	46.1	42.1
01:00:00	45.9	41.1
00:00:00	45.9	41.1

DATE 05-18-95

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.7	40.2
21:00:00	46.3	43.0
20:00:00	45.9	41.1
19:00:00	46.3	43.0
18:00:00	55.1	159.3
17:00:00	59.0	222.1
16:00:00	25.7	222.5
15:00:00	25.7	222.5
14:00:00	25.8	223.7
13:00:00	25.8	223.7
12:00:00	25.8	223.7
11:00:00	25.9	225.0
10:00:00	25.9	225.0
09:00:00	25.9	225.0
08:00:00	25.7	222.5
07:00:00	25.6	221.2
06:00:00	25.5	219.9
05:00:00	25.7	222.5
04:00:00	25.7	222.5
03:00:00	25.7	222.5
02:00:00	25.8	223.7
01:00:00	25.8	223.7
00:00:00	25.8	223.7

← Completed flushing flow operation after 10 days duration.

Note: Slide gate and the stop logs gates were raised for unrestricted flow, during the flushing flow period.

DATE 05-17-95

TIME	LEVEL	FLOW
23:00:00	25.7	222.5
22:00:00	25.7	222.5
21:00:00	25.7	222.5
20:00:00	25.7	222.5
19:00:00	25.9	225.0
18:00:00	25.9	225.0
17:00:00	25.9	225.0
16:00:00	25.9	225.0
15:00:00	25.8	223.7
14:00:00	25.6	221.2
13:00:00	25.4	218.7
12:00:00	25.3	217.4
11:00:00	25.2	216.2
10:00:00	25.2	216.2
09:00:00	25.1	214.9
08:00:00	24.9	212.4
07:00:00	24.9	212.4
06:00:00	25.2	216.2
05:00:00	25.1	214.9
04:00:00	25.2	216.2
03:00:00	25.3	217.4
02:00:00	25.4	218.7
01:00:00	25.4	218.7
00:00:00	25.4	218.7

DATE 05-16-95

TIME	LEVEL	FLOW
23:00:00	25.2	216.2
22:00:00	25.0	213.6
21:00:00	25.3	217.4
20:00:00	25.8	223.7
19:00:00	25.9	225.0
18:00:00	25.9	225.0
17:00:00	26.0	226.3
16:00:00	26.1	227.6
15:00:00	26.0	226.3
14:00:00	25.8	223.7
13:00:00	25.5	219.9
12:00:00	25.2	216.2
11:00:00	24.8	211.2
10:00:00	24.7	209.9
09:00:00	24.4	206.2
08:00:00	24.1	202.5
07:00:00	24.0	201.3
06:00:00	24.1	202.5
05:00:00	23.7	197.6
04:00:00	23.7	197.6
03:00:00	23.7	197.6
02:00:00	23.8	198.8
01:00:00	23.8	198.8
00:00:00	23.9	200.0

DATE 05-15-95

TIME	LEVEL	FLOW
23:00:00	24.0	201.3
22:00:00	24.1	202.5
21:00:00	24.3	205.0
20:00:00	24.8	211.2
19:00:00	24.9	212.4
18:00:00	25.0	213.6
17:00:00	25.1	214.9
16:00:00	25.0	213.6
15:00:00	25.0	213.6
14:00:00	24.7	209.9
13:00:00	24.6	208.7
12:00:00	24.2	203.7
11:00:00	23.9	200.0
10:00:00	23.6	196.4
09:00:00	23.5	195.2
08:00:00	23.1	190.3
07:00:00	23.1	190.3
06:00:00	23.1	190.3
05:00:00	23.0	189.1
04:00:00	23.1	190.3
03:00:00	23.0	189.1
02:00:00	23.0	189.1
01:00:00	23.1	190.3
00:00:00	23.2	191.5

DATE 05-14-95

TIME	LEVEL	FLOW
23:00:00	23.4	194.0
22:00:00	23.6	196.4
21:00:00	24.1	202.5
20:00:00	24.0	201.3
19:00:00	24.2	203.7
18:00:00	24.2	203.7
17:00:00	24.2	203.7
16:00:00	24.2	203.7
15:00:00	24.1	202.5
14:00:00	23.9	200.0
13:00:00	24.0	201.3
12:00:00	23.7	197.6
11:00:00	23.5	195.2
10:00:00	23.4	194.0
09:00:00	23.4	194.0
08:00:00	23.5	195.2
07:00:00	23.2	191.5
06:00:00	23.6	196.4
05:00:00	23.8	198.8
04:00:00	23.7	197.6
03:00:00	23.8	198.8
02:00:00	23.9	200.0
01:00:00	23.9	200.0
00:00:00	24.0	201.3

DATE 05-13-95

TIME	LEVEL	FLOW
23:00:00	24.3	205.0
22:00:00	24.2	203.7
21:00:00	24.3	205.0
20:00:00	24.3	205.0
19:00:00	24.5	207.4
18:00:00	24.5	207.4
17:00:00	24.8	211.2
16:00:00	24.8	211.2
15:00:00	25.1	214.9
14:00:00	24.8	211.2
13:00:00	24.9	212.4
12:00:00	24.9	212.4
11:00:00	24.9	212.4
10:00:00	25.0	213.6
09:00:00	24.9	212.4
08:00:00	25.0	213.6
07:00:00	25.2	216.2
06:00:00	24.7	209.9
05:00:00	24.7	209.9
04:00:00	24.6	208.7
03:00:00	24.5	207.4
02:00:00	24.4	206.2
01:00:00	24.5	207.4
00:00:00	24.5	207.4

DATE 05-12-95

TIME	LEVEL	FLOW
23:00:00	24.5	207.4
22:00:00	24.8	211.2
21:00:00	25.0	213.6
20:00:00	25.4	218.7
19:00:00	25.6	221.2
18:00:00	25.7	222.5
17:00:00	25.6	221.2
16:00:00	25.7	222.5
15:00:00	26.2	228.8
14:00:00	26.1	227.6
13:00:00	26.1	227.6
12:00:00	26.1	227.6
11:00:00	26.1	227.6
10:00:00	25.8	223.7
09:00:00	25.6	221.2
08:00:00	25.7	222.5
07:00:00	25.7	222.5
06:00:00	25.6	221.2
05:00:00	25.8	223.7
04:00:00	25.7	222.5
03:00:00	25.9	225.0
02:00:00	25.8	223.7
01:00:00	25.7	222.5
00:00:00	26.1	227.6

DATE 05-11-95

TIME	LEVEL	FLOW
23:00:00	26.1	227.6
22:00:00	26.2	228.8
21:00:00	26.3	230.1
20:00:00	26.2	228.8
19:00:00	26.5	232.7
18:00:00	26.5	232.7
17:00:00	26.6	234.0
16:00:00	26.3	230.1
15:00:00	26.4	231.4
14:00:00	26.1	227.6
13:00:00	26.1	227.6
12:00:00	26.1	227.6
11:00:00	25.5	219.9
10:00:00	25.4	218.7
09:00:00	25.0	213.6
08:00:00	24.6	208.7
07:00:00	24.0	201.3
06:00:00	24.0	201.3
05:00:00	23.8	198.8
04:00:00	23.6	196.4
03:00:00	23.6	196.4
02:00:00	23.3	192.7
01:00:00	23.2	191.5
00:00:00	23.4	194.0

DATE 05-10-95

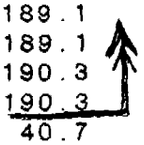
TIME	LEVEL	FLOW
23:00:00	23.3	192.7
22:00:00	23.2	191.5
21:00:00	23.2	191.5
20:00:00	23.1	190.3
19:00:00	23.2	191.5
18:00:00	23.2	191.5
17:00:00	23.2	191.5
16:00:00	23.2	191.5
15:00:00	23.3	192.7
14:00:00	23.3	192.7
13:00:00	23.3	192.7
12:00:00	23.3	192.7
11:00:00	23.3	192.7
10:00:00	23.1	190.3
09:00:00	23.1	190.3
08:00:00	23.2	191.5
07:00:00	23.2	191.5
06:00:00	23.2	191.5
05:00:00	23.2	191.5
04:00:00	23.1	190.3
03:00:00	23.1	190.3
02:00:00	23.1	190.3
01:00:00	23.1	190.3
00:00:00	23.1	190.3

DATE 05-09-95

TIME	LEVEL	FLOW
23:00:00	23.0	189.1
22:00:00	23.0	189.1
21:00:00	23.0	189.1
20:00:00	23.0	189.1
19:00:00	23.0	189.1
18:00:00	23.0	189.1
17:00:00	23.2	191.5
16:00:00	23.2	191.5
15:00:00	23.2	191.5
14:00:00	23.2	191.5
13:00:00	23.2	191.5
12:00:00	23.2	191.5
11:00:00	23.3	192.7
10:00:00	23.3	192.7
09:00:00	23.3	192.7
08:00:00	23.3	192.7
07:00:00	23.3	192.7
06:00:00	23.3	192.7
05:00:00	23.2	191.5
04:00:00	23.2	191.5
03:00:00	23.1	190.3
02:00:00	23.1	190.3
01:00:00	23.2	191.5
00:00:00	23.3	192.7

DATE 05-08-95

TIME	LEVEL	FLOW
23:00:00	23.2	191.5
22:00:00	23.2	191.5
21:00:00	23.0	189.1
20:00:00	23.0	189.1
19:00:00	23.1	190.3
18:00:00	23.1	190.3
17:00:00	45.8	40.7
16:00:00	46.1	42.1
15:00:00	47.7	50.0
14:00:00	45.6	39.7
13:00:00	46.1	42.1
12:00:00	46.2	42.6
11:00:00	45.8	40.7
10:00:00	45.8	40.7
09:00:00	46.1	42.1
08:00:00	46.3	43.0
07:00:00	45.8	40.7
06:00:00	45.8	40.7
05:00:00	46.2	42.6
04:00:00	45.8	40.7
03:00:00	45.8	40.7
02:00:00	45.6	39.7
01:00:00	45.7	40.2
00:00:00	45.8	40.7



Started flushing flow operation for 10 days duration.

DATE 05-07-95

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	45.7	40.2
21:00:00	45.8	40.7
20:00:00	45.8	40.7
19:00:00	45.8	40.7
18:00:00	45.9	41.1
17:00:00	45.9	41.1
16:00:00	45.8	40.7
15:00:00	45.8	40.7
14:00:00	46.0	41.6
13:00:00	46.0	41.6
12:00:00	45.9	41.1
11:00:00	45.8	40.7
10:00:00	45.7	40.2
09:00:00	45.8	40.7
08:00:00	45.7	40.2
07:00:00	46.4	43.5
06:00:00	45.9	41.1
05:00:00	45.7	40.2
04:00:00	46.1	42.1
03:00:00	46.0	41.6
02:00:00	46.1	42.1
01:00:00	46.0	41.6
00:00:00	45.8	40.7

DATE 05-06-95

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	46.0	41.6
21:00:00	45.9	41.1
20:00:00	45.7	40.2
19:00:00	45.9	41.1
18:00:00	46.4	43.5
17:00:00	45.7	40.2
16:00:00	45.8	40.7
15:00:00	45.6	39.7
14:00:00	46.0	41.6
13:00:00	46.1	42.1
12:00:00	45.9	41.1
11:00:00	45.6	39.7
10:00:00	46.2	42.6
09:00:00	45.9	41.1
08:00:00	45.8	40.7
07:00:00	45.9	41.1
06:00:00	45.8	40.7
05:00:00	45.6	39.7
04:00:00	46.2	42.6
03:00:00	46.1	42.1
02:00:00	45.9	41.1
01:00:00	45.8	40.7
00:00:00	45.9	41.1

DATE 05-05-95

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	45.9	41.1
21:00:00	46.0	41.6
20:00:00	46.2	42.6
19:00:00	45.9	41.1
18:00:00	45.9	41.1
17:00:00	46.2	42.6
16:00:00	46.0	41.6
15:00:00	46.1	42.1
14:00:00	46.1	42.1
13:00:00	45.7	40.2
12:00:00	46.1	42.1
11:00:00	46.1	42.1
10:00:00	46.2	42.6
09:00:00	45.8	40.7
08:00:00	45.7	40.2
07:00:00	46.9	46.0
06:00:00	46.1	42.1
05:00:00	45.6	39.7
04:00:00	46.2	42.6
03:00:00	45.9	41.1
02:00:00	45.7	40.2
01:00:00	46.4	43.5
00:00:00	45.7	40.2

DATE 05-04-95

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	46.4	43.5
21:00:00	45.9	41.1
20:00:00	45.9	41.1
19:00:00	45.9	41.1
18:00:00	45.7	40.2
17:00:00	45.7	40.2
16:00:00	45.7	40.2
15:00:00	45.7	40.2
14:00:00	45.7	40.2
13:00:00	45.8	40.7
12:00:00	46.1	42.1
11:00:00	46.0	41.6
10:00:00	45.6	39.7
09:00:00	45.9	41.1
08:00:00	45.7	40.2
07:00:00	46.1	42.1
06:00:00	45.9	41.1
05:00:00	46.0	41.6
04:00:00	46.1	42.1
03:00:00	46.0	41.6
02:00:00	45.8	40.7
01:00:00	45.8	40.7
00:00:00	45.9	41.1

DATE 05-03-95

TIME	LEVEL	FLOW
23:00:00	46.1	42.1
22:00:00	45.8	40.7
21:00:00	45.6	39.7
20:00:00	45.7	40.2
19:00:00	45.9	41.1
18:00:00	45.9	41.1
17:00:00	46.1	42.1
16:00:00	46.0	41.6
15:00:00	45.7	40.2
14:00:00	46.4	43.5
13:00:00	45.9	41.1
12:00:00	45.7	40.2
11:00:00	46.4	43.5
10:00:00	46.0	41.6
09:00:00	45.8	40.7
08:00:00	45.6	39.7
07:00:00	46.5	44.0
06:00:00	45.7	40.2
05:00:00	45.8	40.7
04:00:00	45.9	41.1
03:00:00	45.8	40.7
02:00:00	45.7	40.2
01:00:00	46.3	43.0
00:00:00	45.8	40.7

DATE 05-02-95

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	47.7	50.0
21:00:00	46.2	42.6
20:00:00	45.7	40.2
19:00:00	45.7	40.2
18:00:00	46.1	42.1
17:00:00	45.8	40.7
16:00:00	45.8	40.7
15:00:00	47.8	50.5
14:00:00	46.1	42.1
13:00:00	46.2	42.6
12:00:00	46.1	42.1
11:00:00	46.0	41.6
10:00:00	45.7	40.2
09:00:00	46.2	42.6
08:00:00	45.7	40.2
07:00:00	45.7	40.2
06:00:00	45.7	40.2
05:00:00	46.1	42.1
04:00:00	46.1	42.1
03:00:00	46.2	42.6
02:00:00	46.2	42.6
01:00:00	45.8	40.7
00:00:00	46.0	41.6

DATE 05-01-95

TIME	LEVEL	FLOW
23:00:00	46.2	42.6
22:00:00	45.7	40.2
21:00:00	46.3	43.0
20:00:00	46.8	45.5
19:00:00	45.7	40.2
18:00:00	45.7	40.2
17:00:00	45.7	40.2
16:00:00	45.7	40.2
15:00:00	46.0	41.6
14:00:00	45.8	40.7
13:00:00	45.7	40.2
12:00:00	46.0	41.6
11:00:00	46.3	43.0
10:00:00	46.3	43.0
09:00:00	46.8	45.5
08:00:00	46.7	45.0
07:00:00	45.7	40.2
06:00:00	45.7	40.2
05:00:00	46.0	41.6
04:00:00	46.0	41.6
03:00:00	45.7	40.2
02:00:00	46.0	41.6
01:00:00	45.9	41.1
00:00:00	45.8	40.7

CEM COMMERCIAL ENERGY MGMT, INC.
1155 Yellowstone Ave • Suite B • P. O. Box 4518 • Pocatello, Idaho 83205 • Telephone (208) 237-8184 • Fax (208) 237-8184

Tel: (208) 237-3563

May 20, 1995
Ref: CEM/1040

RECEIVED
MAY 24 1995
Department of Water Resources

Mr. L. GLEN SAXTON
Chief, Water Allocation Bureau
State of Idaho, Department of Water Resources
1301 North Orchard Street
Statehouse Mail
Boise, ID 83720-9000

Subject: Portneuf River Hydroelectric Project
Lava Hot Springs, Idaho
FERC Project No. 7447-002
Permit No. 29-7699

Dear Mr. Saxton:

Attached please find a copy of the bypass channel flow records for the month of April 1995.

Sincerely,

Maher F. Wissa
President

Attachments: 15 sheets

DATE 04-30-95

TIME	LEVEL	FLOW
23:00:00	46.0	41.6
22:00:00	45.9	41.1
21:00:00	45.8	40.7
20:00:00	46.1	42.1
19:00:00	46.0	41.6
18:00:00	45.6	39.7
17:00:00	46.2	42.6
16:00:00	45.8	40.7
15:00:00	46.0	41.6
14:00:00	46.0	41.6
13:00:00	45.9	41.1
12:00:00	46.0	41.6
11:00:00	46.0	41.6
10:00:00	46.1	42.1
09:00:00	45.9	41.1
08:00:00	45.7	40.2
07:00:00	46.1	42.1
06:00:00	45.9	41.1
05:00:00	45.7	40.2
04:00:00	45.9	41.1
03:00:00	46.3	43.0
02:00:00	45.9	41.1
01:00:00	45.7	40.2
00:00:00	45.9	41.1

DATE 04-29-95

TIME	LEVEL	FLOW
23:00:00	46.2	42.6
22:00:00	45.9	41.1
21:00:00	46.2	42.6
20:00:00	45.7	40.2
19:00:00	46.4	43.5
18:00:00	45.7	40.2
17:00:00	46.3	43.0
16:00:00	46.0	41.6
15:00:00	45.7	40.2
14:00:00	46.4	43.5
13:00:00	46.0	41.6
12:00:00	45.7	40.2
11:00:00	46.0	41.6
10:00:00	46.1	42.1
09:00:00	46.0	41.6
08:00:00	45.8	40.7
07:00:00	45.9	41.1
06:00:00	46.1	42.1
05:00:00	46.0	41.6
04:00:00	45.8	40.7
03:00:00	45.7	40.2
02:00:00	45.8	40.7
01:00:00	46.1	42.1
00:00:00	46.0	41.6

DATE 04-28-95

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	46.0	41.6
21:00:00	46.2	42.6
20:00:00	46.1	42.1
19:00:00	45.6	39.7
18:00:00	46.2	42.6
17:00:00	45.8	40.7
16:00:00	45.8	40.7
15:00:00	46.1	42.1
14:00:00	45.8	40.7
13:00:00	46.0	41.6
12:00:00	45.6	39.7
11:00:00	46.2	42.6
10:00:00	46.1	42.1
09:00:00	45.9	41.1
08:00:00	46.1	42.1
07:00:00	46.2	42.6
06:00:00	45.9	41.1
05:00:00	46.2	42.6
04:00:00	45.9	41.1
03:00:00	45.7	40.2
02:00:00	45.7	40.2
01:00:00	45.6	39.7
00:00:00	46.3	43.0

DATE 04-27-95

TIME	LEVEL	FLOW
23:00:00	46.0	41.6
22:00:00	45.6	39.7
21:00:00	45.7	40.2
20:00:00	46.4	43.5
19:00:00	45.6	39.7
18:00:00	45.8	40.7
17:00:00	46.2	42.6
16:00:00	45.7	40.2
15:00:00	46.1	42.1
14:00:00	46.2	42.6
13:00:00	45.9	41.1
12:00:00	46.0	41.6
11:00:00	45.6	39.7
10:00:00	46.3	43.0
09:00:00	45.6	39.7
08:00:00	47.2	47.5
07:00:00	45.9	41.1
06:00:00	46.0	41.6
05:00:00	46.0	41.6
04:00:00	45.7	40.2
03:00:00	45.7	40.2
02:00:00	45.8	40.7
01:00:00	46.0	41.6
00:00:00	46.1	42.1

DATE 04-26-95

TIME	LEVEL	FLOW
23:00:00	46.0	41.6
22:00:00	45.7	40.2
21:00:00	45.8	40.7
20:00:00	45.9	41.1
19:00:00	46.0	41.6
18:00:00	45.8	40.7
17:00:00	45.6	39.7
16:00:00	45.9	41.1
15:00:00	45.7	40.2
14:00:00	46.0	41.6
13:00:00	45.7	40.2
12:00:00	46.4	43.5
11:00:00	45.7	40.2
10:00:00	46.2	42.6
09:00:00	45.8	40.7
08:00:00	45.9	41.1
07:00:00	46.1	42.1
06:00:00	45.6	39.7
05:00:00	46.7	45.0
04:00:00	45.7	40.2
03:00:00	46.2	42.6
02:00:00	45.9	41.1
01:00:00	45.6	39.7
00:00:00	46.1	42.1

DATE 04-25-95

TIME	LEVEL	FLOW
23:00:00	46.0	41.6
22:00:00	45.8	40.7
21:00:00	45.8	40.7
20:00:00	45.9	41.1
19:00:00	46.4	43.5
18:00:00	45.7	40.2
17:00:00	46.8	45.5
16:00:00	45.6	39.7
15:00:00	45.7	40.2
14:00:00	45.7	40.2
13:00:00	46.1	42.1
12:00:00	46.5	44.0
11:00:00	45.8	40.7
10:00:00	46.2	42.6
09:00:00	46.1	42.1
08:00:00	46.3	43.0
07:00:00	45.6	39.7
06:00:00	46.1	42.1
05:00:00	45.9	41.1
04:00:00	45.7	40.2
03:00:00	46.2	42.6
02:00:00	45.6	39.7
01:00:00	46.3	43.0
00:00:00	45.9	41.1

DATE 04-24-95

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	46.1	42.1
21:00:00	45.7	40.2
20:00:00	45.6	39.7
19:00:00	45.9	41.1
18:00:00	46.1	42.1
17:00:00	45.9	41.1
16:00:00	45.6	39.7
15:00:00	46.3	43.0
14:00:00	46.1	42.1
13:00:00	46.1	42.1
12:00:00	45.9	41.1
11:00:00	45.6	39.7
10:00:00	46.3	43.0
09:00:00	45.8	40.7
08:00:00	45.8	40.7
07:00:00	46.2	42.6
06:00:00	46.0	41.6
05:00:00	45.9	41.1
04:00:00	45.8	40.7
03:00:00	45.7	40.2
02:00:00	45.8	40.7
01:00:00	45.7	40.2
00:00:00	45.7	40.2

DATE 04-23-95

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	45.9	41.1
21:00:00	45.8	40.7
20:00:00	45.7	40.2
19:00:00	45.9	41.1
18:00:00	45.9	41.1
17:00:00	45.7	40.2
16:00:00	45.9	41.1
15:00:00	46.2	42.6
14:00:00	45.7	40.2
13:00:00	46.2	42.6
12:00:00	45.8	40.7
11:00:00	46.1	42.1
10:00:00	46.0	41.6
09:00:00	46.0	41.6
08:00:00	46.2	42.6
07:00:00	46.0	41.6
06:00:00	45.9	41.1
05:00:00	45.8	40.7
04:00:00	45.8	40.7
03:00:00	45.9	41.1
02:00:00	45.9	41.1
01:00:00	45.8	40.7
00:00:00	45.7	40.2

DATE 04-22-95

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	46.0	41.6
21:00:00	45.9	41.1
20:00:00	45.6	39.7
19:00:00	46.0	41.6
18:00:00	46.1	42.1
17:00:00	46.0	41.6
16:00:00	45.8	40.7
15:00:00	45.8	40.7
14:00:00	45.6	39.7
13:00:00	46.0	41.6
12:00:00	46.4	43.5
11:00:00	45.7	40.2
10:00:00	46.1	42.1
09:00:00	46.0	41.6
08:00:00	45.7	40.2
07:00:00	46.6	44.5
06:00:00	45.6	39.7
05:00:00	46.2	42.6
04:00:00	46.1	42.1
03:00:00	45.7	40.2
02:00:00	46.5	44.0
01:00:00	45.7	40.2
00:00:00	45.9	41.1

DATE 04-21-95

TIME	LEVEL	FLOW
23:00:00	46.1	42.1
22:00:00	45.7	40.2
21:00:00	46.2	42.6
20:00:00	46.0	41.6
19:00:00	45.7	40.2
18:00:00	46.3	43.0
17:00:00	45.6	39.7
16:00:00	46.5	44.0
15:00:00	45.7	40.2
14:00:00	45.8	40.7
13:00:00	45.6	39.7
12:00:00	46.2	42.6
11:00:00	46.1	42.1
10:00:00	46.2	42.6
09:00:00	45.9	41.1
08:00:00	45.6	39.7
07:00:00	46.1	42.1
06:00:00	45.9	41.1
05:00:00	45.7	40.2
04:00:00	45.8	40.7
03:00:00	45.9	41.1
02:00:00	46.1	42.1
01:00:00	46.0	41.6
00:00:00	45.6	39.7

DATE 04-20-95

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	46.2	42.6
21:00:00	46.0	41.6
20:00:00	45.6	39.7
19:00:00	45.9	41.1
18:00:00	46.1	42.1
17:00:00	45.7	40.2
16:00:00	46.0	41.6
15:00:00	46.1	42.1
14:00:00	46.0	41.6
13:00:00	46.0	41.6
12:00:00	45.9	41.1
11:00:00	45.9	41.1
10:00:00	46.0	41.6
09:00:00	46.0	41.6
08:00:00	45.9	41.1
07:00:00	45.8	40.7
06:00:00	45.8	40.7
05:00:00	45.8	40.7
04:00:00	45.8	40.7
03:00:00	45.7	40.2
02:00:00	45.8	40.7
01:00:00	45.7	40.2
00:00:00	45.8	40.7

DATE 04-19-95

TIME	LEVEL	FLOW
23:00:00	46.0	41.6
22:00:00	46.0	41.6
21:00:00	45.9	41.1
20:00:00	45.7	40.2
19:00:00	45.8	40.7
18:00:00	45.9	41.1
17:00:00	45.8	40.7
16:00:00	45.7	40.2
15:00:00	45.7	40.2
14:00:00	46.2	42.6
13:00:00	45.9	41.1
12:00:00	45.7	40.2
11:00:00	46.2	42.6
10:00:00	46.1	42.1
09:00:00	46.1	42.1
08:00:00	46.0	41.6
07:00:00	45.9	41.1
06:00:00	45.8	40.7
05:00:00	45.7	40.2
04:00:00	45.8	40.7
03:00:00	45.9	41.1
02:00:00	45.9	41.1
01:00:00	45.8	40.7
00:00:00	45.8	40.7

DATE 04-18-95

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	45.9	41.1
21:00:00	45.7	40.2
20:00:00	45.8	40.7
19:00:00	46.1	42.1
18:00:00	45.8	40.7
17:00:00	45.8	40.7
16:00:00	46.1	42.1
15:00:00	45.8	40.7
14:00:00	45.8	40.7
13:00:00	46.0	41.6
12:00:00	45.8	40.7
11:00:00	46.1	42.1
10:00:00	46.0	41.6
09:00:00	45.8	40.7
08:00:00	45.7	40.2
07:00:00	46.2	42.6
06:00:00	45.7	40.2
05:00:00	46.0	41.6
04:00:00	46.0	41.6
03:00:00	45.7	40.2
02:00:00	46.2	42.6
01:00:00	45.7	40.2
00:00:00	46.6	44.5

DATE 04-17-95

TIME	LEVEL	FLOW
23:00:00	46.3	43.0
22:00:00	46.2	42.6
21:00:00	46.2	42.6
20:00:00	46.5	44.0
19:00:00	45.7	40.2
18:00:00	46.6	44.5
17:00:00	45.7	40.2
16:00:00	46.2	42.6
15:00:00	45.6	39.7
14:00:00	46.0	41.6
13:00:00	46.1	42.1
12:00:00	46.0	41.6
11:00:00	45.7	40.2
10:00:00	46.2	42.6
09:00:00	45.9	41.1
08:00:00	45.8	40.7
07:00:00	46.3	43.0
06:00:00	45.7	40.2
05:00:00	46.5	44.0
04:00:00	45.6	39.7
03:00:00	46.2	42.6
02:00:00	46.1	42.1
01:00:00	45.7	40.2
00:00:00	46.3	43.0

DATE 04-16-95

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	46.3	43.0
21:00:00	45.7	40.2
20:00:00	46.4	43.5
19:00:00	45.8	40.7
18:00:00	45.9	41.1
17:00:00	46.2	42.6
16:00:00	45.7	40.2
15:00:00	46.5	44.0
14:00:00	45.8	40.7
13:00:00	45.9	41.1
12:00:00	46.1	42.1
11:00:00	45.8	40.7
10:00:00	45.6	39.7
09:00:00	45.8	40.7
08:00:00	46.2	42.6
07:00:00	46.1	42.1
06:00:00	45.8	40.7
05:00:00	45.6	39.7
04:00:00	45.8	40.7
03:00:00	45.9	41.1
02:00:00	45.6	39.7
01:00:00	45.8	40.7
00:00:00	45.7	40.2

DATE 04-15-95

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	45.8	40.7
21:00:00	45.9	41.1
20:00:00	46.2	42.6
19:00:00	45.8	40.7
18:00:00	45.9	41.1
17:00:00	46.2	42.6
16:00:00	45.7	40.2
15:00:00	45.9	41.1
14:00:00	46.1	42.1
13:00:00	46.1	42.1
12:00:00	45.9	41.1
11:00:00	45.6	39.7
10:00:00	45.9	41.1
09:00:00	45.8	40.7
08:00:00	45.9	41.1
07:00:00	46.2	42.6
06:00:00	46.0	41.6
05:00:00	45.6	39.7
04:00:00	45.9	41.1
03:00:00	46.1	42.1
02:00:00	46.1	42.1
01:00:00	46.0	41.6
00:00:00	45.6	39.7

DATE 04-14-95

TIME	LEVEL	FLOW
23:00:00	46.2	42.6
22:00:00	45.9	41.1
21:00:00	45.8	40.7
20:00:00	46.1	42.1
19:00:00	45.7	40.2
18:00:00	47.2	47.5
17:00:00	45.7	40.2
16:00:00	46.2	42.6
15:00:00	46.1	42.1
14:00:00	45.9	41.1
13:00:00	45.7	40.2
12:00:00	45.8	40.7
11:00:00	45.8	40.7
10:00:00	46.4	43.5
09:00:00	45.8	40.7
08:00:00	45.7	40.2
07:00:00	46.1	42.1
06:00:00	45.6	39.7
05:00:00	45.8	40.7
04:00:00	45.8	40.7
03:00:00	46.1	42.1
02:00:00	45.8	40.7
01:00:00	46.4	43.5
00:00:00	45.9	41.1

DATE 04-13-95

TIME	LEVEL	FLOW
23:00:00	46.2	42.6
22:00:00	45.9	41.1
21:00:00	46.0	41.6
20:00:00	45.9	41.1
19:00:00	45.8	40.7
18:00:00	46.1	42.1
17:00:00	45.6	39.7
16:00:00	46.4	43.5
15:00:00	46.1	42.1
14:00:00	46.0	41.6
13:00:00	46.2	42.6
12:00:00	45.7	40.2
11:00:00	46.2	42.6
10:00:00	45.8	40.7
09:00:00	46.1	42.1
08:00:00	45.9	41.1
07:00:00	45.6	39.7
06:00:00	46.0	41.6
05:00:00	46.0	41.6
04:00:00	45.8	40.7
03:00:00	45.7	40.2
02:00:00	45.8	40.7
01:00:00	45.9	41.1
00:00:00	46.0	41.6

DATE 04-12-95

TIME	LEVEL	FLOW
23:00:00	46.1	42.1
22:00:00	46.1	42.1
21:00:00	45.7	40.2
20:00:00	45.8	40.7
19:00:00	46.0	41.6
18:00:00	46.0	41.6
17:00:00	45.7	40.2
16:00:00	46.5	44.0
15:00:00	46.1	42.1
14:00:00	45.9	41.1
13:00:00	45.7	40.2
12:00:00	46.1	42.1
11:00:00	46.0	41.6
10:00:00	45.9	41.1
09:00:00	45.8	40.7
08:00:00	45.8	40.7
07:00:00	45.9	41.1
06:00:00	46.1	42.1
05:00:00	46.0	41.6
04:00:00	45.7	40.2
03:00:00	45.8	40.7
02:00:00	46.0	41.6
01:00:00	46.2	42.6
00:00:00	45.9	41.1

DATE 04-11-95

TIME	LEVEL	FLOW
23:00:00	45.6	39.7
22:00:00	46.2	42.6
21:00:00	45.6	39.7
20:00:00	45.9	41.1
19:00:00	45.9	41.1
18:00:00	45.9	41.1
17:00:00	46.1	42.1
16:00:00	46.0	41.6
15:00:00	45.9	41.1
14:00:00	46.0	41.6
13:00:00	46.2	42.6
12:00:00	45.7	40.2
11:00:00	46.0	41.6
10:00:00	46.1	42.1
09:00:00	46.0	41.6
08:00:00	45.9	41.1
07:00:00	45.9	41.1
06:00:00	45.9	41.1
05:00:00	46.0	41.6
04:00:00	46.0	41.6
03:00:00	46.0	41.6
02:00:00	45.9	41.1
01:00:00	45.7	40.2
00:00:00	45.9	41.1

DATE 04-10-95

TIME	LEVEL	FLOW
23:00:00	46.0	41.6
22:00:00	45.9	41.1
21:00:00	45.6	39.7
20:00:00	45.9	41.1
19:00:00	45.8	40.7
18:00:00	45.6	39.7
17:00:00	46.5	44.0
16:00:00	46.0	41.6
15:00:00	45.6	39.7
14:00:00	45.9	41.1
13:00:00	46.0	41.6
12:00:00	45.7	40.2
11:00:00	45.7	40.2
10:00:00	45.7	40.2
09:00:00	46.1	42.1
08:00:00	45.8	40.7
07:00:00	46.1	42.1
06:00:00	45.9	41.1
05:00:00	45.8	40.7
04:00:00	46.2	42.6
03:00:00	45.6	39.7
02:00:00	46.3	43.0
01:00:00	45.8	40.7
00:00:00	45.8	40.7

DATE 04-09-95

TIME	LEVEL	FLOW
23:00:00	45.8	40.7
22:00:00	45.8	40.7
21:00:00	46.2	42.6
20:00:00	45.8	40.7
19:00:00	46.0	41.6
18:00:00	46.0	41.6
17:00:00	46.0	41.6
16:00:00	45.8	40.7
15:00:00	45.6	39.7
14:00:00	45.6	39.7
13:00:00	45.8	40.7
12:00:00	45.7	40.2
11:00:00	46.1	42.1
10:00:00	46.1	42.1
09:00:00	46.0	41.6
08:00:00	45.8	40.7
07:00:00	45.7	40.2
06:00:00	45.7	40.2
05:00:00	45.8	40.7
04:00:00	46.0	41.6
03:00:00	46.0	41.6
02:00:00	45.6	39.7
01:00:00	45.8	40.7
00:00:00	46.0	41.6

DATE 04-08-95

TIME	LEVEL	FLOW
23:00:00	46.0	41.6
22:00:00	45.8	40.7
21:00:00	45.6	39.7
20:00:00	46.4	43.5
19:00:00	45.8	40.7
18:00:00	45.8	40.7
17:00:00	46.5	44.0
16:00:00	45.8	40.7
15:00:00	46.8	45.5
14:00:00	45.8	40.7
13:00:00	46.9	46.0
12:00:00	46.1	42.1
11:00:00	46.3	43.0
10:00:00	46.3	43.0
09:00:00	46.0	41.6
08:00:00	46.1	42.1
07:00:00	46.1	42.1
06:00:00	45.7	40.2
05:00:00	45.9	41.1
04:00:00	46.1	42.1
03:00:00	45.8	40.7
02:00:00	45.7	40.2
01:00:00	46.2	42.6
00:00:00	45.7	40.2

DATE 04-07-95

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	46.1	42.1
21:00:00	46.0	41.6
20:00:00	45.7	40.2
19:00:00	46.1	42.1
18:00:00	45.7	40.2
17:00:00	45.8	40.7
16:00:00	45.9	41.1
15:00:00	45.9	41.1
14:00:00	46.0	41.6
13:00:00	45.8	40.7
12:00:00	46.1	42.1
11:00:00	45.8	40.7
10:00:00	45.8	40.7
09:00:00	45.7	40.2
08:00:00	45.7	40.2
07:00:00	45.8	40.7
06:00:00	45.8	40.7
05:00:00	46.0	41.6
04:00:00	46.1	42.1
03:00:00	46.0	41.6
02:00:00	45.9	41.1
01:00:00	46.0	41.6
00:00:00	45.9	41.1

DATE 04-06-95

TIME	LEVEL	FLOW
23:00:00	45.9	41.1
22:00:00	46.0	41.6
21:00:00	45.9	41.1
20:00:00	45.7	40.2
19:00:00	46.6	44.5
18:00:00	45.7	40.2
17:00:00	46.1	42.1
16:00:00	46.1	42.1
15:00:00	45.7	40.2
14:00:00	46.3	43.0
13:00:00	45.8	40.7
12:00:00	45.7	40.2
11:00:00	46.6	44.5
10:00:00	45.6	39.7
09:00:00	46.0	41.6
08:00:00	46.2	42.6
07:00:00	45.7	40.2
06:00:00	46.2	42.6
05:00:00	45.9	41.1
04:00:00	45.7	40.2
03:00:00	46.4	43.5
02:00:00	45.6	39.7
01:00:00	46.1	42.1
00:00:00	47.1	47.0

DATE 04-05-95

TIME	LEVEL	FLOW
23:00:00	52.9	125.0
22:00:00	47.3	48.0
21:00:00	45.9	41.1
20:00:00	45.8	40.7
19:00:00	46.0	41.6
18:00:00	45.8	40.7
17:00:00	46.0	41.6
16:00:00	45.8	40.7
15:00:00	46.1	42.1
14:00:00	46.1	42.1
13:00:00	45.7	40.2
12:00:00	46.1	42.1
11:00:00	55.8	170.4
10:00:00	54.6	151.4
09:00:00	49.0	66.2
08:00:00	45.7	40.2
07:00:00	46.2	42.6
06:00:00	45.6	39.7
05:00:00	46.4	43.5
04:00:00	45.6	39.7
03:00:00	46.2	42.6
02:00:00	45.8	40.7
01:00:00	45.8	40.7
00:00:00	46.1	42.1

DATE 04-04-95

TIME	LEVEL	FLOW
23:00:00	46.1	42.1
22:00:00	46.2	42.6
21:00:00	45.7	40.2
20:00:00	46.3	43.0
19:00:00	45.6	39.7
18:00:00	46.1	42.1
17:00:00	46.0	41.6
16:00:00	45.9	41.1
15:00:00	46.1	42.1
14:00:00	45.9	41.1
13:00:00	45.9	41.1
12:00:00	45.8	40.7
11:00:00	45.8	40.7
10:00:00	45.7	40.2
09:00:00	45.8	40.7
08:00:00	45.8	40.7
07:00:00	45.9	41.1
06:00:00	45.9	41.1
05:00:00	45.9	41.1
04:00:00	45.9	41.1
03:00:00	46.0	41.6
02:00:00	46.0	41.6
01:00:00	45.9	41.1
00:00:00	46.0	41.6

DATE 04-03-95

TIME	LEVEL	FLOW
23:00:00	46.0	41.6
22:00:00	46.0	41.6
21:00:00	46.0	41.6
20:00:00	46.0	41.6
19:00:00	46.0	41.6
18:00:00	45.8	40.7
17:00:00	45.9	41.1
16:00:00	46.1	42.1
15:00:00	45.8	40.7
14:00:00	45.9	41.1
13:00:00	46.5	44.0
12:00:00	45.7	40.2
11:00:00	45.7	40.2
10:00:00	46.3	43.0
09:00:00	45.7	40.2
08:00:00	46.2	42.6
07:00:00	46.1	42.1
06:00:00	45.7	40.2
05:00:00	46.5	44.0
04:00:00	45.7	40.2
03:00:00	46.0	41.6
02:00:00	45.8	40.7
01:00:00	45.9	41.1

DATE 04-02-95

TIME	LEVEL	FLOW
23:00:00	45.7	40.2
22:00:00	46.5	44.0
21:00:00	45.7	40.2
20:00:00	46.2	42.6
19:00:00	45.7	40.2
18:00:00	52.1	112.7
17:00:00	46.1	42.1
16:00:00	45.7	40.2
15:00:00	45.9	41.1
14:00:00	45.8	40.7
13:00:00	46.3	43.0
12:00:00	46.0	41.6
11:00:00	45.9	41.1
10:00:00	46.1	42.1
09:00:00	46.0	41.6
08:00:00	45.7	40.2
07:00:00	46.1	42.1
06:00:00	46.0	41.6
05:00:00	45.9	41.1
04:00:00	45.9	41.1
03:00:00	46.1	42.1
02:00:00	46.1	42.1
01:00:00	45.9	41.1
00:00:00	45.7	40.2

DATE 04-01-95

TIME	LEVEL	FLOW
23:00:00	46.1	42.1
22:00:00	46.1	42.1
21:00:00	45.7	40.2
20:00:00	46.3	43.0
19:00:00	45.9	41.1
18:00:00	45.7	40.2
17:00:00	46.2	42.6
16:00:00	45.7	40.2
15:00:00	46.2	42.6
14:00:00	46.0	41.6
13:00:00	46.3	43.0
12:00:00	46.1	42.1
11:00:00	46.0	41.6
10:00:00	46.1	42.1
09:00:00	46.1	42.1
08:00:00	46.1	42.1
07:00:00	46.1	42.1
06:00:00	46.0	41.6
05:00:00	45.8	40.7
04:00:00	45.7	40.2
03:00:00	45.8	40.7
02:00:00	46.2	42.6
01:00:00	46.0	41.6
00:00:00	45.7	40.2

State of Idaho
DEPARTMENT OF WATER RESOURCES
1301 North Orchard Street, Statehouse Mail, Boise, Idaho 83720-9000
Phone: (208) 327-7900 FAX: (208) 327-7866

CECIL D. ANDRUS
GOVERNOR

R. KEITH HIGGINSON
DIRECTOR

May 4, 1995

Maher F. Wissa
Commercial Energy Mgmt, Inc.
P.O. Box 4518
Pocatello, ID 83205

RE: PERMIT NO. 29-07699

Dear Mr. Wissa:

I have received the bypass flow records which you recently submitted to the department in connection with the above referenced permit. Thank you for your prompt response and submittal of the records.

As you transmit records of bypass flow in the future, please reference the submittal with the permit number in order that the department can properly file the documents.

Sincerely,

L. GLEN SAXTON, Chief
Water Allocation Bureau

c: IDWR - E. Region

CEM COMMERCIAL ENERGY MGMT, INC.
1155 Yellowstone Ave • Suite B • P. O. Box 4518 • Pocatello, Idaho 83205 • Telephone (208) 237-8184 • Fax (208) 237-8184

Tel: (208) 237-3563

April 22, 1995
Ref: CEM/1037

Mr. L. GLEN SAXTON
Chief, Water Allocation Bureau
State of Idaho, Department of Water Resources
1301 North Orchard Street
Statehouse Mail
Boise, ID 83720-9000

Subject: Portneuf River Hydroelectric Project
Lava Hot Springs, Idaho
FERC Project No. 7447-002
Permit No. 29-7699

Dear Mr. Saxton:

Thank you for your letter dated April 12, 1995.

Attached please find a copy of the bypass channel flow records from the starting date of plant operation to March 31, 1995. We apologize for the delay in transmitting this past records. However, future records will be transmitted in a timely manner.

Please note that the power plant was Off Line from 8/25/94 to 11/12/94 due to very low flow.

Sincerely,

Maher F. Wissa
President

Attachments: 402 sheets

State of Idaho
DEPARTMENT OF WATER RESOURCES
1301 North Orchard Street, P.O. Box 83720, Boise, Idaho 83720-0098
Phone: (208) 327-7900 FAX: (208) 327-7866

April 12, 1995

PHILIP E. BATT
GOVERNOR

R. KEITH HIGGINSON
DIRECTOR

Maher F. Wissa
1155 Yellowstone Ave.
P.O. Box 4518
Pocatello, ID 83205

RE: PERMIT NO. 29-07699 - COMMERCIAL MANAGEMENT, INC.

Dear Mr. Wissa:

Condition of Approval No. 6. for the above referenced permit provides as follows:

> Prior to diversion of any water, a measuring device and lockable controlling works of a type acceptable to the department shall be permanently installed and maintained as part of the diverting works. Also a measuring device with a continuous strip recorder (or other recording device) as approved by the department shall be installed and maintained on the natural channel to measure the flow in the bypassed reach. Records from the bypass channel shall be sent to the department within thirty (30) days of collection.

In a letter dated November 2, 1992, you submitted a proposal to the department to measure water in the by-pass reach by installing a level transducer at the diversion weir and a Smartan Level Control System and printer. On November 5, 1992, the department approved your plan.

To date, however, the department has not received the records of flow thorough the by-pass channel as required in Condition of Approval No. 6. Please submit the past flow records and continue to timely send future records of by-passed flow to the department. In order to maintain the permit in good standing, you are required to comply with all conditions of approval.

By copy of this letter to the department's Eastern Regional Office in Idaho Falls, I am requesting that office to follow up the submittal of the required information in future years if necessary.

Sincerely,

L. GLEN SAXTON, Chief
Water Allocation Bureau

c: IDWR - E. Region
Norman C. Young

CEM COMMERCIAL ENERGY MGMT, INC.
1155 Yellowstone Ave • Suite B • P. O. Box 4518 • Pocatello, Idaho 83205 • Telephone (208) 237-8184 • Fax (208) 237-8184

September 23, 1993
Ref: CEM/0961

RECEIVED
SEP 2 8 1993
Department of Water Resources

Mr. L. GLEN SAXTON
Chief, Water Allocation Bureau
State of Idaho, Department of Water Resources
1301 North Orchard Street
Statehouse Mail
Boise, ID 83720-9000

Subject: Portneuf River Hydroelectric Project
Lava Hot Springs, Idaho
FERC Project No. 7447-002
Permit No. 29-7699

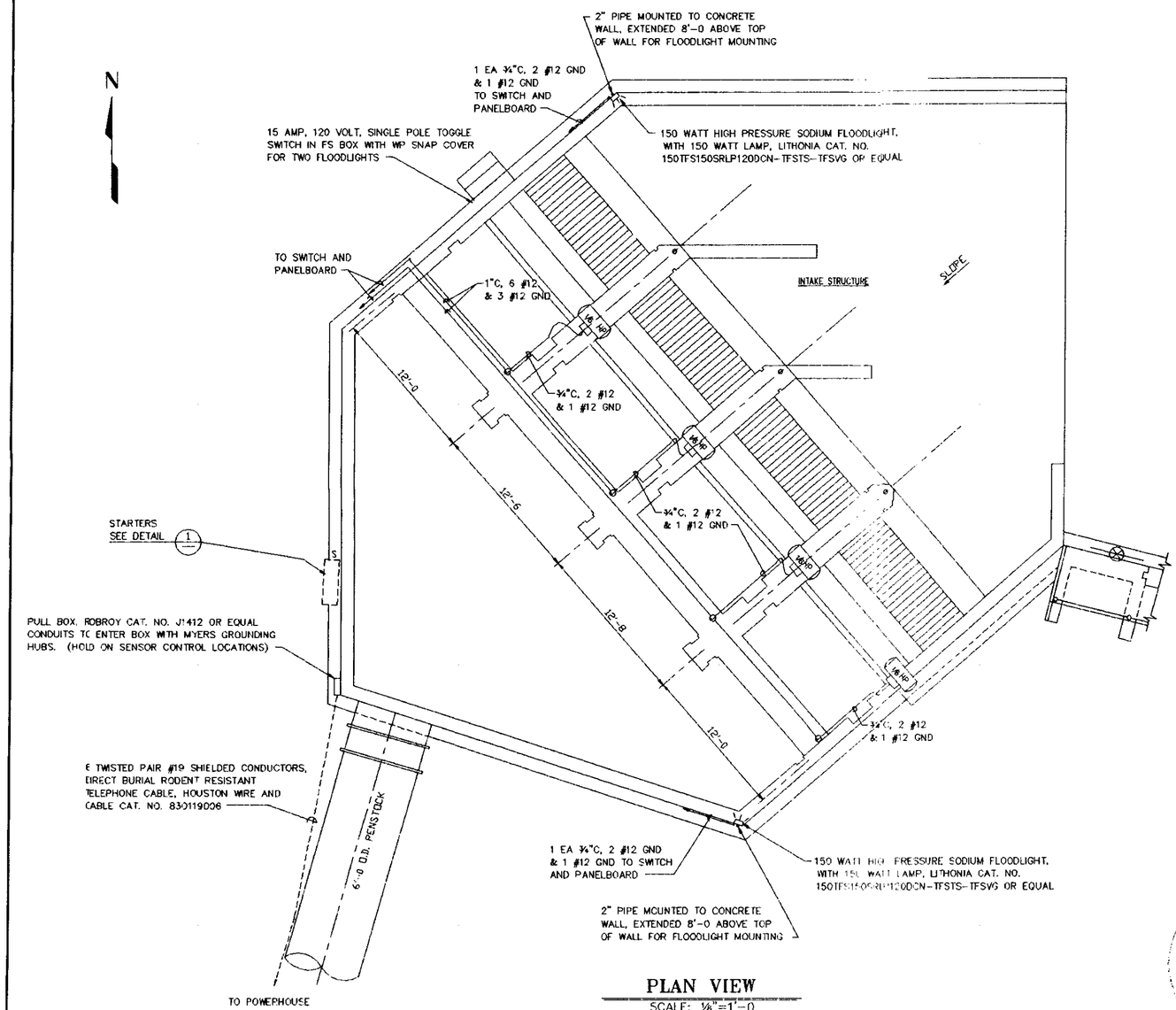
Dear Mr. Saxton:

As required by the referenced Permit, transmitted herewith is a set of as built drawings.

Sincerely,

Maher F. Wissa, P.E.
President

Attachments: one set of as built drawings



PLAN VIEW
SCALE: ⅛"=1'-0

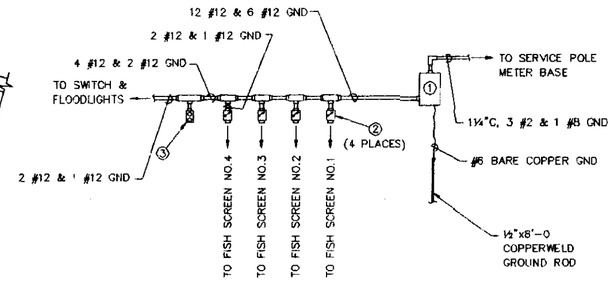
LEGEND

① 100 AMP, 240 VOLT, 3 WIRE, MAIN BREAKER, 18 CIRCUIT, SERVICE ENTRTANCE PANELBOARD, GENERAL ELECTRIC CAT. NO. AQF1181AB-AB313 OR EQUAL WITH 5 EACH 20 AMP, 2 POLE BREAKERS AND 4 EACH 20 AMP, 1 POLE BREAKERS.

② 240 VOLT, 2 POLE, SINGLE PHASE, MANUAL MOTOR STARTER, NEMA 4 ENCLOSURE WITH 2 THERMO-OVERLOAD HEATERS, GENERAL ELECTRIC CAT. NO. CR101H400J OR EQUAL.

③ 15 AMP 120 VOLT, DUPLEX GROUND FAULT CIRCUIT INTERRUPTER RECEPTACLE, PASS & SEYMOUR CAT. NO. 1591-R OR EQUAL IN A FS SINGLE GANG BOX BOX WITH WP SNAP COVER.

NOTE:
1. ALL CONDUIT TO BE RIGID GALVANIZED STEEL OR IMC, MINIMUM SIZE ¾". ALL CONDUITS ENTERING BOXES, SWITCHES, STARTERS AND TRANSFORMER SHALL HAVE THREADED HUBS FOR CONNECTIONS.
2. STARTERS SHALL BE MOUNTED ON UNISTRUT TYPE GALVANIZED CHANNEL.
3. SERVICE POLE LOCATION WITH METER BASE SHALL BE FIELD COORINATED WITH UTAH POWER & LIGHT COMPANY METERING/SERVICE DEPARTMENT.



DETAIL 1
SCALE: NONE

NO.	DATE:	DESCRIPTION	APPVL
1	7/19/93	As Built	M.W.
0	8/2/92	Issued for Construction	M.W.
B	2/5/92	REMOVED XFMR & ADDED SERVICE PANEL	R.E.D.
A	12/16/91	Issued for FERC Review/Approval	M.W.

REVISIONS

CEM
COMMERCIAL ENERGY MANAGEMENT, INC.
1188 YELLOWSTONE, SUITE B
P.O. BOX 4963
Pocatello, Idaho 83205

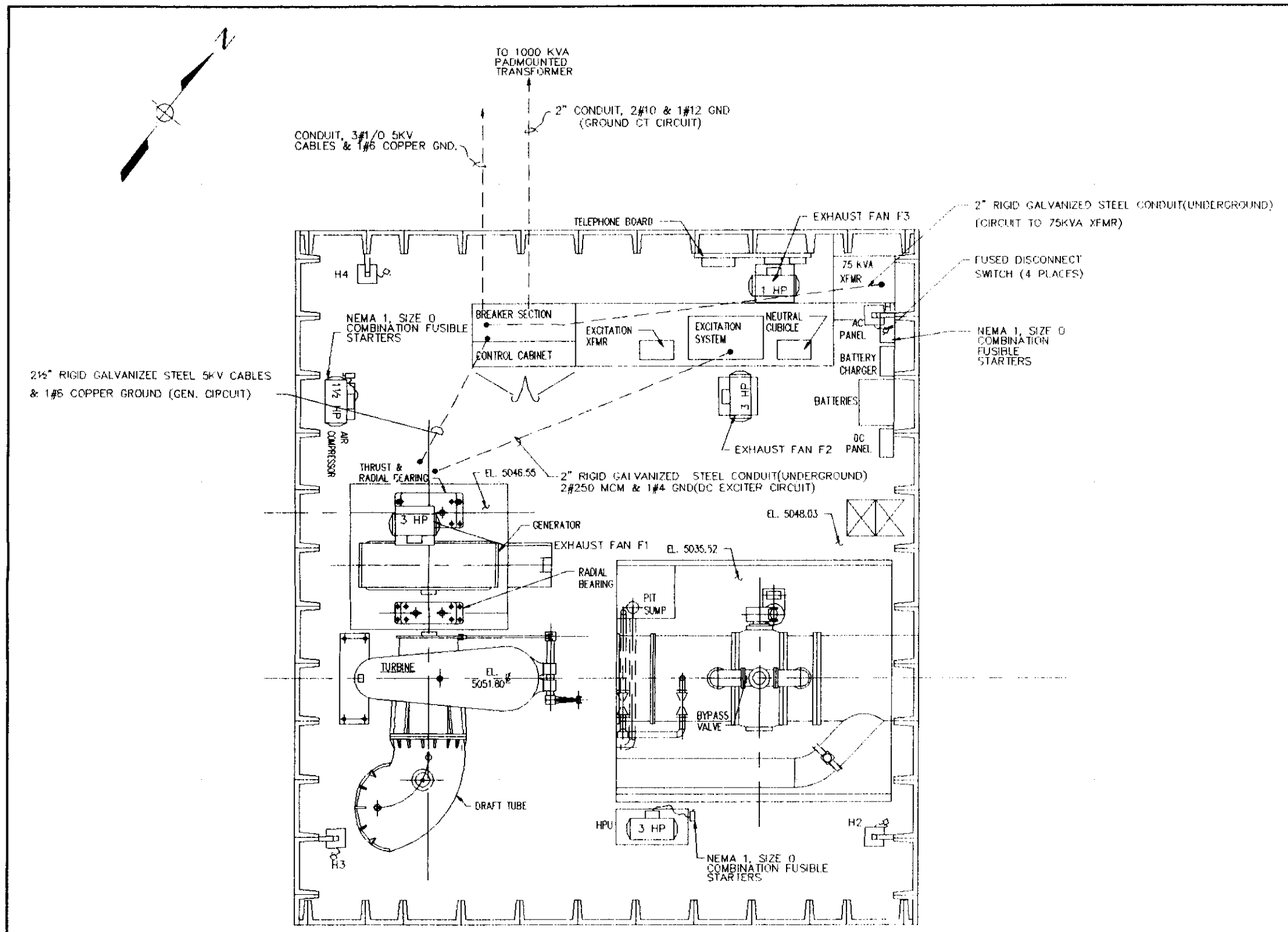
ABCO
DRAFTING / DESIGN, INC.
4922 YELLOWSTONE AVE., SUITE J
P.O. BOX 5507
POCATELLO, ID 83202
208-238-0481

PORTNEUF RIVER - HYDROELECTRIC PROJECT
POWER PLANT NO. 1, LAVA HOT SPRINGS, IDAHO
FERC PROJECT NO. 7447-002

INTAKE STRUCTURE
ELECTRICAL POWER FEEDERS

DRAWING NUMBER: PRH-E-P02

DRAWN BY:	CHECKED BY:	SCALE:	DATE:
RDL	E.E.R.	⅛"=1'-0	11-26-91



PLAN VIEW

SCALE: ⅛"=1'-0

NOTES:

1. ALL CONDUIT AND CONDUIT ELBOWS INSTALLED IN CONCRETE TO BE RIGID GALVANIZED STEEL AND ALL CONDUIT RISERS TO BE RIGID GALVANIZED STEEL WITH INSULATED GROUNDING BUSHINGS. ALL OTHER CONDUITS TO BE SURFACE MOUNTED RIGID GALVANIZED STEEL OR IMC WITH MINIMUM SIZE TO BE ¾ INCH.
2. MINIMUM CONDUCTOR SIZES ARE NOTED ON PANELBOARD SCHEDULE. ALL CONDUCTORS TO BE COPPER STRANDED AND RATED FOR VOLTAGE THEY ARE OPERATING OR CONNECTED TO. ELECTRICAL CONTRACTOR SHALL INCREASE CONDUCTOR SIZE PER NEC FOR MULTIPLE CONDUCTORS INSTALLED IN SINGLE CONDUIT RUNS.
3. NO CHANGES TO BE MADE TO PANELBOARD SCHEDULE UNLESS APPROVED BY ENGINEER.
4. FUSED DISCONNECT SWITCHES FOR UNIT HEATERS H1–H7 TO BE MOUNTED ADJACENT TO UNIT HEATERS WITH FUSE SIZES PER UNIT NAME PLATE. HEATERS TO BE SUPPLIED AND INSTALLED BY OTHERS. DISCONNECT SWITCHES AND FUSES FURNISHED & INSTALLED BY ELECTRICAL CONTRACTOR.
5. COMBINATION FUSED MOTOR STARTERS WITH FUSES AND HEATERS FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR.
6. GENERATOR SWITCHGEAR AND CONTROL PANELS SUPPLIED BY OTHERS AND INSTALLED BY ELECTRICAL CONTRACTOR.
7. POWERHOUSE STATION TRANSFORMER, 4.16KV TO 120/208 VOLTS THREE PHASE SUPPLIED BY OTHERS AND INSTALLED BY ELECTRICAL CONTRACTOR.
8. POWERHOUSE PANELBOARD LPI SUPPLIED BY OTHERS AND INSTALLED BY ELECTRICAL CONTRACTOR.

NO.	DATE:	DESCRIPTION	APPV'L
1	7/15/93	As Built	M.W.
0	8/2/92	Issued for Construction	M.W.
B	2/7/92	Omit 3 Unit Heaters, Rev. Control Panel	R.E.D.
A	12/16/91	Issued for FERC Review/Approval	M.W.

REVISIONS

CEM COMMERCIAL ENERGY MANAGEMENT, INC.
1195 YELLOWSTONE, SUITE B
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Pocatello, Idaho 83205

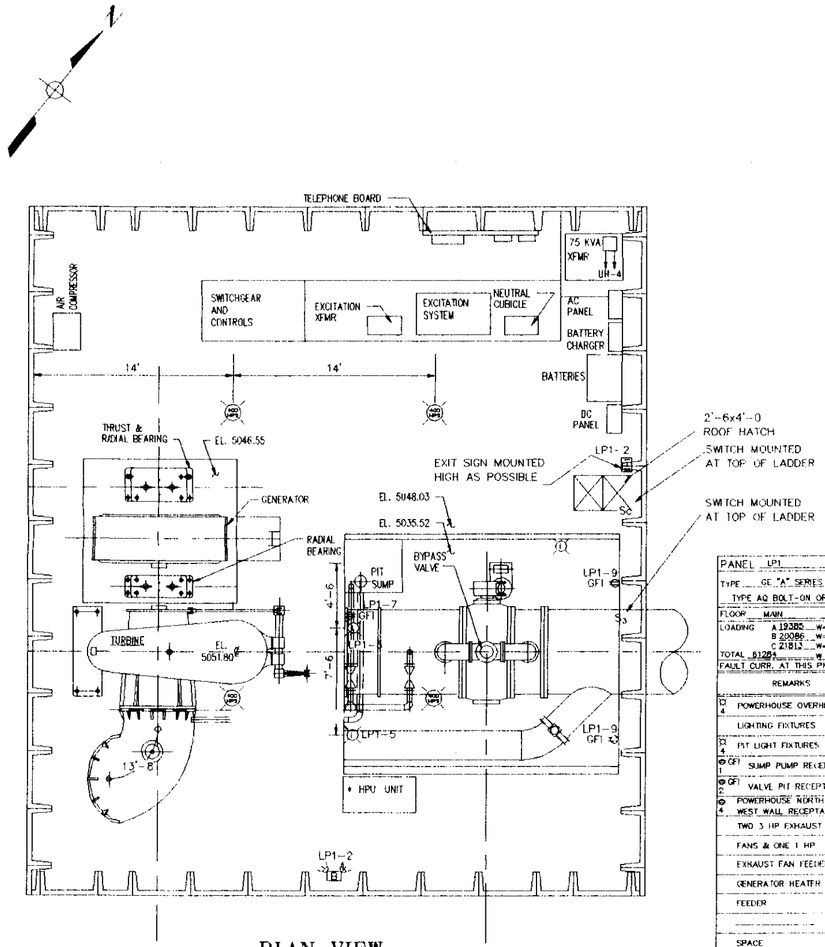
PORTNEUF RIVER – HYDROELECTRIC PROJECT
POWER PLANT NO. 1, LAVA HOT SPRINGS, IDAHO
FERC PROJECT NO. 7447-002

POWERHOUSE
ELECTRICAL POWER FEEDERS

DRAWING NUMBER: PRH–E–P01

DRAWN BY:	CHECKED BY:	SCALE:	DATE:
RDL	R.E.D.	⅛"=1'-0	11-15-91

ABCO
DRAFTING / DESIGN, INC.
4922 YELLOWSTONE AVE., SUITE J
P.O. BOX 5507
POCATELLO, ID 83202
208-238-0481



PLAN VIEW
SCALE: 1/8"=1'-0

LEGEND

- 400 WATT HIGH PRESSURE SODIUM LOWBAY LIGHT FIXTURE, LITHONIA CAT. NO. 400TXAR400S208DF-TOB, OR EQUAL WITH 400 WATT HIGH PRESSURE SODIUM LAMP.
- INCANDESCENT VAPORTITE WALL MOUNT FIXTURE WITH 60 WATT LAMP, HUBBELL CAT. NO. VWX-152 OR EQUAL.
- SINGLE FACE EXIT SIGN WITH EMERGENCY BATTERY PACK AND FLUORESCENT LAMPS, LITHONIA CAT. NO. F2XPW1G120EL OR EQUAL.
- EMERGENCY BATTERY PACK AND LIGHTS, 120 VOLT, LITHONIA CAT. NO. ELU-2 OR EQUAL.
- Sc — 2 POLE, 20 AMP, 120-277 VOLT TOGGLE SWITCH, PASS AND SEYMOUR CAT. NO. 20AC2 OR EQUAL.
- Sv — THREE WAY, 15 AMP, 120 VOLT TOGGLE SWITCH, PASS AND SEYMOUR CAT. NO. 15AC3 OR EQUAL.
- 15 AMP, 120 VOLT, DUPLEX RECEPTACLE, PASS AND SEYMOUR CAT. NO. 6207 OR EQUAL.
- GFI — 15 AMP, 120 VOLT, DUPLEX GROUND FAULT CIRCUIT INTERRUPTER RECEPTACLE, PASS AND SEYMOUR CAT. NO. 1591-R OR EQUAL.

ALL WALL PLATES TO BE STAINLESS STEEL, PASS AND SEYMOUR TYPE 430 OR EQUAL.

NOTES

1. 400 WATT LOWBAY LIGHT FIXTURES TO BE CEILING MOUNTED AS HIGH AS POSSIBLE. (2 PLACES)
2. THE BATTERY PACK EMERGENCY LIGHT UNIT TO BE MOUNTED WITH BOTTOM OF UNIT 10'-0 ABOVE MAIN FLOOR ELEVATION. (1 PLACES)
3. DUPLEX RECEPTACLES ON MAIN FLOOR TO BE MOUNTED 48" ABOVE MAIN FLOOR TO RECEPTACLE CENTER.
4. DUPLEX RECEPTACLES IN BY-PASS VALVE PIT TO BE MOUNTED 48" ABOVE PIT FLOOR TO RECEPTACLE CENTER.
5. LIGHT FIXTURES IN BY-PASS VALVE PIT TO BE MOUNTED WITH TOP OF FIXTURE 12'-0 ABOVE PIT FLOOR.
6. CONDUIT RUNS NOT SHOWN TO AVOID CLUTTER. ALL CONDUITS TO BE SURFACE MOUNTED RIGID GALVANIZED STEEL OR IMC, ¾" MINIMUM SIZE UNLESS OTHERWISE NOTED.
7. MINIMUM CONDUCTOR SIZES ARE NOTED ON PANELBOARD SCHEDULE. ALL CONDUCTORS TO BE COPPER STRANDED AND RATED FOR VOLTAGE THEY ARE OPERATING OR CONNECTED TO. ELECTRICAL CONTRACTOR SHALL INCREASE CONDUCTOR SIZE PER NEC FOR MULTIPLE CONDUCTORS INSTALLED IN SINGLE CONDUIT RUNS.

PANEL LP1 — 3 ø — 4 W — 120/208 V — TYPE AQ BOLT-ON OR EQUAL
MOUNTING: ☐ FLUSH ■ SURFACE
20" W FEED: DIM'S 58.81"D 78.5"H — ☐ TOP ■ BOT — 225AMP. MAIN — ☐ LUGS ☐ ____ ■ BRKR ____
FLOOR MAIN — LOCATION POWERHOUSE
LOADING A 19385 W=161.6 A; B 20086 W=167.4 A; C 21812 W=181.8 A — TOTAL 61283 W
THIS PNL IS FED FROM PNL: ____ 75 KVA TRANSFORMER ____ CKT. NO. ____ — AMP 350 — WIRE SIZE: 3 #250 MCM, 1 #4/0 — 1 EA. 2½" CONDUIT(S) — &1 #2 GND, THHN
FAULT CURR. AT THIS PNL 6500 A RMS SYM — MIN. EQUIP. RATING 10,000 A RMS SYM

REMARKS	WIRE	AMP/POLE	N	CKT	LOADING A	LOADING B	LOADING C	CKT	N	AMP/POLE	WIRE	REMARKS
POWERHOUSE OVERHEAD	#12	20/2		1	1033/43			2	12	20/1	#12	EMERGENCY LIGHTS & EXIT SIGN (2)
LIGHTING FIXTURES			X			1033/1590		4		20/2	#12	BATTERY
PIT LIGHT FIXTURES	#12	20/1	12	5			240/1560	X			#12 GND	CHARGER
GFI SUMP PUMP RECEPTACLES	#12	20/1	12	7	1656/1440			8	12	20/1	#12	POWERHOUSE EAST & SOUTH WALL RECEPTACLES (3)
GFI VALVE PIT RECEPTACLES	#12	20/1	12	9		1920/480		10	12	20/1	#12	METERING CIRCUIT
POWERHOUSE NORTH & WEST WALL RECEPTACLES	#12	20/1	12	11			1920/2880	12	10	30/1	#10	CONTROL PANEL
TWO 3 HP EXHAUST	#8	40/3		13	3310/2357			14		30/3	#10	HYDRAULIC POWER
FANS & ONE 1 HP	#10 GND			15		3310/2357		X			#10 GND	PACK & AIR COMPRESSOR
EXHAUST FAN FEEDER				17			3310/2357	X				FEEDER
GENERATOR HEATER	#10	30/3		19	2880/3333			20		40/3	#8	UNIT HEATERS NO. H1 &
FEEDER	#10 GND			21		2880/3333		20			#10 GND	H2 FEEDER
				23			2880/3333	X				
SPACE				25	3300			26		40/3	#8	UNIT HEATERS NO. H3 &
SPACE				27		3300		X			#10 GND	H4 FEEDER
SPACE				29			3300	X				
SPACE				31				32				SPACE
SPACE				33				X				SPACE
SPACE				35				X				SPACE
SPACE				37				38				SPACE
SPACE				39				40				SPACE
SPACE				41				42				SPACE

NO.	DATE:	REVISIONS	APPVL
1	7/15/93	As Built	M.W.
0	8/2/92	Issued for Construction	M.W.
B	2/7/92	Revised Light Fixtures & Panelboard Schedule	R.E.D.
A	12/16/91	Issued for FERC Review/Approval	M.W.

7/25/93 — STATE OF IDAHO — WERNER F. WISSER

ABCO
DRAFTING / DESIGN, INC.
4922 YELLOWSTONE AVE., SUITE J
P.O. BOX 5507
POCATELLO, ID 83202
208-238-0481

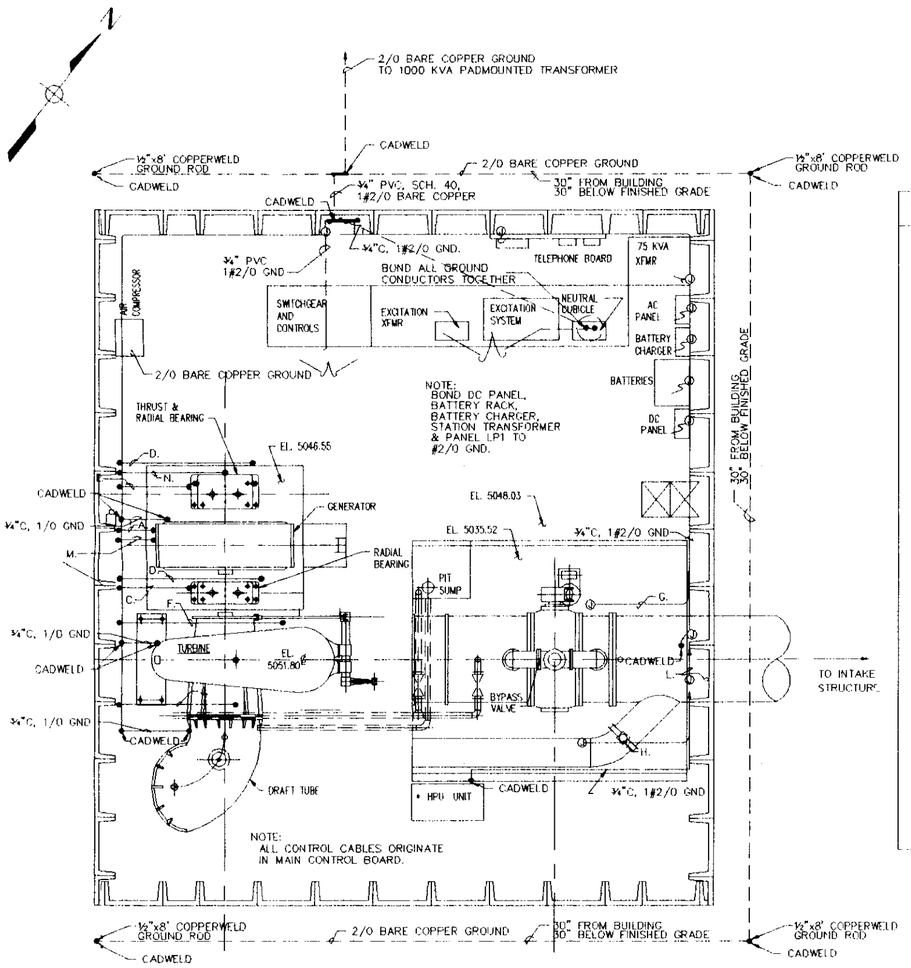
CEM — COMMERCIAL ENERGY MANAGEMENT, INC. — 1186 YELLOWSTONE, SUITE B — P.O. BOX 4918 — Pocatello, Idaho 83205

PORTNEUF RIVER - HYDROELECTRIC PROJECT
POWER PLANT NO. 1, LAVA HOT SPRINGS, IDAHO
FERC PROJECT NO. 7447-002

POWERHOUSE LIGHTING & RECEPTACLES LAYOUT

DRAWING NUMBER: PRH-E-F01

DRAWN BY:	CHECKED BY:	SCALE:	DATE:
RDL	R.E.D.	1/8"=1'-0	11-14-91



PLAN VIEW

SCALE: 1/8"=1'-0

CONTROL CABLE	DESCRIPTION	FUNCTION
A.	6 EACH 3#16 SHIELDED, BELDEN NO. 1098A OR EQUAL	FROM 6 RTD'S IN STATOR SLOTS TO MAIN CONTROL PANEL.
B.	1 EACH 4#14 NON-SHIELDED, BELDEN NO. 8627 OR EQUAL	FROM END THRUST & RADIAL BEARING TEMPERATURE ALARM CONTACTS TO MAIN CONTROL PANEL.
C.	1 EACH 2#14 NON-SHIELDED, BELDEN NO. 9411 OR EQUAL	RADIAL BEARING TEMPERATURE ALARM CONTACTS TO MAIN CONTROL PANEL. (1 PLACES)
D.	1 EACH 2#14 NON-SHIELDED, BELDEN NO. 9411 OR EQUAL	COOLING WATER LOW FLOW ALARM TO MAIN CONTROL PANEL. (2 PLACES)
E.	2 EACH 12#14 NON-SHIELDED, BELDEN NO. 8629 OR EQUAL	HYDRAULIC VALVES, SERVOMOTOR CONTROLS AND ALARMS TO MAIN CONTROL PANEL.
F.	1 EACH 2#16 SHIELDED, BELDEN NO. 1030A OR EQUAL 1 EACH 4#14 NON-SHIELDED, BELDEN NO. 8627 OR EQUAL	SERVOMOTOR GATE OPENING & GATE POSITION TO MAIN CONTROL PANEL.
G.	1 EACH 7#14 NON-SHIELDED, BELDEN NO. 8678 OR EQUAL	TSV CONTROL & POSITION INDICATION TO MAIN CONTROL PANEL.
H.	1 EACH 4#14 NON-SHIELDED, BELDEN NO. 8627 OR EQUAL	BY-PASS VALVE OPEN--CLOSE POSITION TO MAIN CONTROL PANEL.
I.	NOT USED	
J.	1 EACH 2#14 NON-SHIELDED, BELDEN NO. 9411 OR EQUAL	TURBINE WATER PRESSURE RELAY CONTACT TO MAIN CONTROL PANEL.
K.	NOT USED	
L.	6 TWISTED PAIR #19 SHIELDED CONDUCTORS, HOUSTON WIRE & CABLE CAT. NO. 830119006	INTAKE WATER LEVEL INDICATION AND SLIDE GATE CONTROL TO MAIN CONTROL PANEL.
M.	1 EACH 4#14 NON-SHIELDED, BELDEN NO. 8627 OR EQUAL	GENERATOR HEATER THERMOSTAT TO MAIN CONTROL PANEL AND HEATER CONTACTOR.
N.	1 EACH 3#22 SHIELDED, BELDEN NO. 9939 OR EQUAL	SPEED SIGNAL CABLE TO MAIN CONTROL PANEL.

NOTES:

1. ELECTRICAL CONTRACTOR TO FURNISH, INSTALL AND CONNECT ALL CONTROL CABLES, SHIELDED AND NON-SHIELDED.
2. CABLES FROM UNDERGROUND CONDUIT TO EQUIPMENT TO BE INSTALLED IN RIGID GALVANIZED STEEL CONDUIT OR IMC. LIQUID TIGHT FLEX MAY BE USED BETWEEN CONDUIT AND EQUIPMENT.
3. CONDUIT SIZES TO BE DETERMINED AFTER ROUTE AND COMBINATION OF CABLE RUNS HAS BEEN SELECTED IN THE FIELD.
4. GROUNDING CONDUCTORS SHALL BE ATTACHED TO EQUIPMENT BY CADWELD OR COMPRESSION LUGS BOLTED TO EQUIPMENT.

9/23/93

NO.	DATE	DESCRIPTION	APPVL
1	7/14/93	As Built	M.W.
0	8/2/92	Issued for Construction	M.W.
B	2/6/92	Revised Generator & Control Panel	R.E.D.
A	12/16/91	Issued for FERC Review/Approval	M.W.

REVISIONS

CEM — COMMERCIAL ENERGY MANAGEMENT, INC.

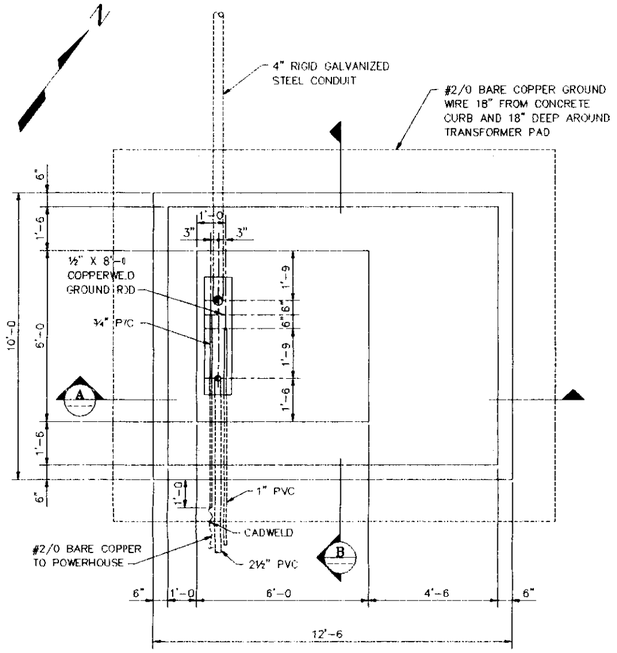
PORTNEUF RIVER - HYDROELECTRIC PROJECT
POWER PLANT NO. 1, LAVA HOT SPRINGS, IDAHO
FERC PROJECT NO. 7447-002

POWERHOUSE ELECTRICAL CONTROL CABLES & GROUNDING LAYOUT

DRAWING NUMBER: PRH-E-C01

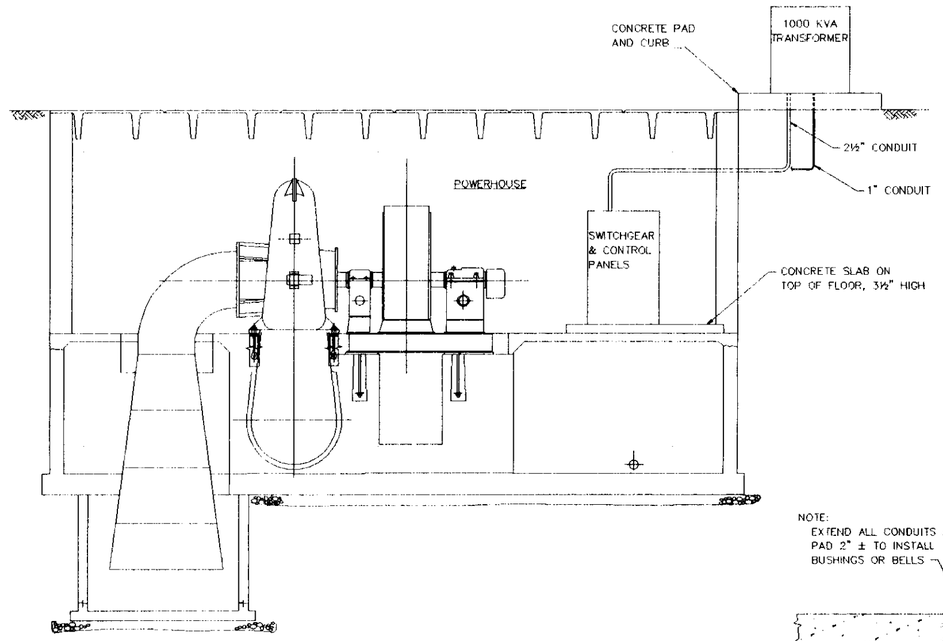
DRAWN BY	CHECKED BY	SCALE	DATE
MBM	R.E.D.	1/8"=1'-0	11-18-91

ABCO
DRAFTING / DESIGN, INC.
4922 YELLOWSTONE AVE., SUITE J
P.O. BOX 5507
POCATELLO, ID 83202
208-238-0481



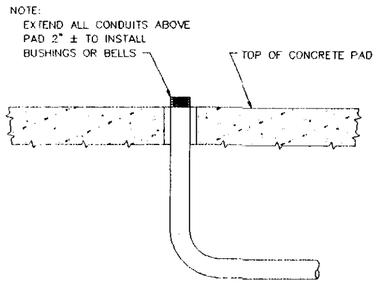
PLAN VIEW

SCALE: ½"=1'-0



ALTERNATE TRANSFORMER PAD LOCATION

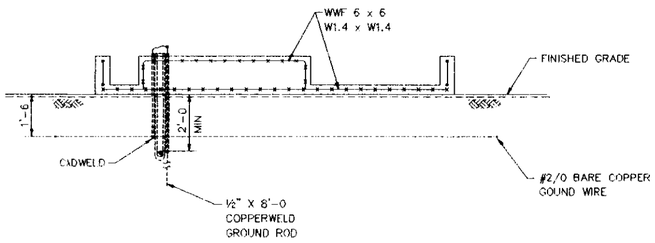
SCALE: ¼"=1'-0



DETAIL 1

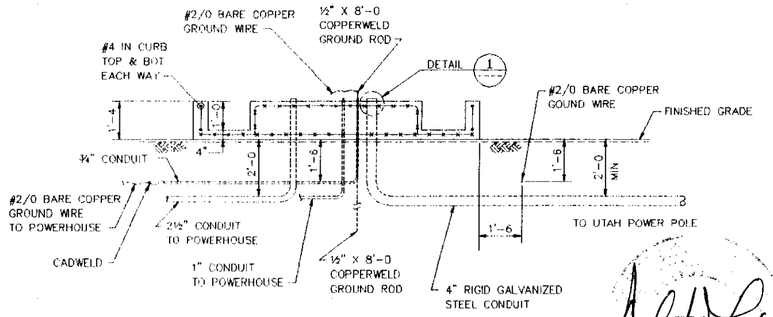
SCALE: NONE

SIMILAR 4 PLACES



SECTION A

SCALE: ½"=1'-0



SECTION B

SCALE: ½"=1'-0

NO.	DATE	REVISIONS	APPVL
1	7/13/93	As Built	M.W.
0	8/2/92	Issued for Construction	M.W.
B	2/5/92	Revised Gen. Layout & Control Panel	R.E.D.
A	12/16/91	Issued for FERC Review/Approval	M.W.

CEM
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1135 YELLOWSTONE, SUITE B
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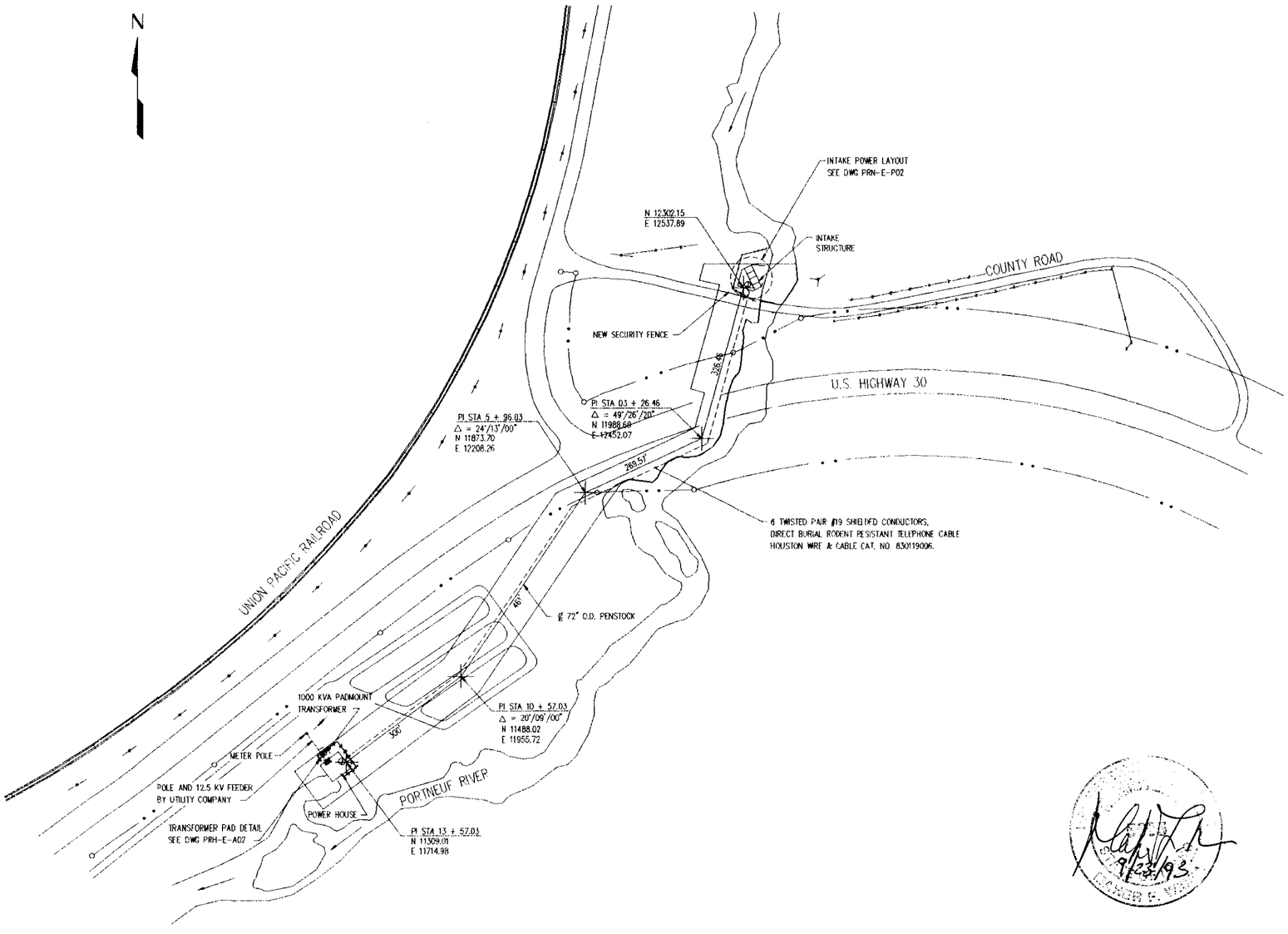
POCATELLO, ID 83202
208-238-0481

PORTNEUF RIVER - HYDROELECTRIC PROJECT
POWER PLANT NO. 1, LAVA HOT SPRINGS, IDAHO
FERC PROJECT NO. 7447-002

POWERHOUSE-PENSTOCK-INTAKE TRANSFORMER PAD

DRAWING NUMBER: PRH-E-A02

DESIGN BY:	DRAWN BY:	TRACE	DATE
RDL	R.E.D.	NOTED	11-23-91



9/23/93

NO.	DATE:	DESCRIPTION	APPV'L
1	7/13/93	As Built	M.W.
0	8/2/92	Issued for Construction	M.W.
B	2/5/92	REMOVED PVC & PULL-BOX, ADDED DIRECT BURIAL	R.E.D.
A	12/16/91	Issued for FERC Review/Approval	M.W.

REVISIONS

CEM
COMMERCIAL ENERGY MANAGEMENT, INC.
1195 YELLOWSTONE, SUITE B
P.O. BOX 818
Pocatello, Idaho 83209

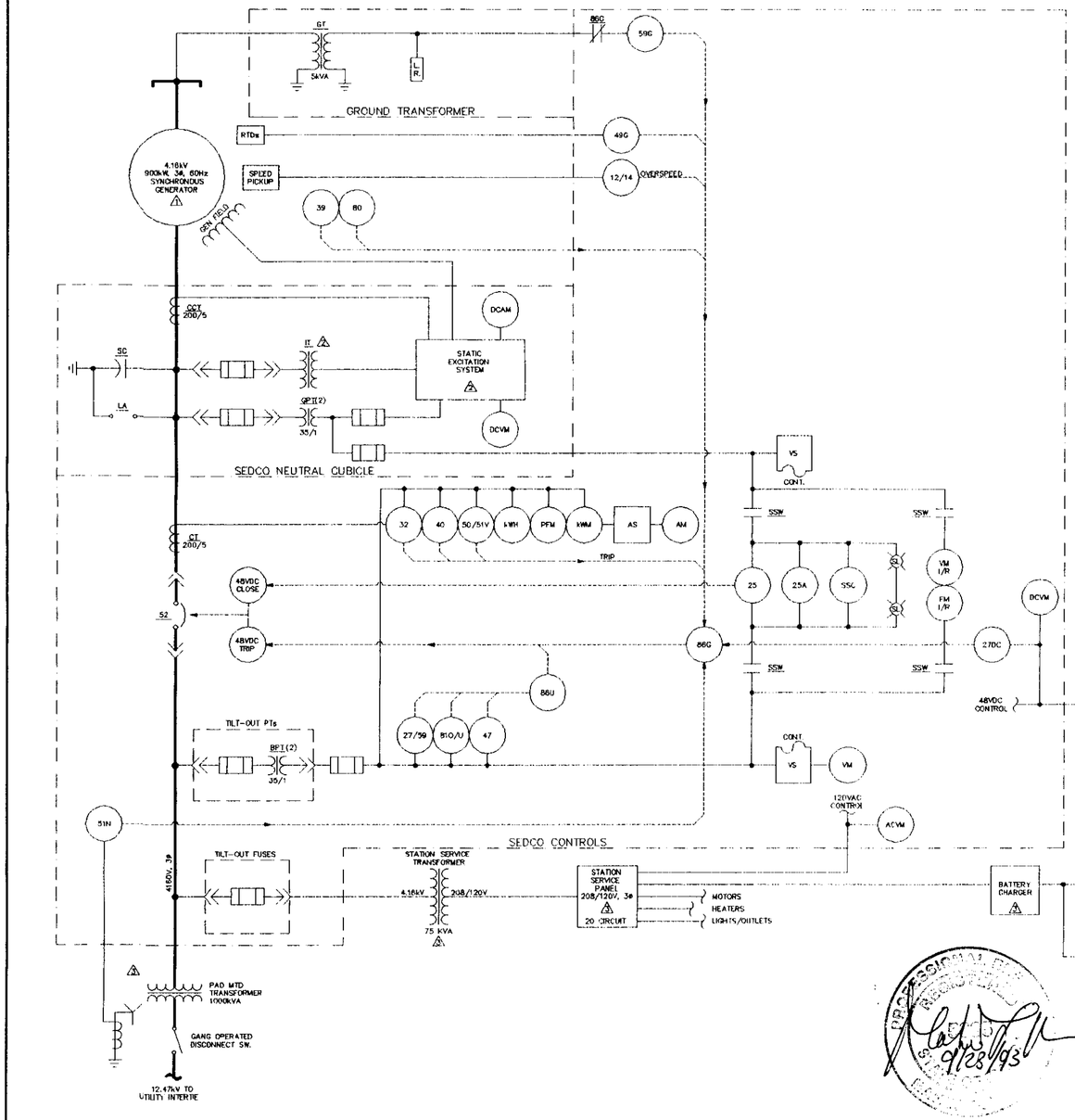
PORTNEUF RIVER - HYDROELECTRIC PROJECT
POWER PLANT NO. 1, LAVA HOT SPRINGS, IDAHO
FERC PROJECT NO. 7447-002

POWERHOUSE-PENSTOCK-INTAKE
SITE LAYOUT PLAN

ABCO
DRAFTING / DESIGN, INC.
4922 YELLOWSTONE AVE., SUITE J
P.O. BOX 5507
POCATELLO, ID 83202
208-238-0481

DRAWING NUMBER: PRH-E-A01

DRAWN BY:	CHECKED BY:	SCALE:	DATE:
REB	R.E.D.	1"=100'-0	11-22-91



ORIENTAL ENGINEERING CO.
LAVA HOT SPRINGS PROJECT
SEDCO 2762
PROTECTIVE RELAY LIST

RELAY	FUNCTION	MANUFACTURER	PART No.	SETTINGS	COIL VOLTS	COIL AMPS
12/14	OVERSPEED RELAY	AIRPAX	TAK-PAK 3	*	120/AC	---
25	SYNC CHECK RELAY	BASLER	BE1-25	BUS-GEN SYNC	120/AC	---
25A	AUTOMATIC SYNC CHECK RELAY	G.E.	PROG. LOGIC CONTROLLER	BUS-GEN SYNC	120/AC	---
27DC	BATTERY CHARGER PROTECTIVE RELAY	EMAX	TYPE BVR	44VDC	48VDC	---
47-27/59 810/U	UNDER/OVER VOLT. & OVER/UNDER FREQUENCY RELAY	BECKWITH ⚠2	M-0296A	PER UTILITY	120/AC	---
32	REVERSE POWER RELAY	BASLER	BE1-32	5%, 10 SEC.	120/AC	5A
39	OVER VIBRATION RELAY	(NOT BY SEDCO)			---	---
40	FIELD RELAY	BASLER	BE1-40	*	120/AC	5A
49G	GENERATOR TEMP. RELAY	TOSHIBA	RTM-20	*	---	---
50/51V	TIME OVER CURRENT RELAY	WESTINGHOUSE	TYPE SL #1878399	PER GEN NAMEPLATE	120/AC	5A
51N	NEUTRAL OVER CURRENT RELAY	G.E.	12IFC	*	---	5A
52	CIRCUIT BREAKER	G.E.	VB 4.16	N/A	---	---
59G	GROUND OVER VOLTAGE RELAY	G.E.	12IAV51K1A	*	69VAC	---
80	COOLING WATER FLOW SWITCH	(NOT BY SEDCO)			---	---
86G	GENERATOR LOCKOUT RELAY	ESCO	7803C	INST	48VDC	---
86U	UTILITY LOCKOUT RELAY	G.E.	12	INST	48VDC	---

DEVICE LEGEND

AM	– AMMETER
AS	– AMMETER SWITCH
BPT	– BUS POTENTIAL TRANSFORMER
CCT	– CROSS CURRENT TRANSFORMER
CT	– CURRENT TRANSFORMER
DCAM	– DC AMMETER
DCVM	– DC VOLTMETER
FM-I/R	– FREQUENCY METER-INCOMING/RUNNING
GPT	– GENERATOR POTENTIAL TRANSFORMER
GT	– GROUND TRANSFORMER
kWH	– KILOWATT HOURMETER
kWM	– KILOWATT METER
LA	– LIGHTNING ARRESTOR
LR	– LOAD RESISTOR
PFM	– POWER FACTOR METER
RTDs	– RESISTIVE TEMP DETECTOR
SC	– SURGE CAPACITOR
SL	– SYNC LIGHT
SSC	– SYNCSCOPE
SSW	– SYNC SWITCH
VM	– VOLTMETER
VM-I/R	– VOLTMETER-INCOMING/RUNNING
VS	– VOLTMETER SWITCH

SYMBOL LEGEND

⚠1 NOT BY SEDCO
⚠2 SUPPLIED BY OTHERS, INSTALLED BY SEDCO
⚠3 SUPPLIED BY SEDCO, INSTALLED BY OTHERS

NO.	DATE:	DESCRIPTION	APPVL
1	8/25/93	As Built	M.W.
0	8/2/92	Issued for Construction	M.W.
C	2/4/92	Issued for FERC Review/Approval	M.W.
B	1/31/92	Revised per ORIENCO Equip. Changes	M.W.
A	12/12/91	Incorporated ORIENCO Equip. Information	M.W.

REVISIONS

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1 of A

SEDCO — SIERRA ELECTRO DEVELOPMENT CO.
1266-C STATE AVE., MARYSVILLE, WA 98270 (206) 653-4054

ORIENTAL ENGINEERING CO.
LAVA HOT SPRINGS PROJECT
ONE LINE DIAGRAM

DRAWING NO: 2762-1

REV.	BY	DATE
A	DJ	1-13-92

DR BY: DJ ENGR: DB DATE: 1-7-92

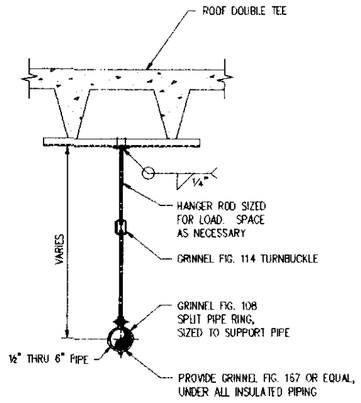
CEM — COMMERCIAL ENERGY MANAGEMENT, INC.
1755 YELLOWSTONE, SUITE 9
P.O. BOX 4004
Pocatello, Idaho 83205

PORTNEUF RIVER – HYDROELECTRIC PROJECT
POWER PLANT NO. 1, LAVA HOT SPRINGS, IDAHO
FERC PROJECT NO. 7447-002

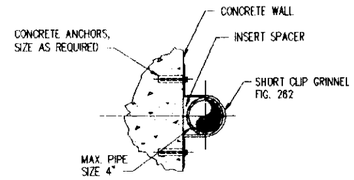
ELECTRICAL
ONE LINE DIAGRAM

DRAWING NUMBER: PRH-E-001

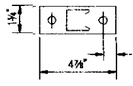
DESIGNED BY | CHECKED BY A. TSENG | SCALE: NO SCALE | DATE



DETAIL 1 PIPE SUPPORT
NTS

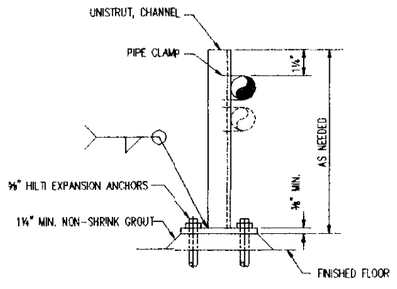


DETAIL 2 WALL SUPPORT FOR PIPE
NTS

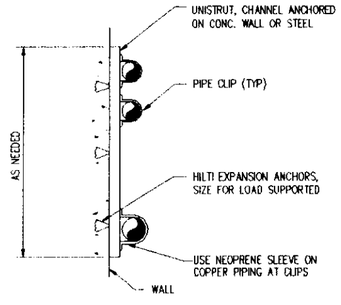


NOTES:

1. USE 1⅝"x2⅛" CHANNEL TO SUPPORT 3" PIPE.
2. LENGTH OF SUPPORT TO BE CALCULATED BASED ON NUMBER OF PIPES ON SUPPORT AND MINIMUM DISTANCE FROM FINISHED FLOOR
3. FABRICATE AND HOT DIP GALVANIZE



DETAIL 3 PIPE SUPPORT
NTS



DETAIL 4 WALL SUPPORT FOR PIPES
NTS
PRH-P-002

PROFESSIONAL ENGINEER REGISTERED 5695 STATE OF IDAHO MAHER F. WISSA
9/23/93

NO.	DATE:	DESCRIPTION	APP'VL
1	7/1/93	As Built	M.W.
0	8/17/92	Issued For Construction	M.W.
C	2/4/92	Issued for FERC Review/Approval	M.W.
B	1/31/92	Revised per ORENCO Equip. Changes	M.W.
A	12/12/91	Incorporated ORENCO Equip. Information	M.W.

REVISIONS

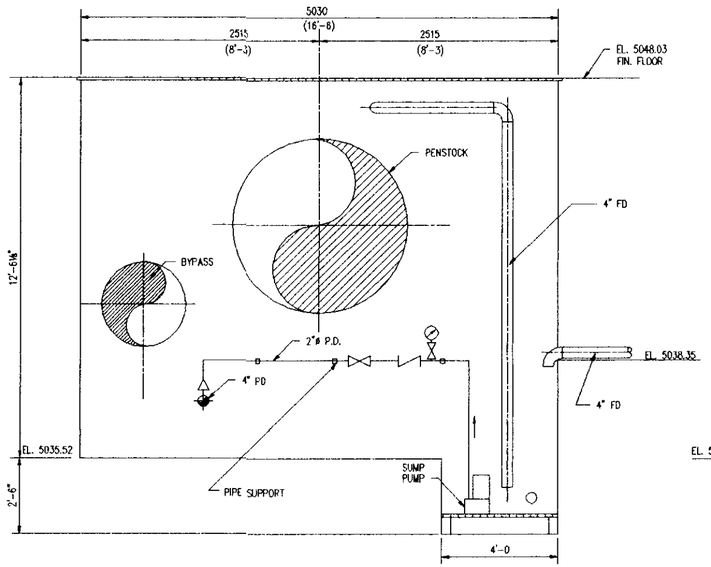
CEM
COMMERCIAL ENERGY MANAGEMENT, INC.
1188 YELLOWSTONE, SUITE B
P.O. BOX 4516
Pocatello, Idaho 83205

PORTNEUF RIVER - HYDROELECTRIC PROJECT
POWER PLANT NO. 1, LAVA HOT SPRINGS, IDAHO
FERC PROJECT NO. 7447-002

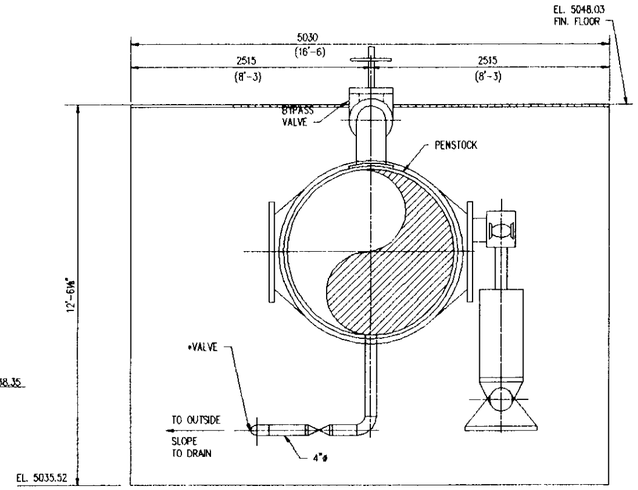
POWER HOUSE
PIPING SECTIONS & DETAILS

DRAWING NUMBER: PRH-P-003

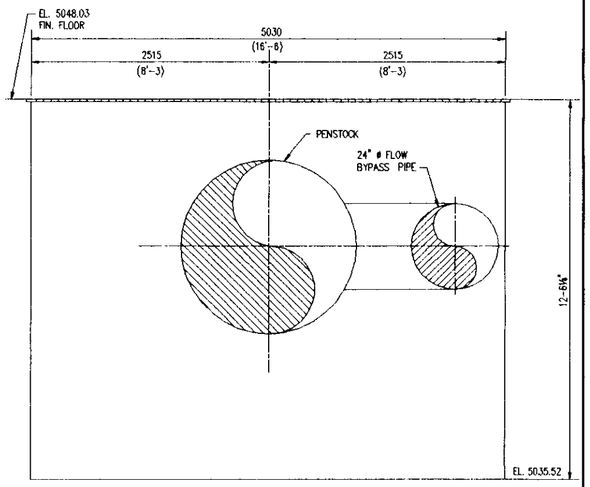
DRAWN BY:	CHECKED BY:	SCALE:	DATE:
TAC	P.K. PARBOH	AS NOTED	11-2-91



SECTION D LOOKING WEST
SCALE: 1/4"=1'-0 PRH-P-001



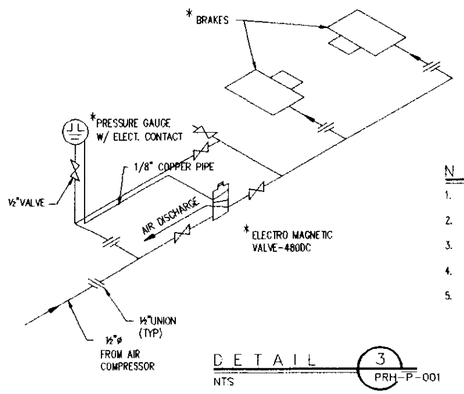
SECTION E LOOKING EAST
SCALE: 1/4"=1'-0 PRH-P-001



SECTION C LOOKING WEST
SCALE: 1/4"=1'-0 PRH-P-001

PIPE SCHEDULE

DESCRIPTION	SIZE	OPERATING PRESSURE	DESIG.	SPECIFICATION	TEST PRESSURE RATING	COMMENTS
BEARING COOLING WATER SUPPLY	¾" TO 1½"	50 PSIG	CWS	GALV SCH 40	150 PSIG	SEE NOTE 1
BEARING COOLING WATER RETURN	¾" TO 2½"	35 PSIG	CWR	GALV SCH 40	150 PSIG	SEE NOTE 1
GATE (CLOSED)	½"	575 PSIG	GCL	SEAMLESS WROUGHT STEEL GRADE B SCH 40	800 PSIG	SEE NOTE 2
GATE (OPEN)	½"	575 PSIG	GOP	SEAMLESS WROUGHT STEEL GRADE B SCH 40	800 PSIG	SEE NOTE 2
FLOOR DRAIN	4"	10 PSIG	F.D.	PVC	15 PSIG	SEE NOTE 1
COMPRESSED AIR	½"	100 PSIG	C.A.	BLACK IRON SCH 40	150 PSIG	SEE NOTE 3
PIEZOMETER	½"	50 PSIG	PZO	COPPER TYPE K	75 PSIG	SEE NOTE 1
DRAIN PROCESS	4" AND UNDER	50 PSIG	PD	GALV SCH 40	100 PSIG	SEE NOTE 1
DRAIN SUMP	3" AND UNDER	50 PSIG	SD	GALV SCH 40	100 PSIG	SEE NOTE 1
BYPASS SUPPLY	½"	375 PSIG	BPS	SEAMLESS WROUGHT STEEL GRADE B SCH 40	800 PSIG	SEE NOTE 2
BYPASS RETURN	½"	375 PSIG	BPR	SEAMLESS WROUGHT STEEL GRADE B SCH 40	800 PSIG	SEE NOTE 2
TURBINE SHUT-OFF SUPPLY	½"	375 PSIG	TSS	SEAMLESS WROUGHT STEEL GRADE B SCH 40	800 PSIG	SEE NOTE 2
TURBINE SHUT-OFF RETURN	½"	375 PSIG	TSR	SEAMLESS WROUGHT STEEL GRADE B SCH 40	800 PSIG	SEE NOTE 2
HOSE BIB	¾"	75 PSIG	HB	GALV SCH 40	150 PSIG	SEE NOTE 1



DETAIL 3
NTS PRH-P-001

NOTES:

1. MEDIA FOR TESTING SHALL BE CLEAN WATER.
2. MEDIA FOR TESTING SHALL BE HYDRAULIC FLUID.
3. MEDIA FOR TESTING SHALL BE AIR.
4. * BY ORENCO
5. INSTALL UNIONS WHERE NECESSARY.

PROFESSIONAL ENGINEER REGISTERED STATE OF IDAHO MAHER F. WISSA 5875 9/23/93

NO.	DATE:	DESCRIPTION	APPVL
		REVISIONS	
1	7/1/93	As Built	M.W.
0	8/17/92	Issued For Construction	M.W.
C	2/4/92	Issued for FERC Review/Approval	M.W.
B	1/31/92	Revised per ORENCO Equip. Changes	M.W.
A	12/12/91	Incorporated ORENCO Equip. Information	M.W.

CEM COMMERCIAL ENERGY MANAGMENT, INC.
1135 YELLOWSTONE, SUITE B
P.O. BOX 4516
Pocatello, Idaho 83204

PORTNEUF RIVER - HYDROELECTRIC PROJECT
POWER PLANT NO. 1, LAVA HOT SPRINGS, IDAHO
FERC PROJECT NO. 7447-002

POWER HOUSE
PIPING SECTIONS & DETAILS

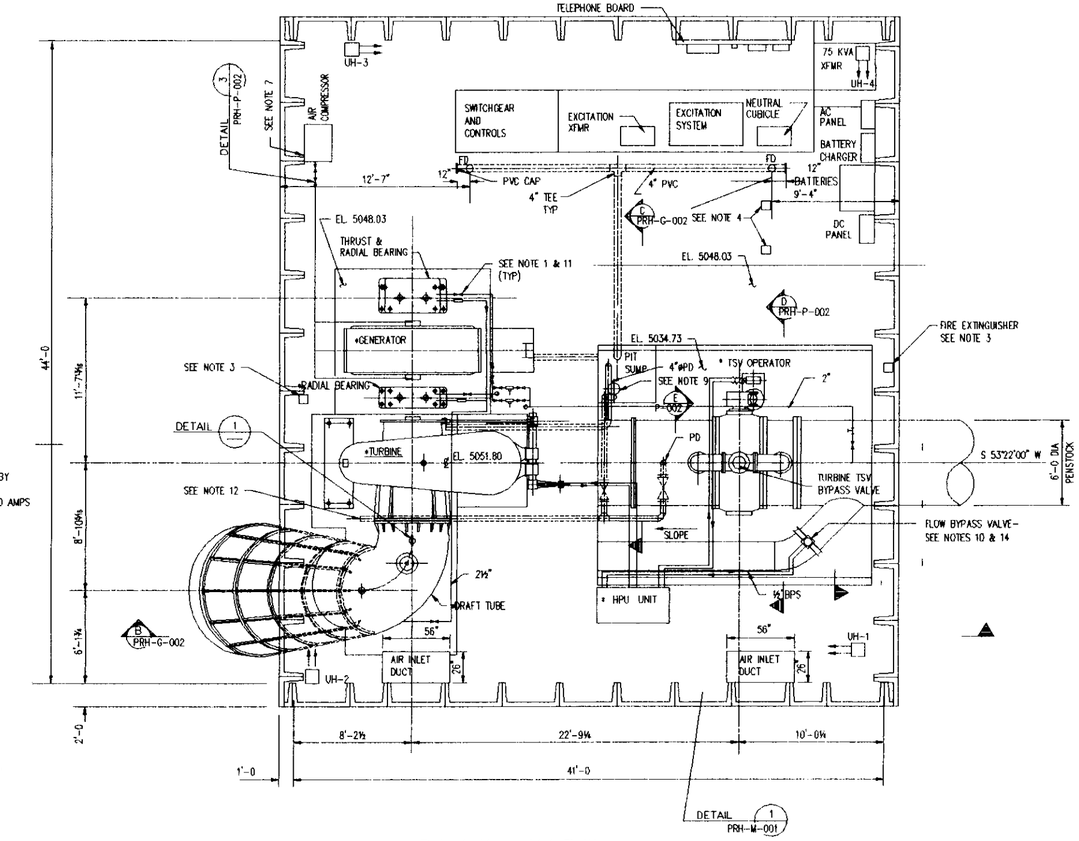
DRAWING NUMBER: PRH-P-002

DRAWN BY:	CHECKED BY:	SCALE:	DATE:
TAC	P.E. FURNISH	AS NOTED	10-7-91

N

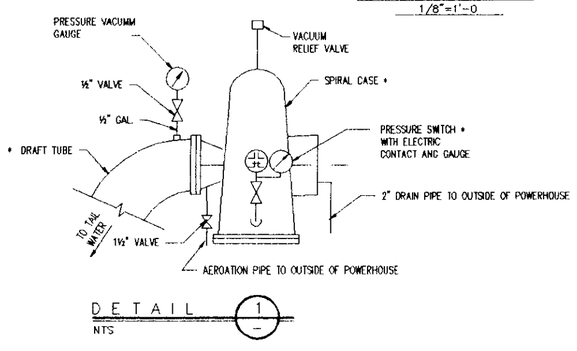
NOTES:

1. FLOW INDICATING SIGNAL METER SUPPLIED BY ORENCO.
2. ALL ELECTRICAL TIE-INS BY OTHERS.
3. FIRE EXTINGUISHER SHALL BE INDUSTRIAL TYPE MODEL NO. 2A10 FYR FYTER OR EQUAL.
4. SMOKE DETECTOR TO BE TIED INTO TELEPHONE SYSTEM FOR REMOTE ALARM. TO BE INSTALLED BY MECHANICAL CONTRACTOR. MOUNT UNDER ROOF.
5. ALL ITEMS MARKED WITH * PROVIDED BY ORENCO.
6. MAX. COOLING WATER FLOW RATE SPECIFIED BY ORENCO-20GPM.
7. MAX. CAPACITY OF AIR STORAGE TANK SPECIFIED BY ORENCO- 30 GAL. RECEIVER, 5-6 CFM, 100 PSI WITH 1½HP COMPRESSOR, 208 VAC/ 60 CYCLE/ 30 AMPS
8. UNIT HEATER SHALL BE MIN. 7'-6 ABOVE FLOOR LEVEL, 5 KW EACH.
9. SUBMERSIBLE PUMP SHALL BE GRUNDFOS MODEL BOSS300 WITH ¾HP MOTOR CAPABLE OF 58 GPM AT 12 FT. HEAD, 115V, 920 WATTS, 9.0 AMPS.
10. REFER ORENCO DWG. 11491L FOR HYDRAULIC PIPING TIE-INS.
11. REFER ORENCO DWG. K110691L FOR GENERAL PIPING TIE-INS.
12. SEE DWG. PRH-S-005 FOR PIPE END LOCATION, AND FLOOR DRAIN LOCATIONS.
13. WATER INLET MAIN VALVE AND DRAIN VALVE ARE TO BE PROVIDED BY THE CONTRACTOR.
14. FLOW BYPASS VALVE#24" TYPE C37R304 150 CWP, KNIFE GATE VALVE W/5" DOUBLE ACTING HYDRAULIC CYLINDER AS MANUFACTURED BY ITT FLUID CORP., OR EQUAL (SUPPLIED BY OWNER)



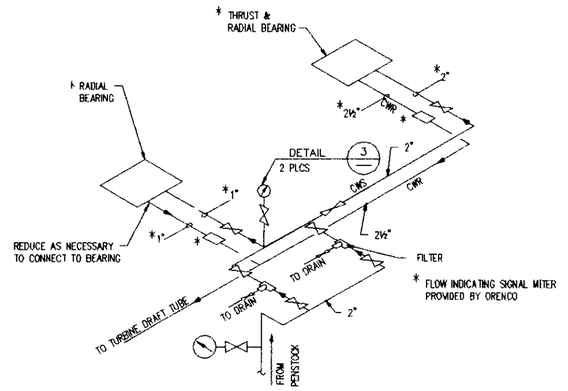
PLAN VIEW

1/8"=1'-0



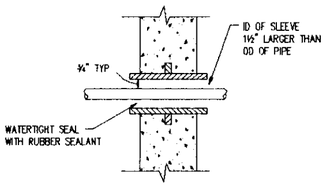
DETAIL 1

NTS



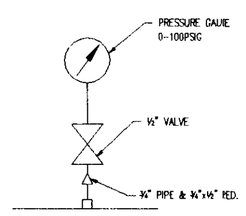
BEARING COOLING WATER DETAIL

NTS



PIPE SLEEVE (TYP)

NTS



DETAIL 2

NTS

NO.	DATE:	DESCRIPTION	APP'L
1	6/30/93	As Built	W.W.
0	8/17/92	Issued For Construction	W.W.
C	2/4/92	Issued for FERC Review/Approval	W.W.
B	1/31/92	Revised per ORENCO Equip. Changes	W.W.
A	12/12/91	Incorporated ORENCO Equip. Information	W.W.

REVISIONS

CEM — COMMERCIAL ENERGY MANAGEMENT, INC.
1130 YELLOWSTONE, SUITE B
P.O. BOX 4858
Pocatello, Idaho 83205

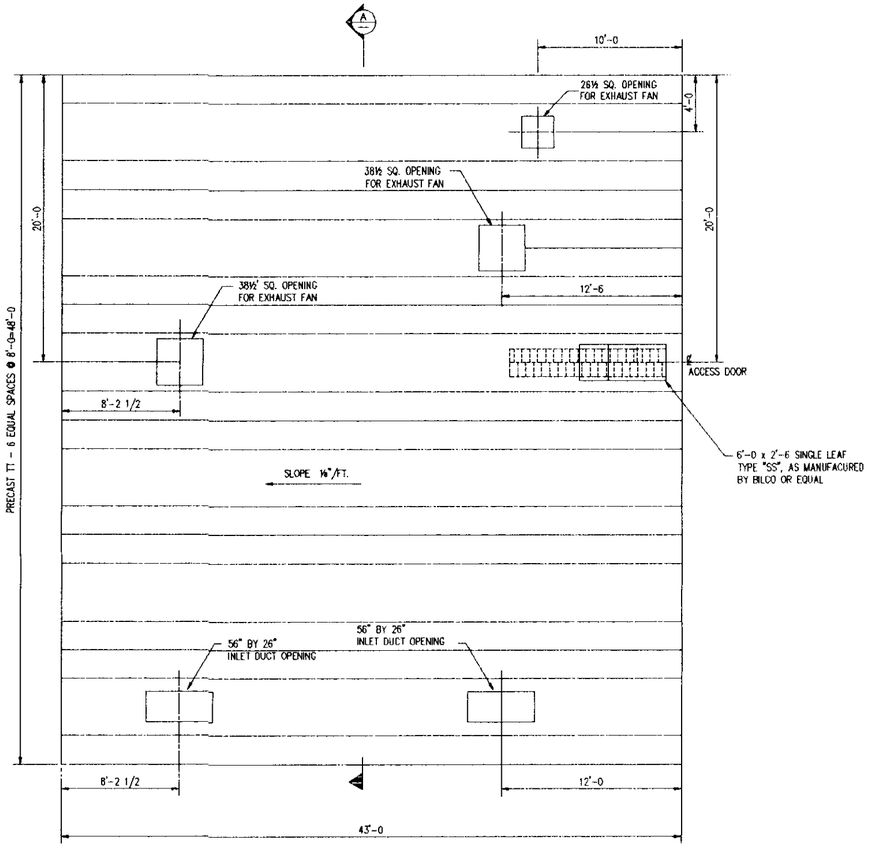
PORTNEUF RIVER - HYDROELECTRIC PROJECT
POWER PLANT NO. 1, LAVA HOT SPRINGS, IDAHO
FERC PROJECT NO. 7447-002

POWER HOUSE
PIPING PLAN

DRAWING NUMBER: PRH-P-001

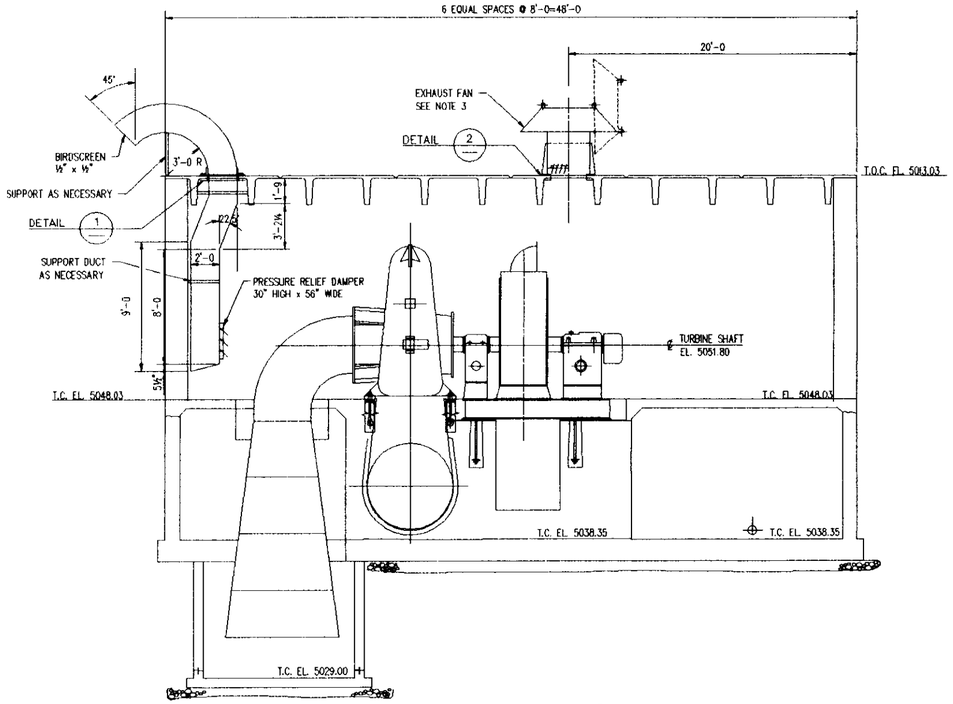
DRAWN BY	CHECKED BY	SCALE	DATE
TAC	P.K. PARIKH	1/8"=1'-0	11-24-91

PROFESSIONAL ENGINEER REGISTERED STATE OF IDAHO PRABHAKAR PARIKH 5571 9/23/93



ROOF PLAN

SCALE: 1/8"=1'-0

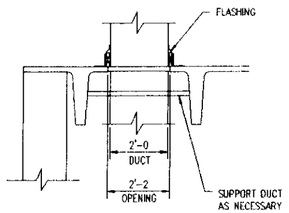


SECTION A

SCALE: 1/8"=1'-0

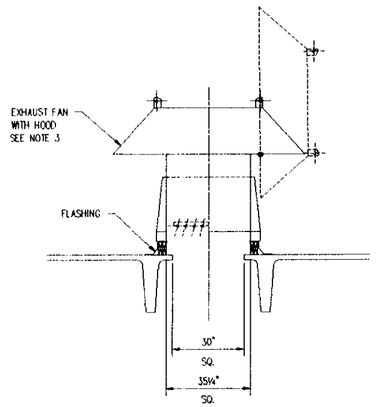
NOTES:

1. ALL DUCTS SHALL BE GALVANIZED IRON FABRICATED AS PER SMACNA, ASHREA, NFPA UMC.
2. DUCTS SHALL BE SUPPORTED AS NECESSARY.
3. EXHAUST FAN SHALLBE HARTZELL SERIES 16, MODEL LJ3 RATED AT 10860 CFM @ ½" SP. OR EQUAL, WITH PREFABRICATED CURB. 2 NEEDED.
4. PRESSURE RELIEF DAMPER SHALL BE AMERICAN WARMING & VENTILATING, MODEL PR-10, SIZE AS SHOWN ON DWG. OR EQUAL. 2 NEEDED.



DETAIL 1

SCALE: 1/4"=1'-0



DETAIL 2

SCALE: 1/4"=1'-0

PROFESSIONAL ENGINEER REGISTERED PRABHAKAR PARIKH STATE OF IDAHO 9/23/92

NO.	DATE	DESCRIPTION	APPVL
1	7/13/93	As Built	M.W.
0	8/17/92	Issued For Construction	M.W.
C	2/4/92	Issued for FERC Review/Approval	M.W.
B	1/31/92	Revised per ORENCO Equip. Changes	M.W.
A	12/12/91	incorporated ORENCO Equip. Information	M.W.

REVISIONS

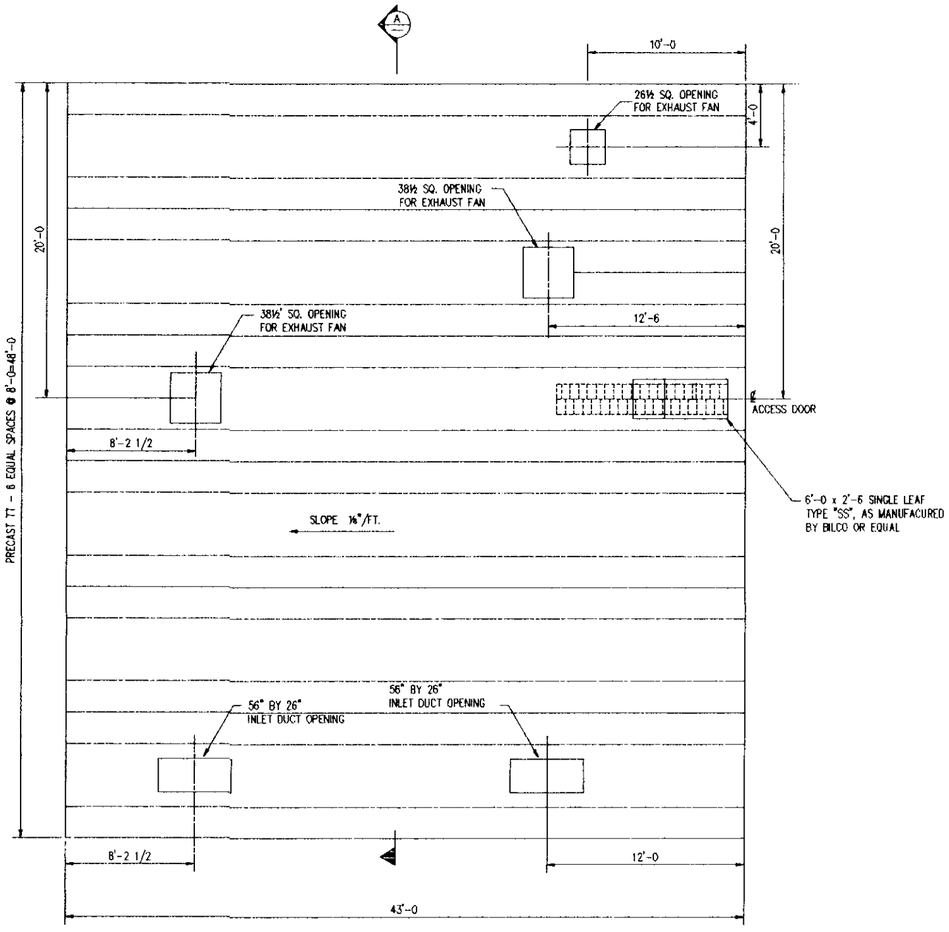
CEM — COMMERCIAL ENERGY MANAGEMENT, INC.

PORTNEUF RIVER - HYDROELECTRIC PROJECT
POWER PLANT NO. 1, LAVA HOT SPRINGS, IDAHO
FERC PROJECT NO. 7447-002

POWER HOUSE
HVAC ROOF PLAN
SECTION & DETAILS

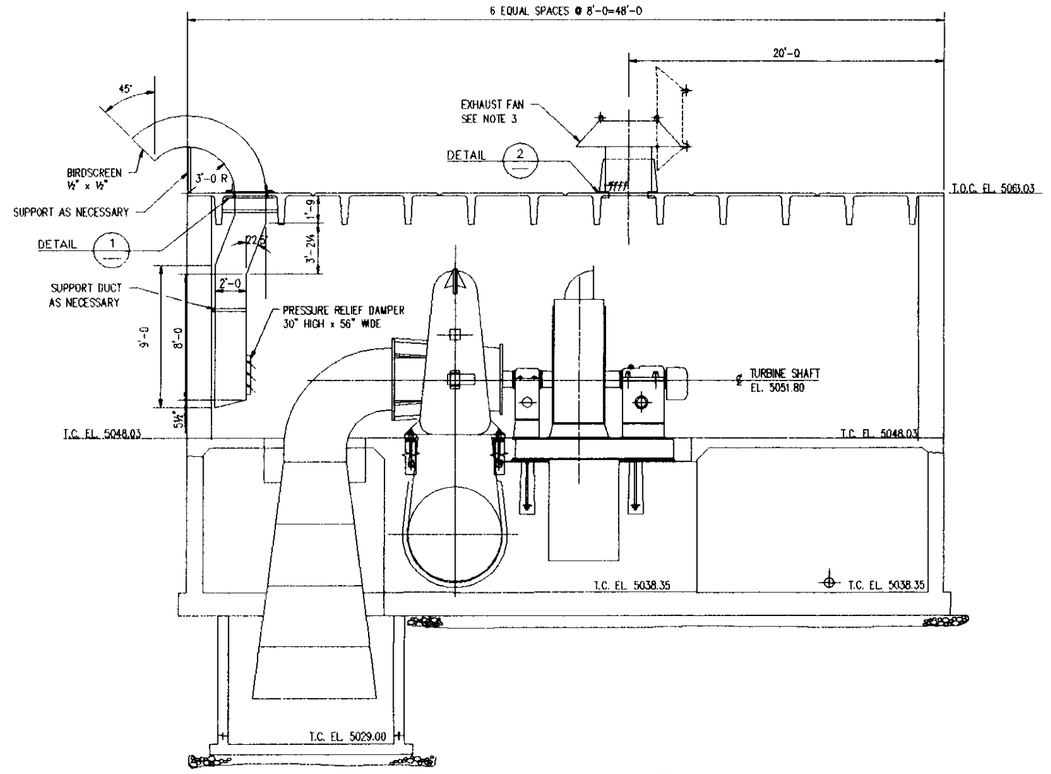
DRAWING NUMBER: PRH-M-001

DRAWN BY:	CHECKED BY:	SCALE:	DATE:
TAC	P.K. PARIKH	1/8"=1'-0	12-6-91



ROOF PLAN

SCALE: 1/8"=1'-0

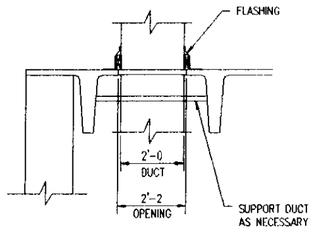


SECTION A

SCALE: 1/8"=1'-0

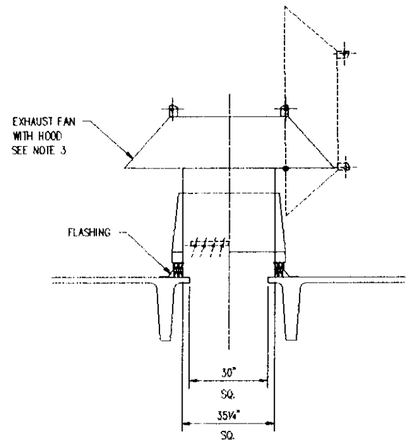
NOTES:

1. ALL DUCTS SHALL BE GALVANIZED IRON FABRICATED AS PER SMACNA, ASHREA, NFPA UMC.
2. DUCTS SHALL BE SUPPORTED AS NECESSARY.
3. EXHAUST FAN SHALLBE HARTZELL SERIES 16, MODEL LJ3 RATED AT 10860 CFM @ ½" SP. OR EQUAL, WITH PREFABRICATED CURB. 2 NEEDED.
4. PRESSURE RELIEF DAMPER SHALL BE AMERICAN WARMING & VENTILATING, MODEL PR-10, SIZE AS SHOWN ON DWG. OR EQUAL. 2 NEEDED.



DETAIL 1

SCALE: 1/4"=1'-0



DETAIL 2

SCALE: 1/4"=1'-0

NO.	DATE:	DESCRIPTION	APPV'L
		REVISIONS	
1	7/13/93	As Built	M.W.
0	8/17/92	Issued For Construction	M.W.
C	2/4/92	Issued for FERC Review/Approval	M.W.
B	1/31/92	Revised per ORENCO Equip. Changes	M.W.
A	12/12/91	Incorporated ORENCO Equip. Information	M.W.

CEM

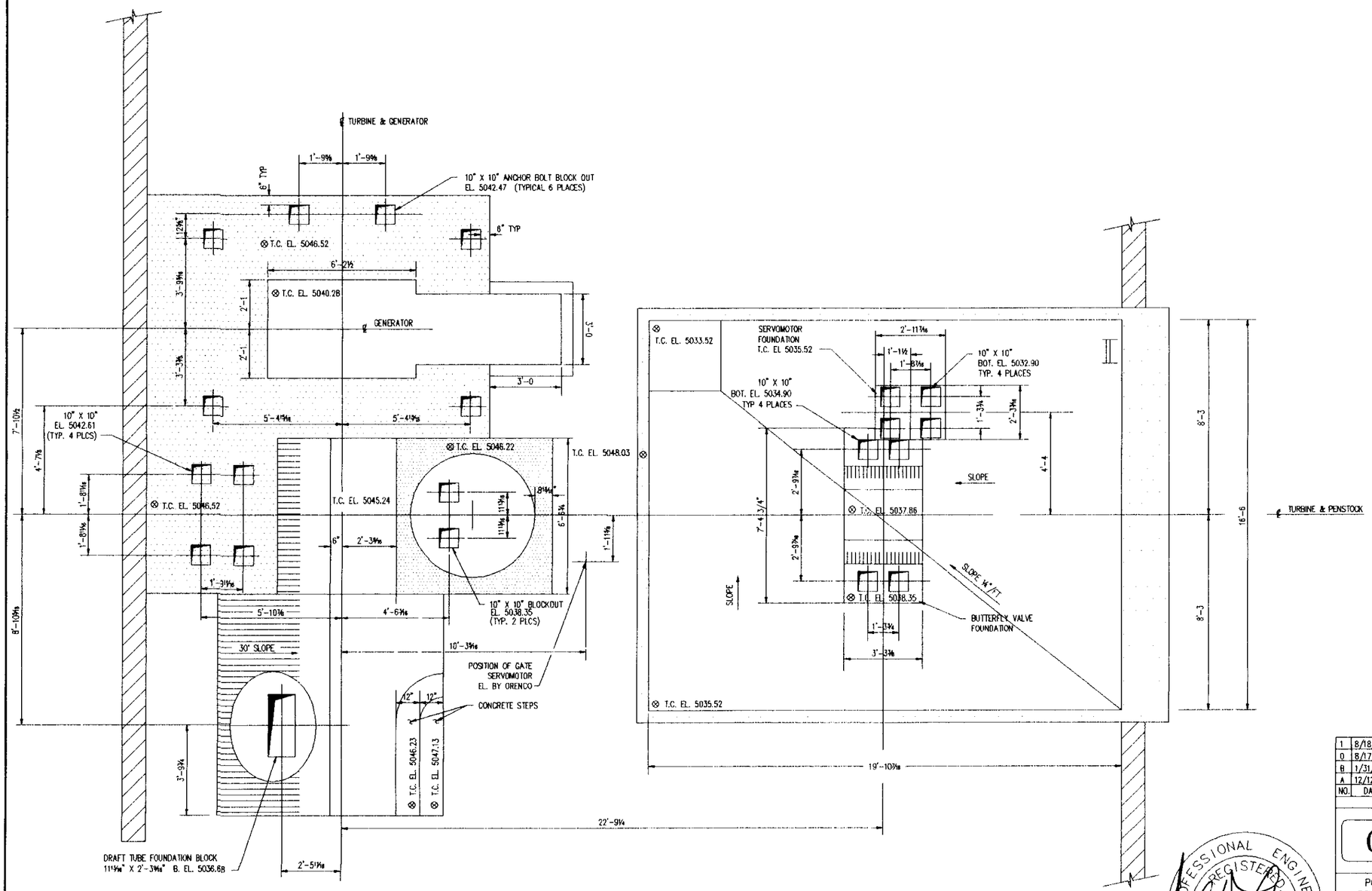
COMMERCIAL ENERGY MANAGEMENT, INC.
1185 YELLOWSTONE SUITE B
P.O. BOX 486
Pocatello, Idaho 83204

PORTNEUF RIVER - HYDROELECTRIC PROJECT
POWER PLANT NO. 1, LAVA HOT SPRINGS, IDAHO
FERC PROJECT NO. 7447-002

POWER HOUSE
HVAC ROOF PLAN
SECTION & DETAILS

DRAWING NUMBER: PRH-M-001

DRAWN BY:	CHECKED BY	SCALE	DATE
TAE	P.K. PARIKH	1/8"=1'-0	12-6-91



EQUIPMENT FOUNDATION AT EL. 5048.03

SCALE: 1/4"=1'-0

LEGEND

- CONCRETE WALL
- CONCRETE AT EL. 5048.03
- CONCRETE AT EL. 5046.55

NO.	DATE:	DESCRIPTION	APPV'L
1	8/18/93	As Built	M.W.
0	8/17/92	Issued For Construction	M.W.
B	1/31/92	Revised per ORENCO Equip. Changes	M.W.
A	12/12/91	Incorporated ORENCO Equip. Information	M.W.

REVISIONS

CEM COMMERCIAL ENERGY MANAGEMENT, INC.

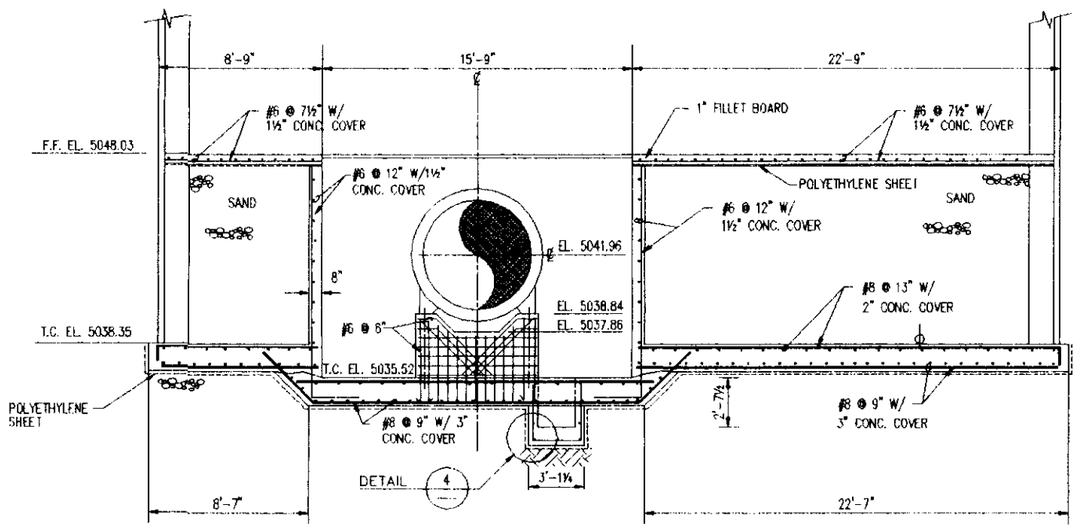
PORTNEUF RIVER - HYDROELECTRIC PROJECT
POWER PLANT NO. 1, LAVA HOT SPRINGS, IDAHO
FERC PROJECT NO. 7447-002

POWER HOUSE
EQUIPMENT FOUNDATION PLAN
AT ELEVATION 5048.03

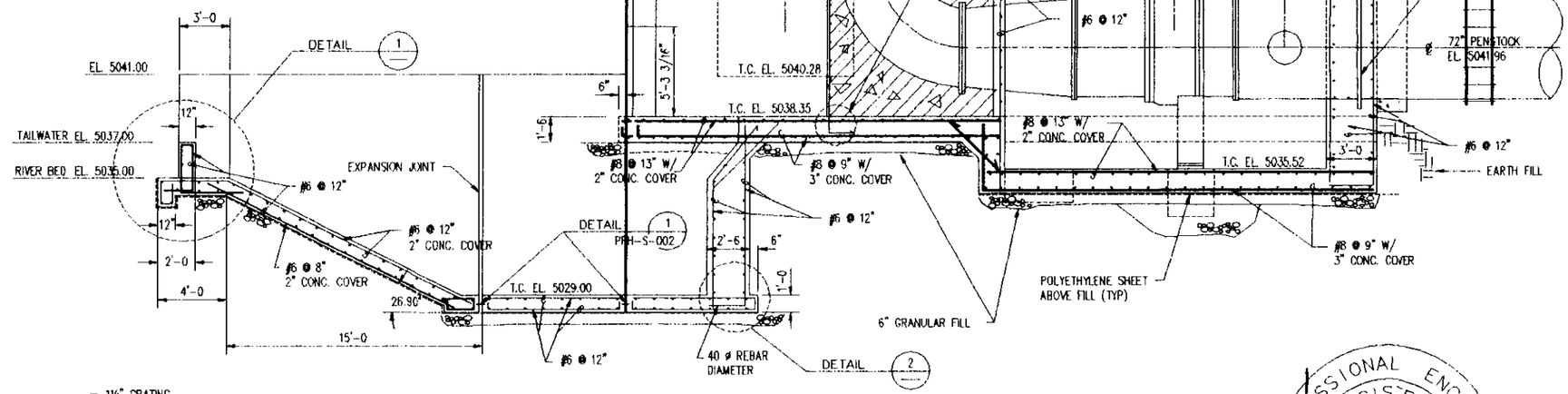
DRAWING NUMBER: PRH-S-008

DRAWN BY:	CHECKED BY:	SCALE:	DATE:
S. ACREE	M. WISSA	1/4"=1'-0	11-4-91

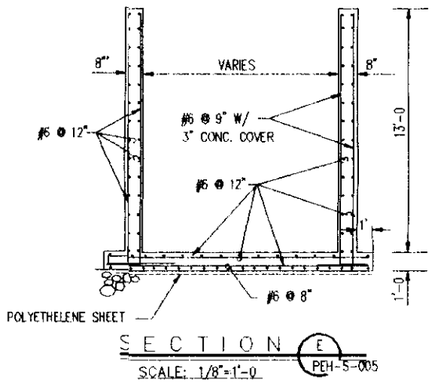
PROFESSIONAL ENGINEER REGISTERED 5695 STATE OF IDAHO MAHER F. WISSA 9/23/93



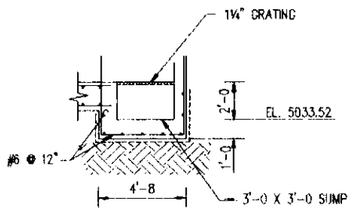
SECTION D PRH-S-004
SCALE: 1/8"=1'-0



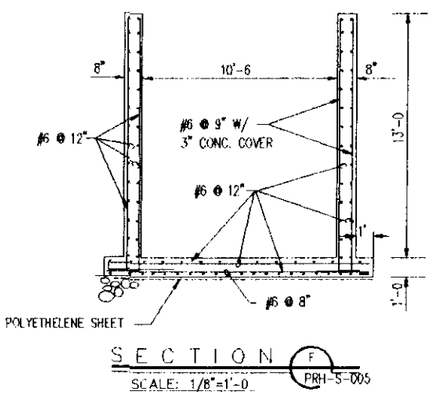
SECTION B PRH-S-004
SCALE: 1/8"=1'-0



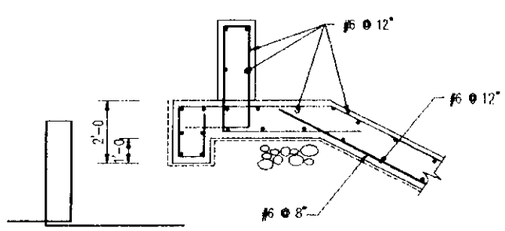
SECTION E PEH-S-005
SCALE: 1/8"=1'-0



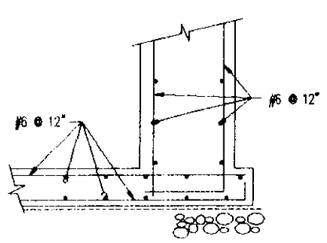
DETAIL 4
SCALE: 1/8"=1'-0



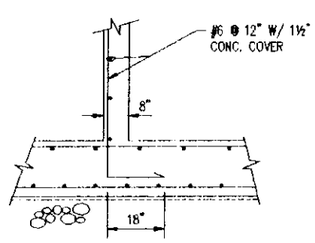
SECTION F PRH-S-005
SCALE: 1/8"=1'-0



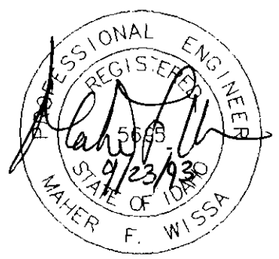
DETAIL 1
SCALE: 1/4"=1'-0



DETAIL 2
SCALE: 1/4"=1'-0



DETAIL 3
SCALE: 1/4"=1'-0



NO.	DATE:	DESCRIPTION	APPVL
2	8/17/93	As Built	M.W.
1	10/10/92	Revised Tail Race Structure	M.W.
0	8/11/92	Issued For Construction	M.W.
C	2/4/92	Issued for FERC Review/Approval	M.W.
B	1/31/92	Revised per OREMCO Equip. Changes	M.W.
A	12/12/91	Incorporated OREMCO Equip. Information	M.W.

REVISIONS

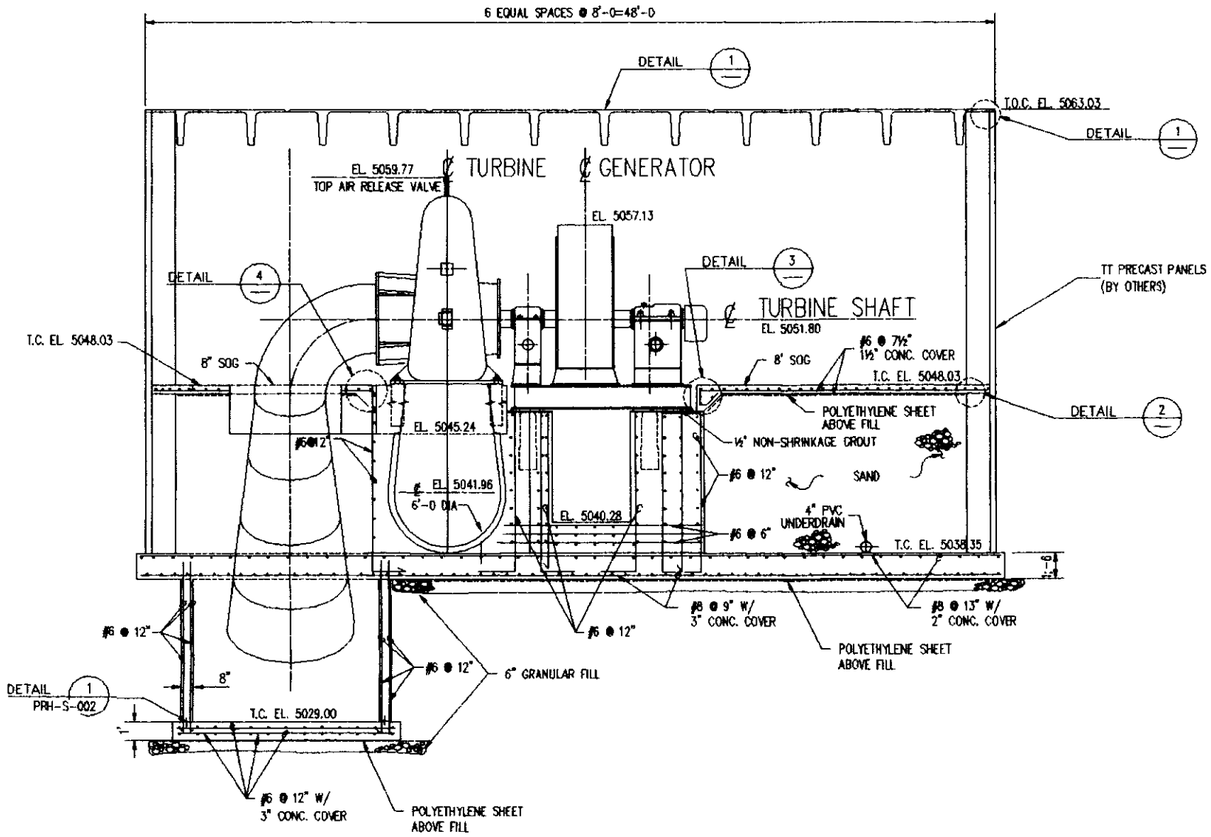
CEM
COMMERCIAL ENERGY MANAGEMENT, INC.
1130 YELLOWSTONE, SUITE B
P.O. BOX 4318
Pocatello, Idaho 83205

PORTNEUF RIVER – HYDROELECTRIC PROJECT
POWER PLANT NO. 1, LAVA HOT SPRINGS, IDAHO
FERC PROJECT NO. 7447-002

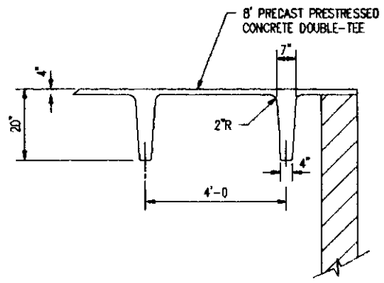
POWER HOUSE
SECTIONS & DETAILS

DRAWING NUMBER: PRH-S-007

DRAWN BY	CHECKED BY	SCALE	DATE
S. ACREE	M. WISSA	1/8"=1'-0	10-17-91



SECTION A
SCALE: 1/8"=1'-0
PRH-S-004



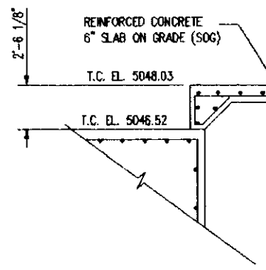
DETAIL 1
SCALE: 1/4"=1'-0

NOTES

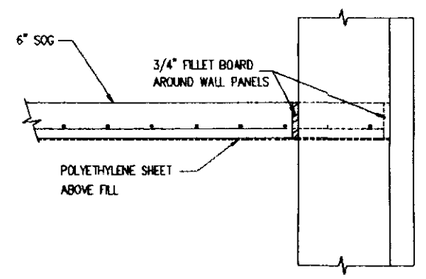
1. CONCRETE ELEMENTS SHALL BE AS SPECIFIED BELOW:
   -CAST IN PLACE CONCRETE: 28 DAYS STRENGTH- 4000 PSI, STEEL REINFORCEMENT- ASTM A615, GRADE 60
   -PRECAST CONCRETE: 28 DAYS STRENGTH- 5000 PSI
2. CONTRACTOR SHALL SUBMIT FOR CEM'S APPROVAL, THE DESIGN CALCULATIONS AND DETAILS FOR PROPOSED PRECAST TT SECTION PRIOR TO THE EXECUTION OF WORK.

SYMBOLS

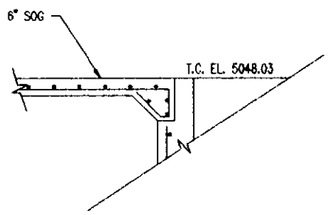
SOG: SLAB ON GRADE, REINFORCED CONCRETE



DETAIL 3
SCALE: 1/4"=1'-0



DETAIL 2
SCALE: 1/2"=1'-0



DETAIL 4
SCALE: 1/4"=1'-0

PROFESSIONAL ENGINEER REGISTERED 5695 STATE OF IDAHO MAHER F. WISSA 9/23/91

NO.	DATE:	DESCRIPTION	APPVL
1	8/17/93	As Built	M.W.
0	8/11/92	Issued For Construction	M.W.
D	7/28/92	Revised for Precast Walls	M.W.
C	2/6/92	Issued for FERC Review/Approval	M.W.
B	1/31/92	Revised per ORENCO Equip. Changes	M.W.
A	12/12/91	Incorporated ORENCO Equip. Information	M.W.

REVISIONS

CEM
COMMERCIAL ENERGY MANAGEMENT, INC.
1100 YELLOWSTONE, SUITE H
P.O. BOX 4215
Pocatello, Idaho 83205

PORTNEUF RIVER - HYDROELECTRIC PROJECT
POWER PLANT NO. 1, LAVA HOT SPRINGS, IDAHO
FERC PROJECT NO 7447-002

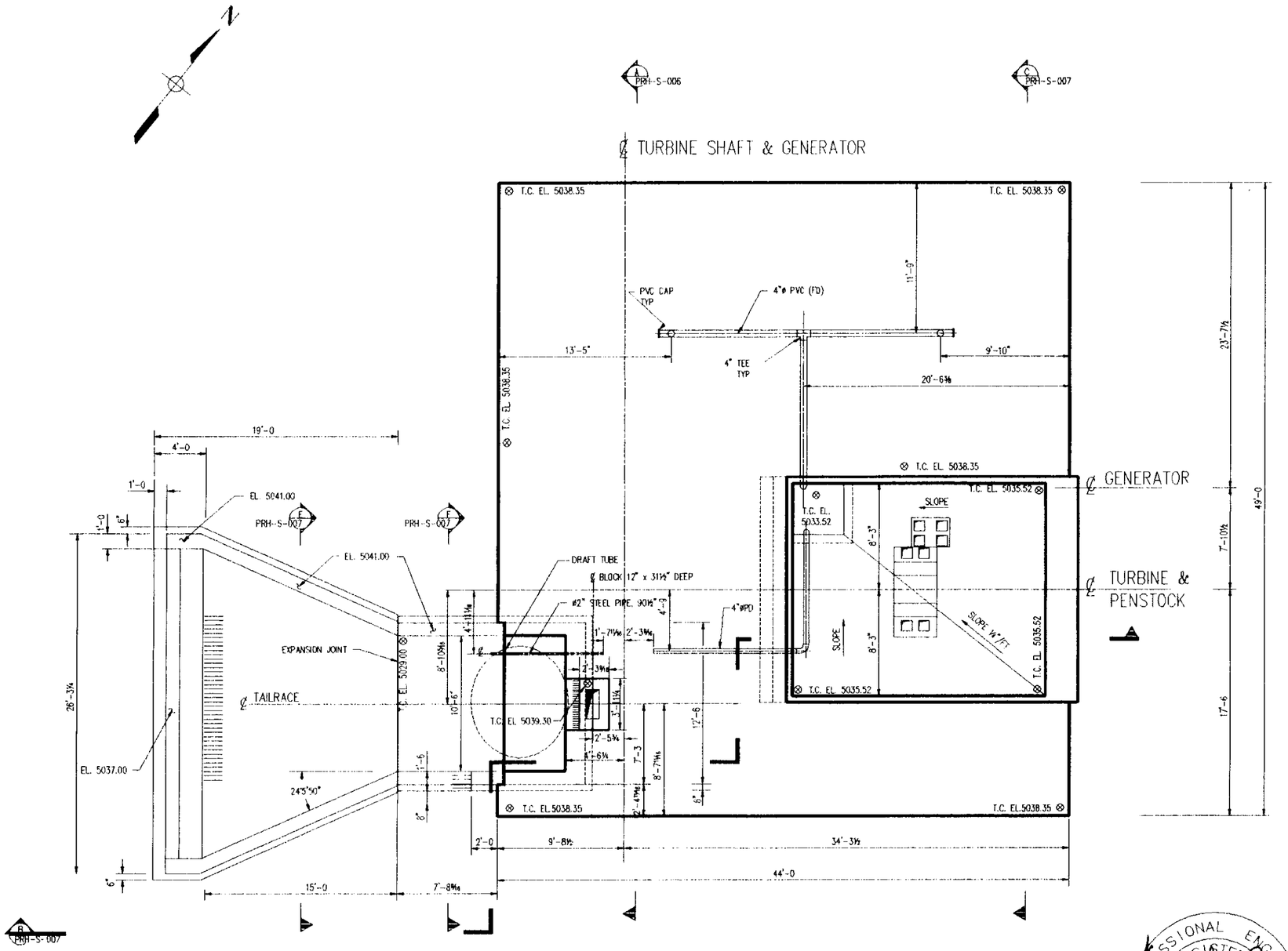
POWER HOUSE
SECTION "A" & DETAILS

DRAWING NUMBER: PRH-S-006

DRAWN BY:	CHECKED BY:	SCALE:	DATE:
S. ACREE	M. WISSA	1/8"=1'-0	10-15-91

N C T E S:

1. SEE DWG. PRH-S-008 FOR EQUIPMENT FOUNDATION DETAIL.



FOUNDATION PLAN AT EL. 5038.35

SCALE: 1/8"=1'-0

NO.	DATE:	DESCRIPTION	APPVL
2	8/17/93	As Built	M.W.
1	10/10/92	Revised Tail Race Strucure	M.W.
0	8/11/92	Issued For Construction	M.W.
C	2/4/92	Issued for FERC Review/Approval	M.W.
B	1/31/92	Revised per ORENCO Equip. Changes	M.W.
A	12/12/91	Incorporated ORENCO Equip. Information	M.W.

REVISIONS

CEM COMMERCIAL ENERGY MANAGEMENT, INC.
1130 YELLOWSTONE, SUITE 6
P.O. BOX 4518
Pocatello, Idaho 83205

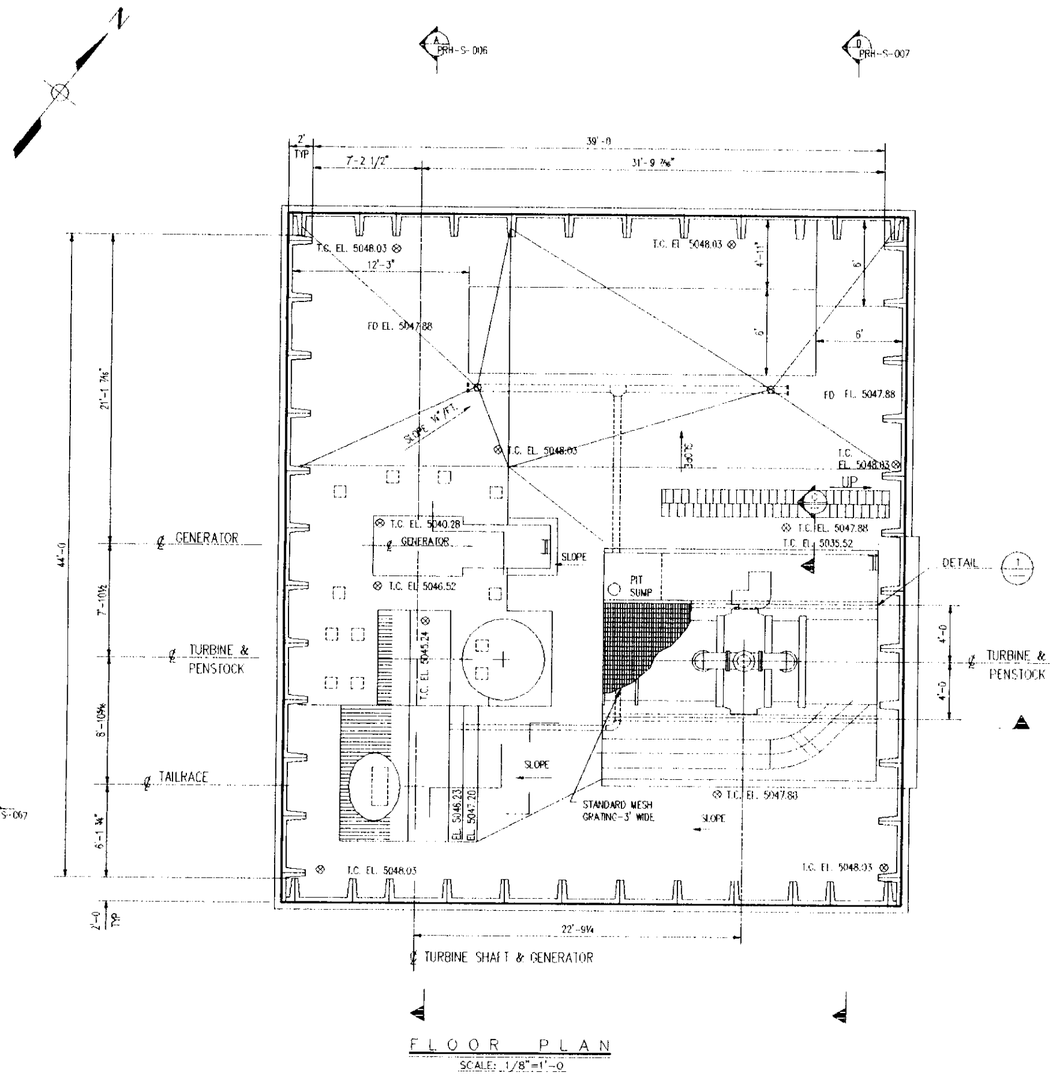
PROFESSIONAL ENGINEER REGISTERED 5695 STATE OF IDAHO MAHER F. WISSA 9/23/93

PORTNEUF RIVER - HYDROELECTRIC PROJECT
POWER PLANT NO. 1, LAVA HOT SPRINGS, IDAHO
FERC PROJECT NO. 7447-002

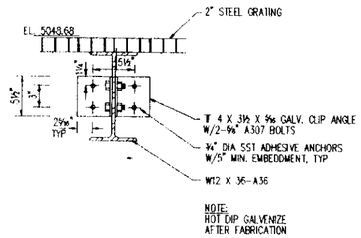
POWER HOUSE
FOUNDATION PLAN
AT ELEVATION 5038.35

DRAWING NUMBER: PRH-S-005

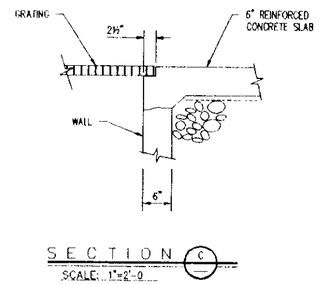
DRAWN BY	CHECKED BY	SCALE	DATE
S. ADREE	M. WISSA	1/8"=1'-0	10-14-91



FLOOR PLAN
SCALE: 1/8"=1'-0



DETAIL 1
SCALE: 1"=1'-0



SECTION C
SCALE: 1"=1'-0

NO.	DATE:	DESCRIPTION	APPV'L
		REVISIONS	
0	21/7/92	Issued for Constuction	M.W.
C	2/4/92	Issued for FERC Review/Approval	M.W.
B	1/31/92	Revised per OREICO Equip. Changes	M.W.
A	12/12/91	Incorporated OREICO Equip. Information	M.W.

CEM — COMMERCIAL ENERGY MANAGEMENT, INC.
1199 YELLOWSTONE, SUITE B
P.O. BOX 4316
Pocatello, Idaho 83205

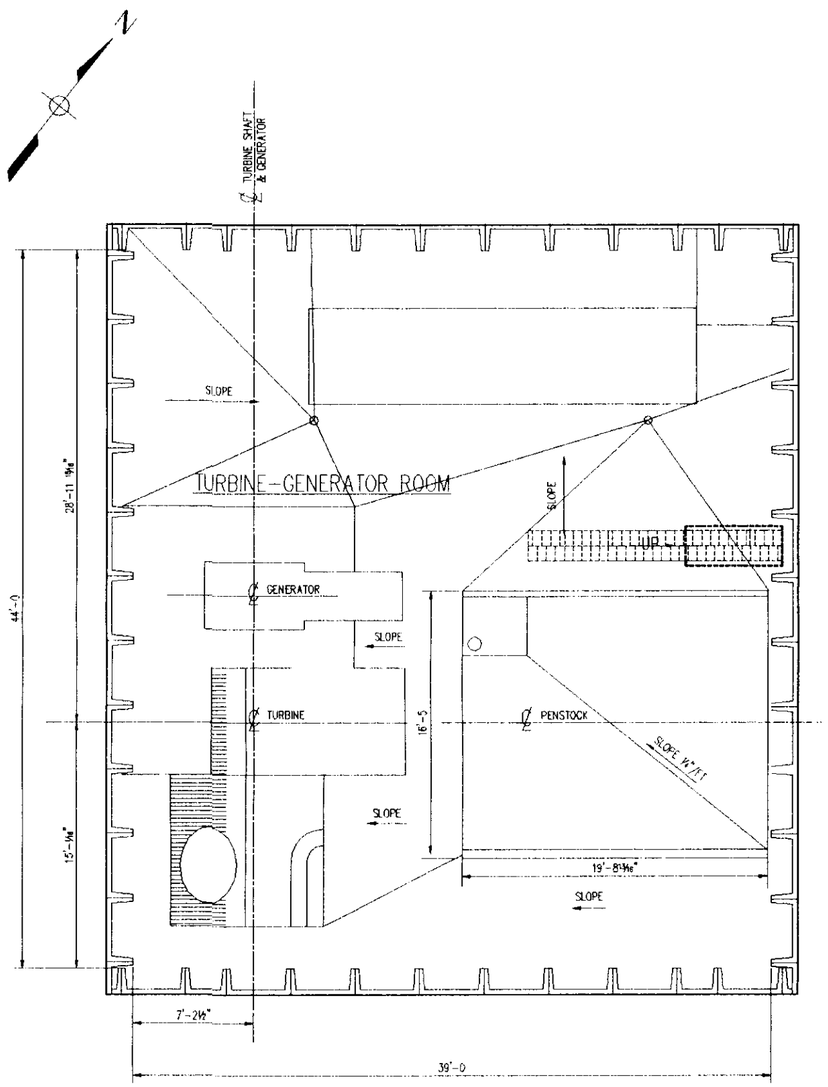
PORTNEUF RIVER – HYDROELECTRIC PROJECT
POWER PLANT NO. 1, LAVA HOT SPRINGS, IDAHO
FERC PROJECT NO. 7447-002

POWER HOUSE
FLOOR PLAN
SECTIONS & DETAILS

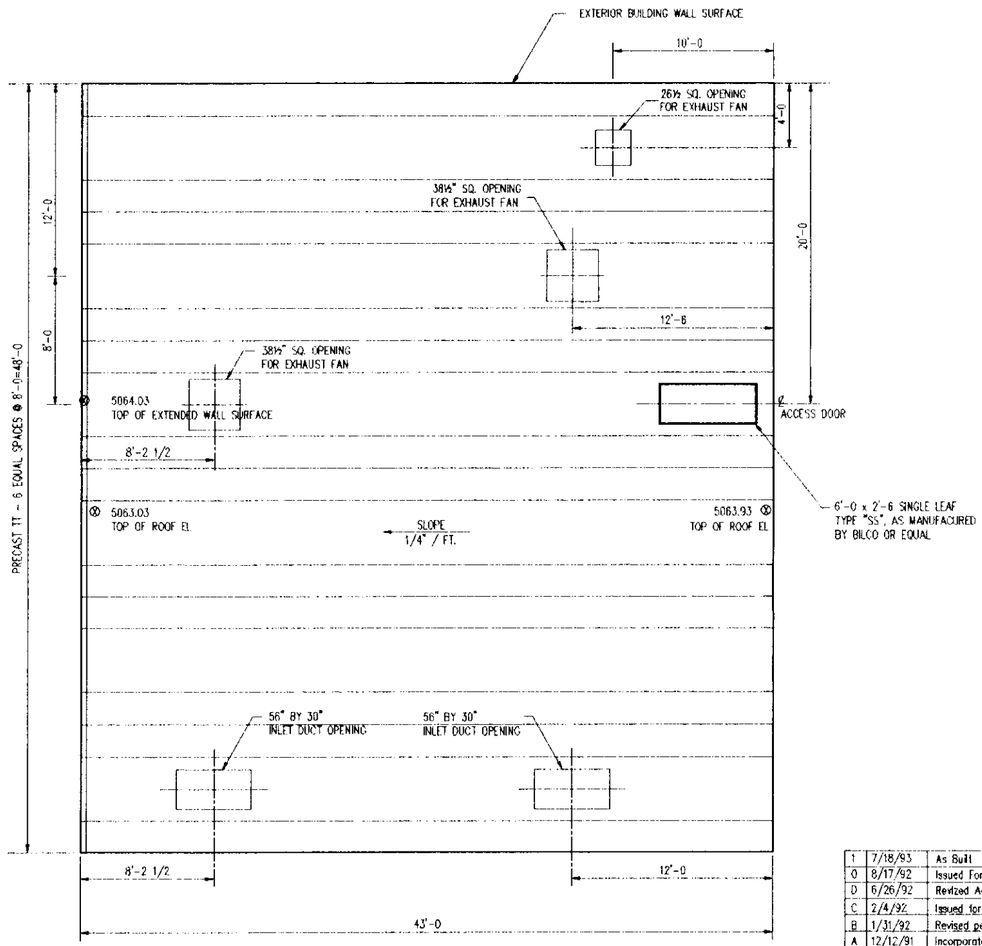
DRAWING NUMBER: PRH-S-004

DRAWN BY	CHECKED BY	SCALE	DATE
S. ASPEE	M. WISSA	1/8"=1'-0	10-9-91

PROFESSIONAL ENGINEER
REGISTERED
5699
STATE OF IDAHO
WALTER F. WISSA
9/28/93



FLOOR PLAN
1/8"=1'-0



ROOF PLAN
1/8"=1'-0

PROFESSIONAL ENGINEER
REGISTERED
5695
STATE OF IDAHO
MAHER F. WISSA
9/23/93

NO.	DATE:	DESCRIPTION	APPV'L
1	7/18/93	As Built	M.W.
0	8/17/92	Issued For Construction	M.W.
D	6/26/92	Revized Access Door & Stairs	M.W.
C	2/4/92	Issued for FERC Review/Approval	M.W.
B	1/31/92	Revised per ORENCO Equip. Changes	M.W.
A	12/12/91	Incorporated ORENCO Equip. Information	M.W.

REVISIONS

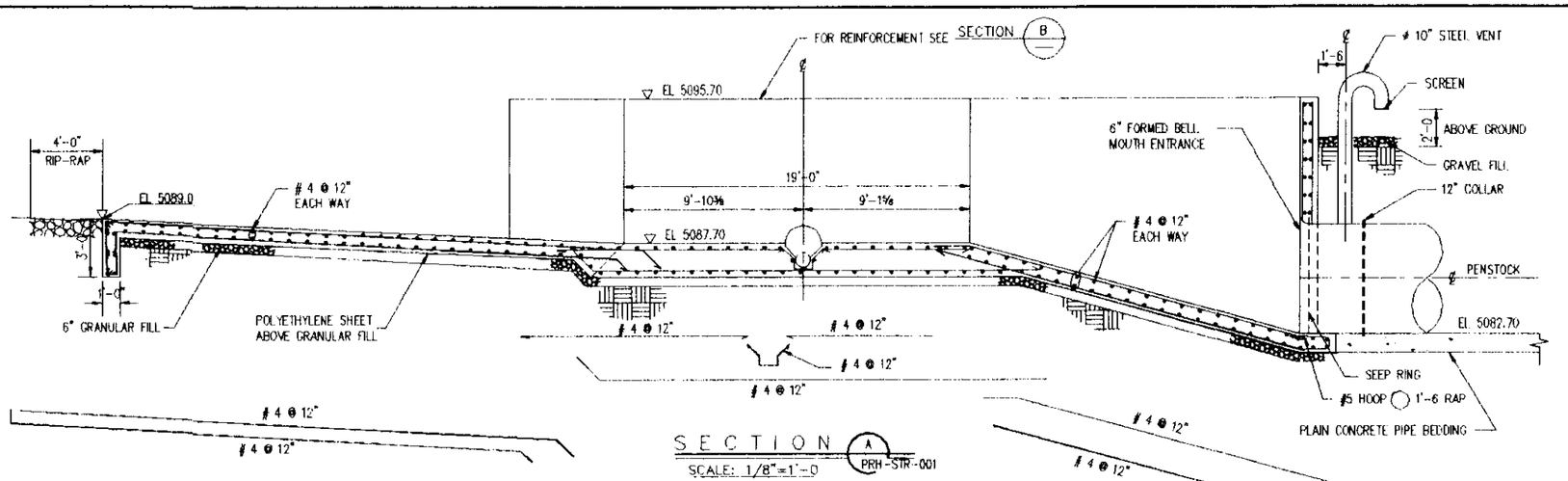
CEM
COMMERCIAL ENERGY MANAGEMENT, INC.
1155 YELLOWSTONE, SUITE B
P.O. BOX 4515
Pocatello, Idaho 83206

PORTNEUF RIVER - HYDROELECTRIC PROJECT
POWER PLANT NO. 1, LAVA HOT SPRINGS, IDAHO
FERC PROJECT NO. 7447-002

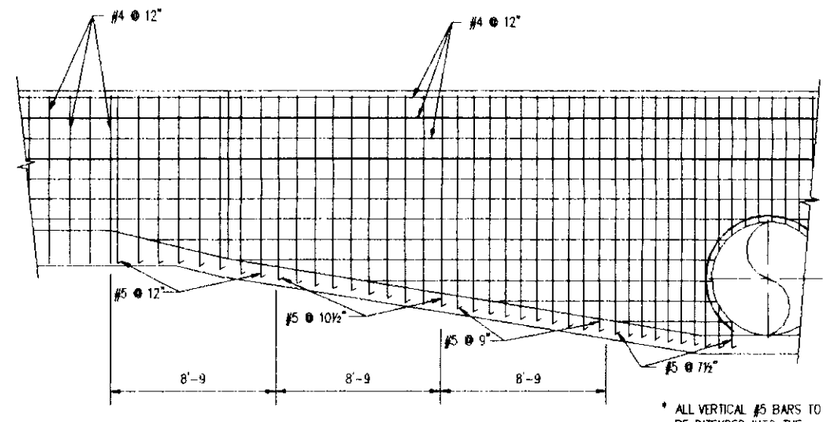
POWER HOUSE
ARCHITECTURAL FLOOR
AND ROOF PLAN

DRAWING NUMBER: PRH--S-003

DRAWN BY:	CHECKED BY:	SCALE:	DATE:
S. ACREE	M. WISSA	1/8"=1'-0	10-10-91

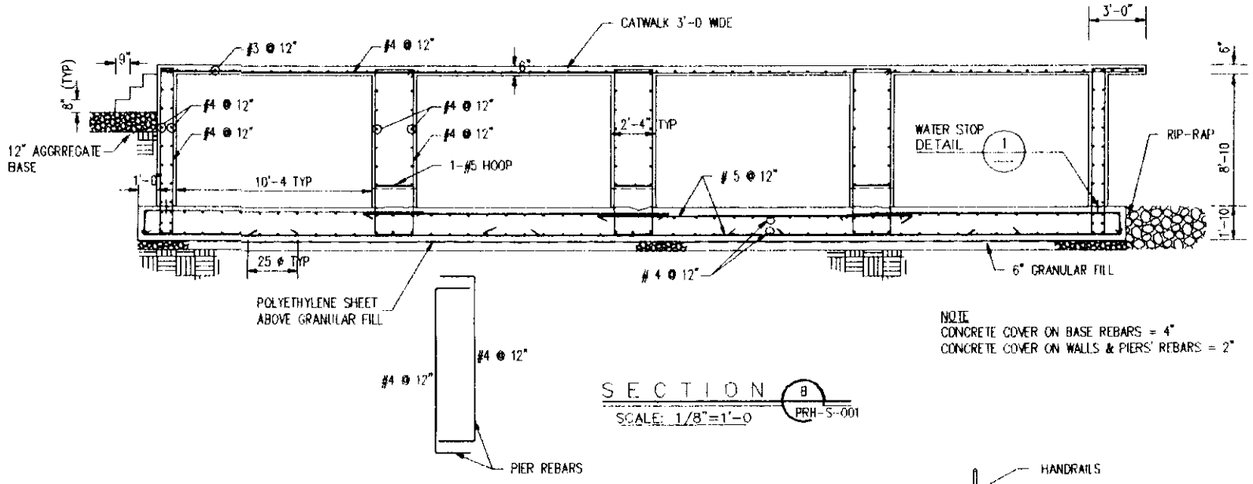


S E C T I O N A PRH-STR-001
SCALE: 1/8"=1'-0



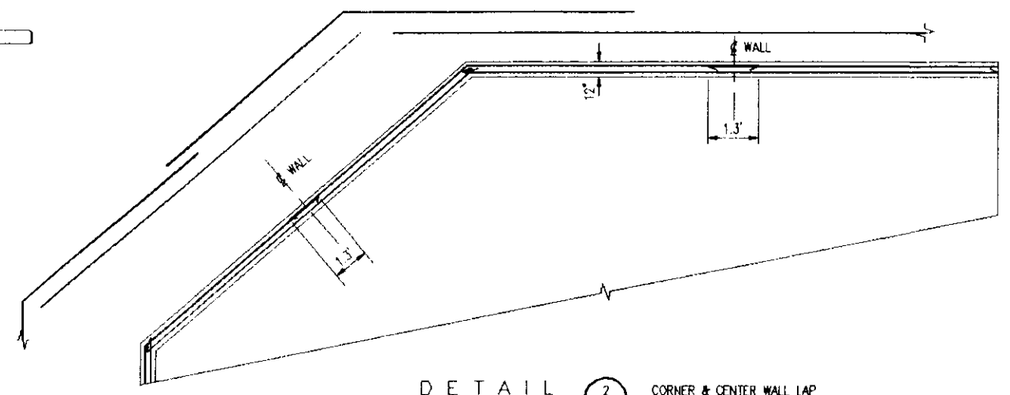
S E C T I O N D WALL AND PENSTOCK PRH-S-001
SCALE: 1/8"=1'-0

* ALL VERTICAL #5 BARS TO BE EXTENDED INTO THE BASE AT LEAST 3'-0

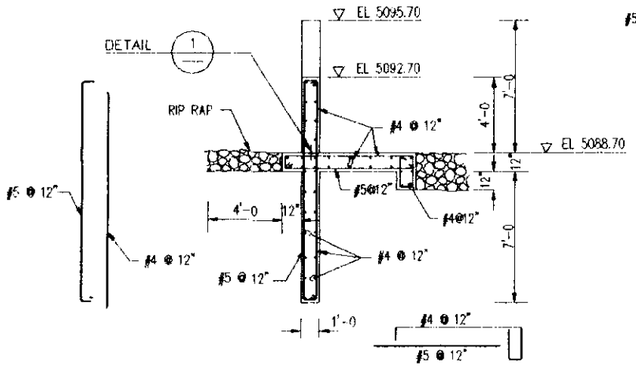


NOTE
CONCRETE COVER ON BASE REBARS = 4"
CONCRETE COVER ON WALLS & PIERS' REBARS = 2"

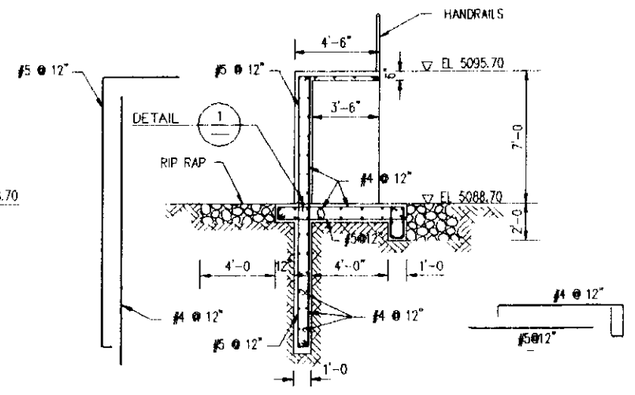
S E C T I O N B PRH-S-001
SCALE: 1/8"=1'-0



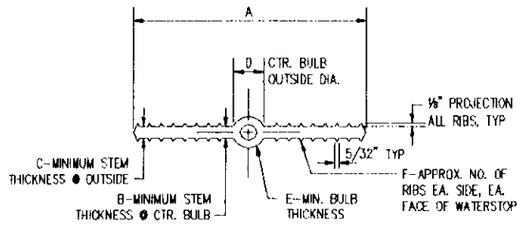
D E T A I L 2 CORNER & CENTER WALL LAP PRH-S-001
SCALE: 1/16"=1'-0



S E C T I O N C DIVERSION WEIR PRH-S-001
SCALE: 1/8"=1'-0



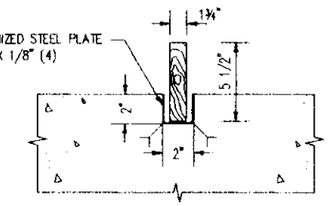
D E T A I L D DIVERSION WEIR PRH-S-001
SCALE: 1/8"=1'-0



SIZE	A	B	C	D	E	F
6" x ⅜"	6"	⅜"	⅜"	⅞"	¼"	6
9" x ⅜"	9"	⅜"	⅜"	1"	¼"	8

NOTES:
1. MATERIAL QUALITY, SEE SPECIFICATIONS
2. 9" WATERSTOP INSTALLED AT PIERS
   6" WATERSTOP INSTALLED AT WALLS
3. NON-ROUND CENTER BULBS SHALL HAVE A MINIMUM OUTSIDE DIMENSION OF -D-

D E T A I L 1 PLASTIC WATERSTOP
SCALE: NO SCALE



D E T A I L 4 PRH-C-003
SCALE: NO SCALE

N O T E S:

CONCRETE FOR DIVERSION WEIR AND INTAKE STRUCTURES SHALL BE CAST-IN-PLACE AS SPECIFIED BELOW:

- CONCRETE CLASS: 3000 PSI COMPRESSIVE STRENGTH @ 28 DAYS.
- STEEL REINFORCEMENT - ASTM A615, GRADE 40.

SEE PROJECT SPECIFICATIONS, DIVISION 3 - CONCRETE, FOR MATERIAL AND WORKMANSHIP.

NO.	DATE:	DESCRIPTION	APP'VL
1	7/28/93	As Built	M.W.
0	7/18/92	Issued for construction	M.W.
A	7/29/88	Issued for FERC Review/Approval	M.W.

REVISIONS

CEM — COMMERCIAL ENERGY MANAGEMENT, INC.
1155 ELLSWORTH, SUITE B
P.O. BOX 4518
Pocatello, Idaho 83205

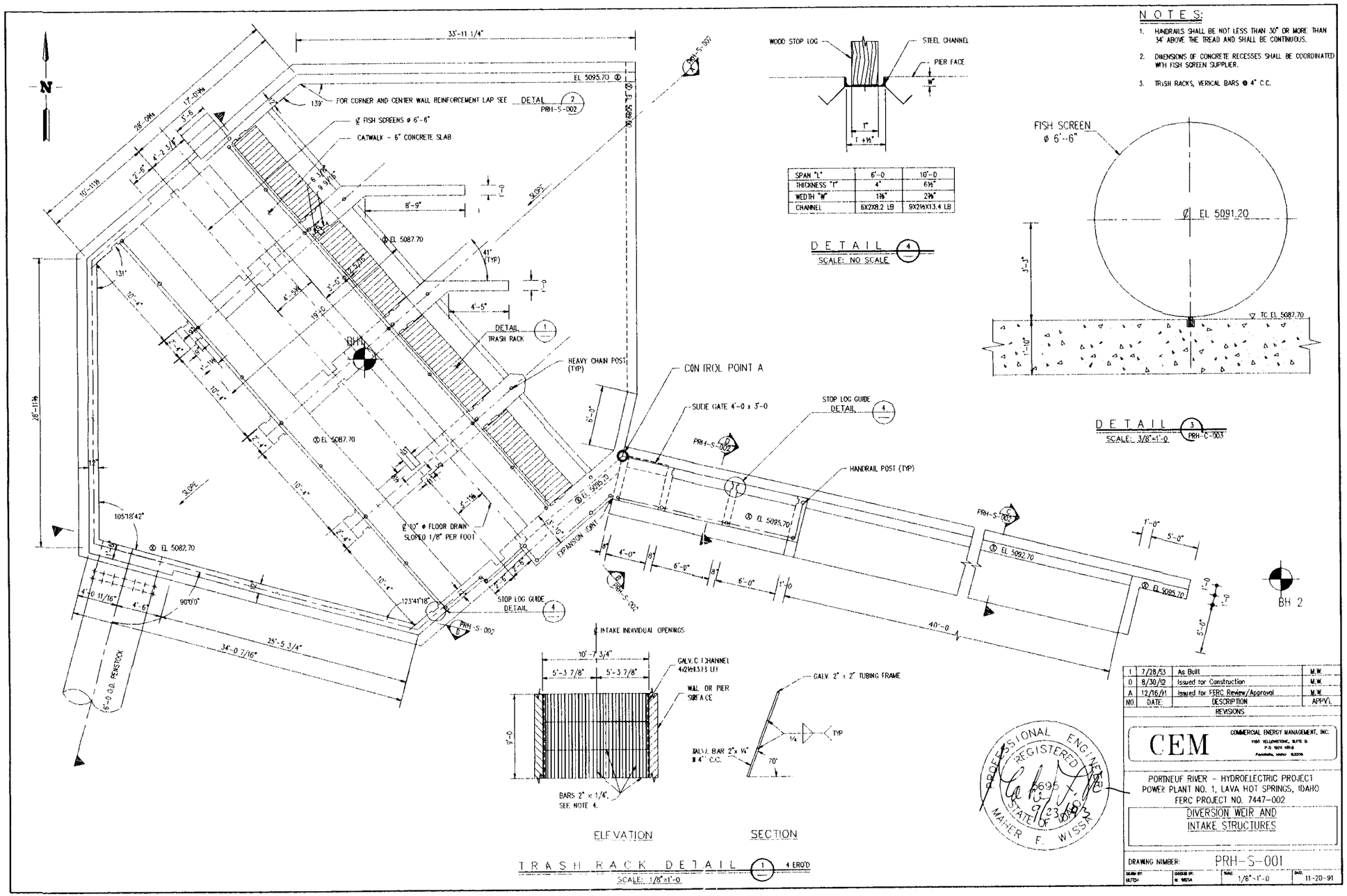
PROFESSIONAL ENGINEER REGISTERED 5695 STATE OF IDAHO MAHER F. WISSA 9/23/93

PORTNEUF RIVER - HYDROELECTRIC PROJECT
POWER PLANT NO. 1, LAVA HOT SPRINGS, IDAHO
FERC PROJECT NO. 744-002

DIVERSION WEIR & INTAKE STRUCTURES SECTIONS AND DETAILS

DRAWING NUMBER: PRH-S-002

DRAWN BY	CHECKED BY	SCALE	DATE
BUTCH	M. WISSA	1/8"=1'-0	11-26-91



SPAN "L"	6'-0	10'-0
THICKNESS "T"	4"	6½"
WEDTH "W"	1⅛"	2⅜"
CHANNEL	6X2X8.2 LB	9X2½X13.4 LB

DETAIL 4
SCALE: NO SCALE

DETAIL 3 PRH-C-003
SCALE: 3/8"=1'-0

TRASH RACK DETAIL 1 4 ERQ'D
SCALE: 1/8"=1'-0

NOTES:

1. HANDRAILS SHALL BE NOT LESS THAN 30" OR MORE THAN 34" ABOVE THE TREAD AND SHALL BE CONTINUOUS.
2. DIMENSIONS OF CONCRETE RECESSES SHALL BE COORDINATED WITH FISH SCREEN SUPPLIER.
3. TRASH RACKS, VERICAL BARS @ 4" C.C.

NO.	DATE	DESCRIPTION	APPV'L
1	7/28/93	As Built	M.W.
0	8/30/92	Issued for Construction	M.W.
A	12/16/91	Issued for FERC Review/Approval	M.W.

REVISIONS

CEM
COMMERCIAL ENERGY MANAGEMENT, INC.
1155 YELLOWSTONE, SUITE B
P.O. BOX 4818
Pocatello, Idaho 83205

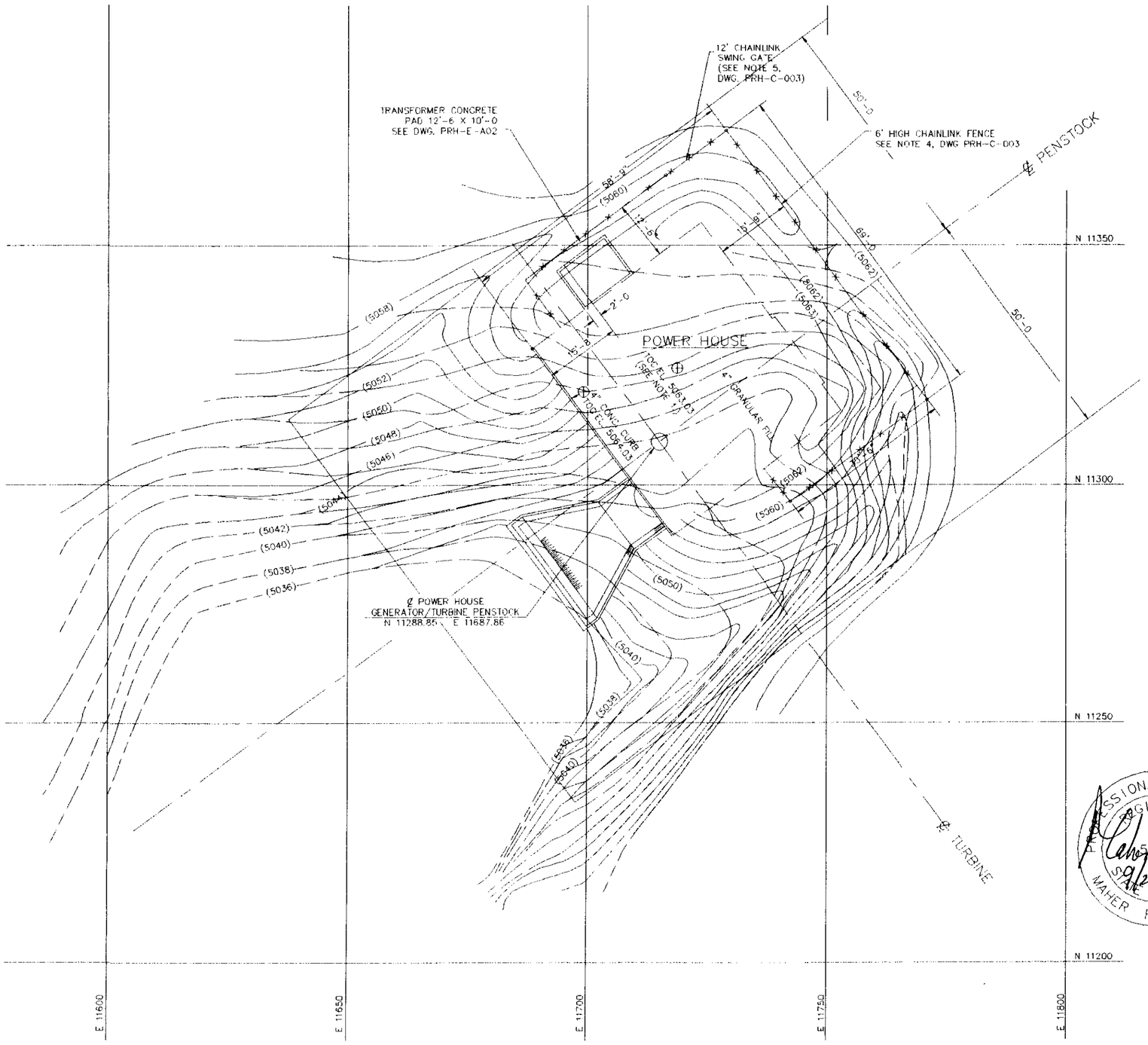
PORTNEUF RIVER - HYDROELECTRIC PROJECT
POWER PLANT NO. 1, LAVA HOT SPRINGS, IDAHO
FERC PROJECT NO. 7447-002

DIVERSION WEIR AND INTAKE STRUCTURES

DRAWING NUMBER: PRH-S-001

DRAWN BY: BLITCH | CHECKED BY: M. WISSA | SCALE: 1/8"=1'-0 | DATE: 11-20-91

PROFESSIONAL ENGINEER REGISTERED 5695 STATE OF IDAHO MAHER F. WISSA 9/23/93



NOTES:

1. 4" GRANULAR FILL ON TOP OF ROOF.

LEGEND:

- 5048 — EXISTING CONTOURS
- 5060 — DESIGNED CONTOURS
- EASEMENT BOUNDARY LINE

PROFESSIONAL ENGINEER REGISTERED 5695 STATE OF IDAHO 9/23/93 MAHER F. WISSA

NO.	DATE:	DESCRIPTION	APPV'L
		REVISIONS	
1	8/16/93	As Built	M.W.
D	8/2/92	Issued for Construction	M.W.
C	2/4/92	Issued for FERC Review/Approval	M.W.
B	1/31/92	Revised per ORENCO Equip. Changes	M.W.
A	12/12/91	Incorporated ORENCO Equip. Information	M.W.

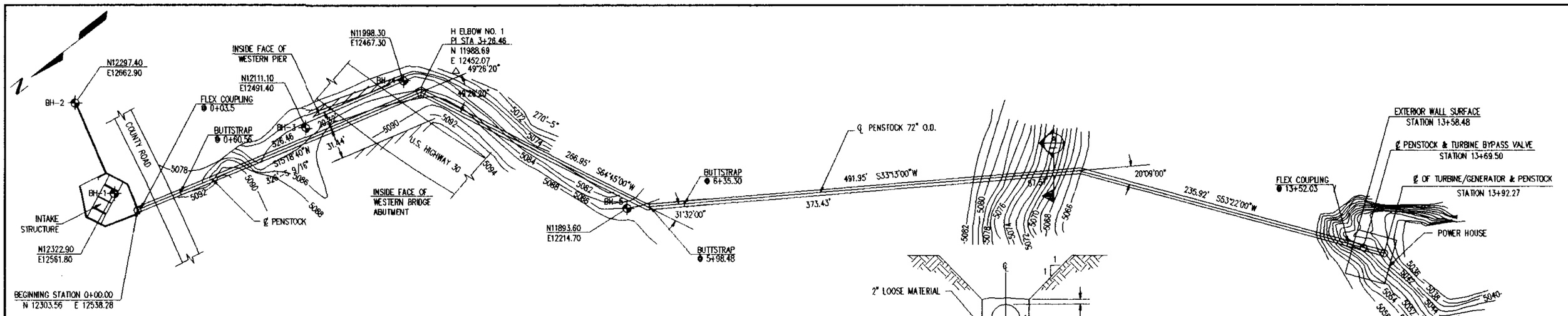
CEM — COMMERCIAL ENERGY MANAGEMENT, INC.
1135 YELLOWSTONE, SUITE B
P.O. BOX 4891
Pocatello, Idaho 83205

PORTNEUF RIVER - HYDROELECTRIC PROJECT
POWER PLANT NO. 1, LAVA HOT SPRINGS IDAHO
FERC PROJECT NO. 7447-002

POWER HOUSE SITE & GRADING PLAN

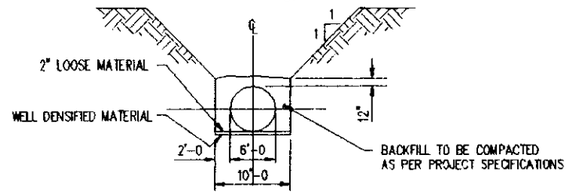
DRAWING NUMBER: PRH-C-005

DRAWN BY	CHECKED BY	SCALE	DATE
S. MOREE	M. WISSA	1"=20'-0	12-2-91



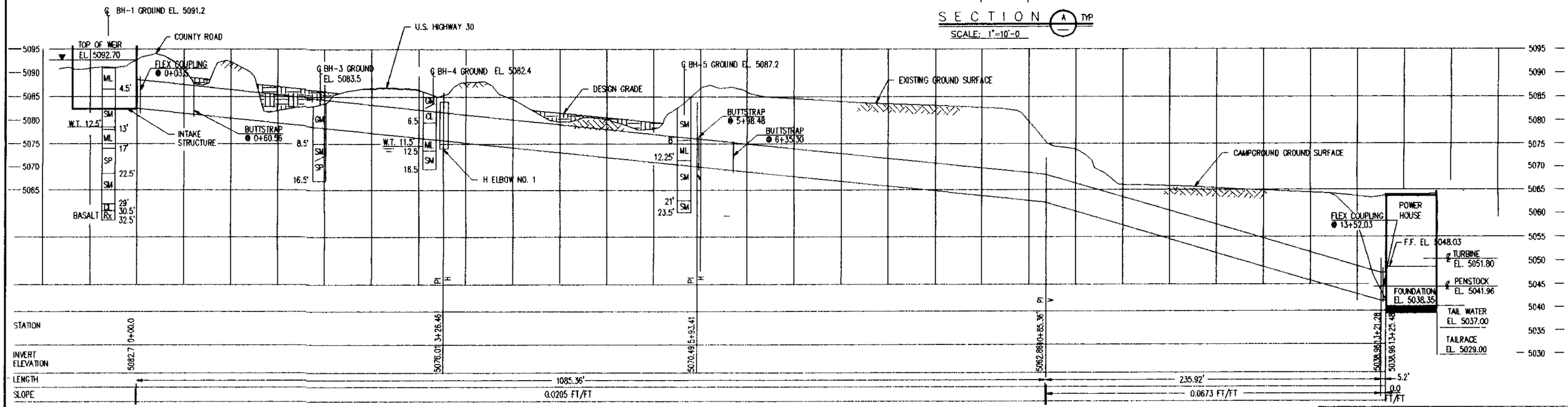
P L A N

SCALE: 1"=100'-0



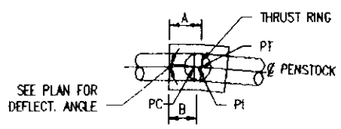
S E C T I O N A TYP

SCALE: 1"=10'-0



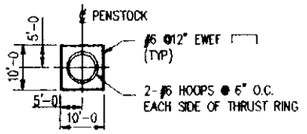
P R O F I L E

SCALE: 1"=100'-0 HORIZONTAL
1"=20'-0 VERTICAL



THRUST BLOCK PLAN

THRUST BLOCK SCHEDULE			
ELBOW NO.	TYPE	LENGTH "A"	DIMENSION "B"
1	1	6'-7¼	2'-0



THRUST BLOCK SECTION

- THRUST BLOCK SHALL BE PLACED AGAINST UNDISTURBED EARTH.
- CONCRETE COVER OVER OUTER REBARS SHALL BE 4".

SOIL INFORMATION

SOIL BORING LOGS SHOWN HEREIN ARE AS PER GEOTECHNICAL CONSULTANT'S (HOWARD CONSULTANTS, INC. OF BOISE, IDAHO) REPORT DATED MAY 7, 1988, JOB NO 1644-10. THE SYMBOLS SHOWN ABOVE ARE DEFINED IN ACCORDANCE WITH UNIFIED SOIL CLASSIFICATION AS FOLLOWS:
GW: SILTY GRAVELS, POORLY GRADED GRAVEL-SAND-SILT MIXTURES
SP: POORLY GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
SM: SILTY SANDS, POORLY GRADED SAND-SILT MIXTURES
ML: INORGANIC SILTS AND VERY FINE SAND, SILTY OR CLAYEY FINE SANDS
CL: INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY

NO.	DATE:	DESCRIPTION	APP'VL
0	5-19-92	ISSUED FOR CONSTRUCTION	M.W.
C	10-31-91	REVISED PENSTOCK ALIGNMENT	M.W.
B	7-13-88	ADDED OFFSETS OF PENSTOCK ℄	M.W.
A	6-29-88	ISSUED FOR FERC REVIEW & APPROVAL	M.W.
1	8-28-93	AS BUILT	M.W.

REVISIONS

CEM

COMMERCIAL ENERGY MANAGEMENT, INC.
1100 YELLOWSTONE, SUITE B
P.O. BOX 4895
Pocatello, Idaho 83205

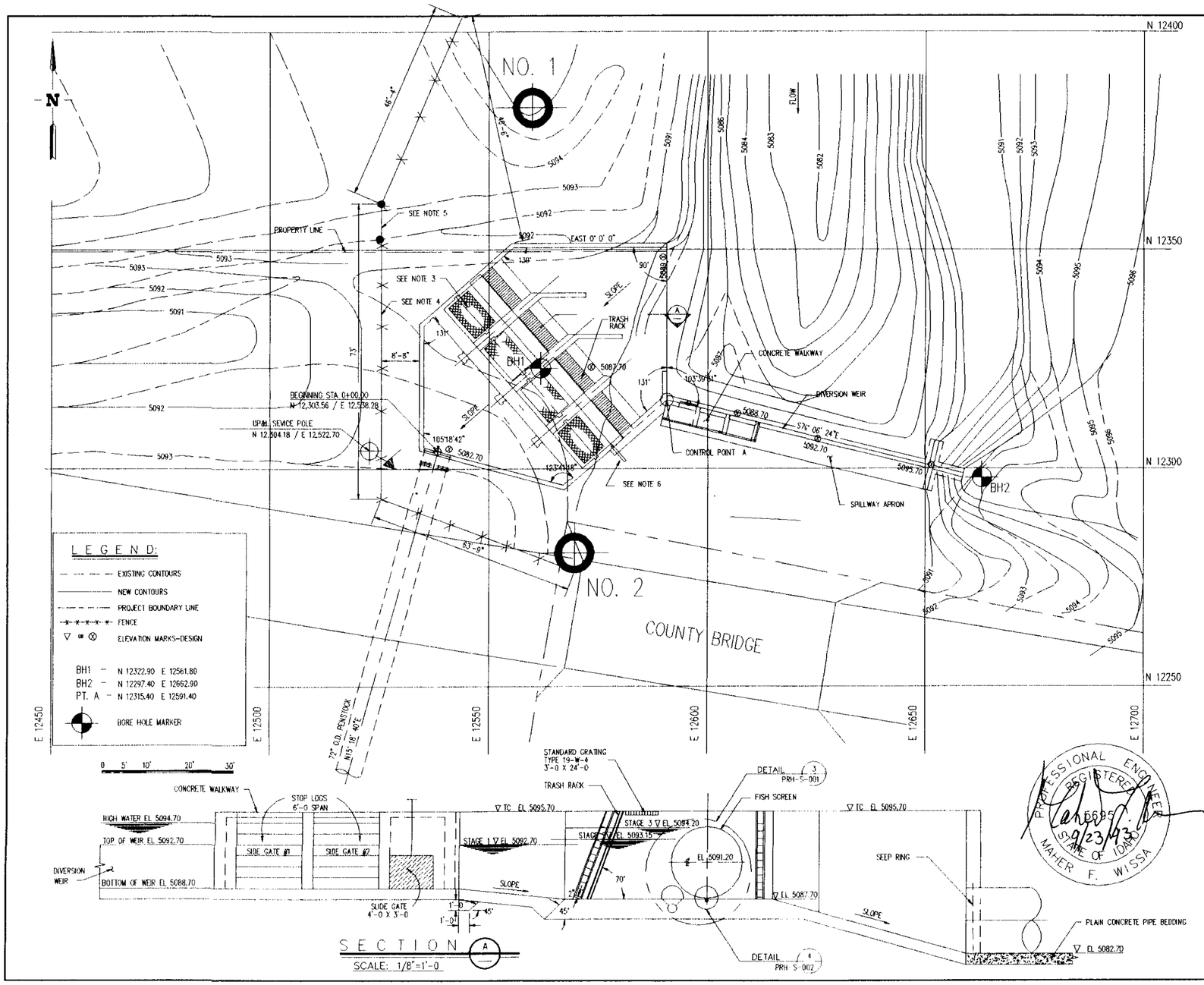
PORTNEUF RIVER - HYDROELECTRIC PROJECT
POWER PLANT NO. 1, LAVA HOT SPRINGS, IDAHO
FERC PROJECT NO. 7447-002

PENSTOCK PLAN
AND PROFILE

PROFESSIONAL ENGINEER REGISTERED 5696 STATE OF IDAHO MAHER F. WISSA 9/23/93

DRAWING NUMBER: PRH-C-004

DRAWN BY	CHECKED BY	SCALE:	DATE:
S. ACREE	M. WISSA	AS NOTED	10-25-91



SPECIFICATIONS FOR FABRICATION AND INSTALLATION OF FISH SCREENS:

1. EACH FISH SCREEN SHALL BE MANUFACTURED AS SHOWN ON THIS DRAWING OF A SELF-CLEANING (WITH SWEEPING VELOCITY NOT LESS THAN 2 FPS) CYLINDER TYPE OF 6 FEET IN DIAMETER AND 10 FEET IN LENGTH.
2. THE SCREEN SHALL BE MADE OF 4 MESH, 20 GAUGE GALVENIZED BEFORE WEAVING, WITH 0.25-INCH OPENINGS.
3. THE CYLINDERS SHALL BE MADE TO ROTATE ABOUT THEIR AXIS WITH MAXIMUM OUTER CIRCUMFERENCE ROTATIONAL SPEED OF 5 FT./MIN. THE CYLINDERS SHALL BE CHAIN DRIVEN FROM ELECTRIC MOTORS LOCATED ON TOP OF PIERS. THE CYLINDERS ROTATE SUCH THAT THE FRONT (UPSTREAM) FACE RISES AND BACKFACE DESCENDS.
4. RUBBER SEALS (SEAT AGAINST THE PIERS) SHALL BE ATTACHED TO BOTH ENDS OF THE CYLINDER. A BOTTOM SEAL SHALL BE FIXED TO THE STRUCTURE BENEATH THE CYLINDER AND SEATS AGAINST THE CYLINDER SURFACE.

SPECIFICATION FOR BYPASS INTAKE:

1. BYPASS INTAKE SHALL BE LOCATED AS SHOWN ON THIS DRAWING AND SHALL CONSIST OF 10" PVC PIPE.

SPECIFICATION FOR TRASH RACK:

1. TRASH RACKS SHALL BE PROVIDED AS SHOWN ON THIS DRAWING. IT SHALL BE MANUFACTURED SO THAT THE CLEAR OPENING OF THE TRASH RACK BARS SHALL NOT BE LESS THAN 8 INCHES.

N O T E S:

1. CONTOUR INTERVALS SHOWN HEREIN ARE 1 FT.
2. FISH SCREEN DESIGN IS BASED ON A NOMINAL TURBINE FLOW OF 168 CFS.
3. FISH SCREEN, SEE SPECIFICATIONS ABOVE.
4. 6' HIGH CHAIN LINK, THREE BARBED WIRE, SECURITY FENCE.
5. 12' CHAIN LINK SWING GATE KEEPER, CENTER STOP AND LOCK.
6. FISH BYPASS INTAKE, SEE ABOVE SPECIFICATIONS.
7. STAGES OF WATER ELEVATIONS SHOWN REPRESENT:
   STAGE 1: FISH SCREE AT 75% SATURATION.
   STAGE 2: FISH SCREEN AT 82.5% SATURATION AND 40 CFS FLOW OVER WEIR.
   STAGE 3: FISH SCREEN AT 100% SATURATION AT HIGH FLOW.
8. HIGH WATER ELEVATION REPRESENTS HIGH FLOW, DURING 20 YEAR PERIOD(1966-1986) WHICH OCCURED IN MAY 1984.

*FOR OVER-ALL DIMENSIONS SEE DWG. NO. PRH-S-001

NO.	DATE:	DESCRIPTION	APP'L
1	7/25/93	As Built	M.W.
0	6/24/92	Issued for Construction	M.W.
D	6/20/88	Submitted w/ art. 402 for FERC Approval	M.W.
C	6/20/88	Revised as per IDF&G letter of 6-20-88	M.W.
B	6/8/88	Revised as per IDF&G letter of 5-31-88	M.W.
A	5/13/88	Issued for IDF&G & US FWS Rev/Comments	M.W.

REVISIONS

PROFESSIONAL ENGINEER REGISTERED STATE OF IDAHO MAHER F. WISSA 5669 9/23/93

CEM — COMMERCIAL ENERGY MANAGEMENT, INC.
1155 YELLOWSTONE, SUITE B
P.O. BOX 4818
Pocatello, Idaho 83205

PORTNEUF RIVER - HYDROELECTRIC PROJECT
POWER PLANT NO. 1, LAVA HOT SPRINGS, IDAHO
FERC PROJECT NO. 7447-002

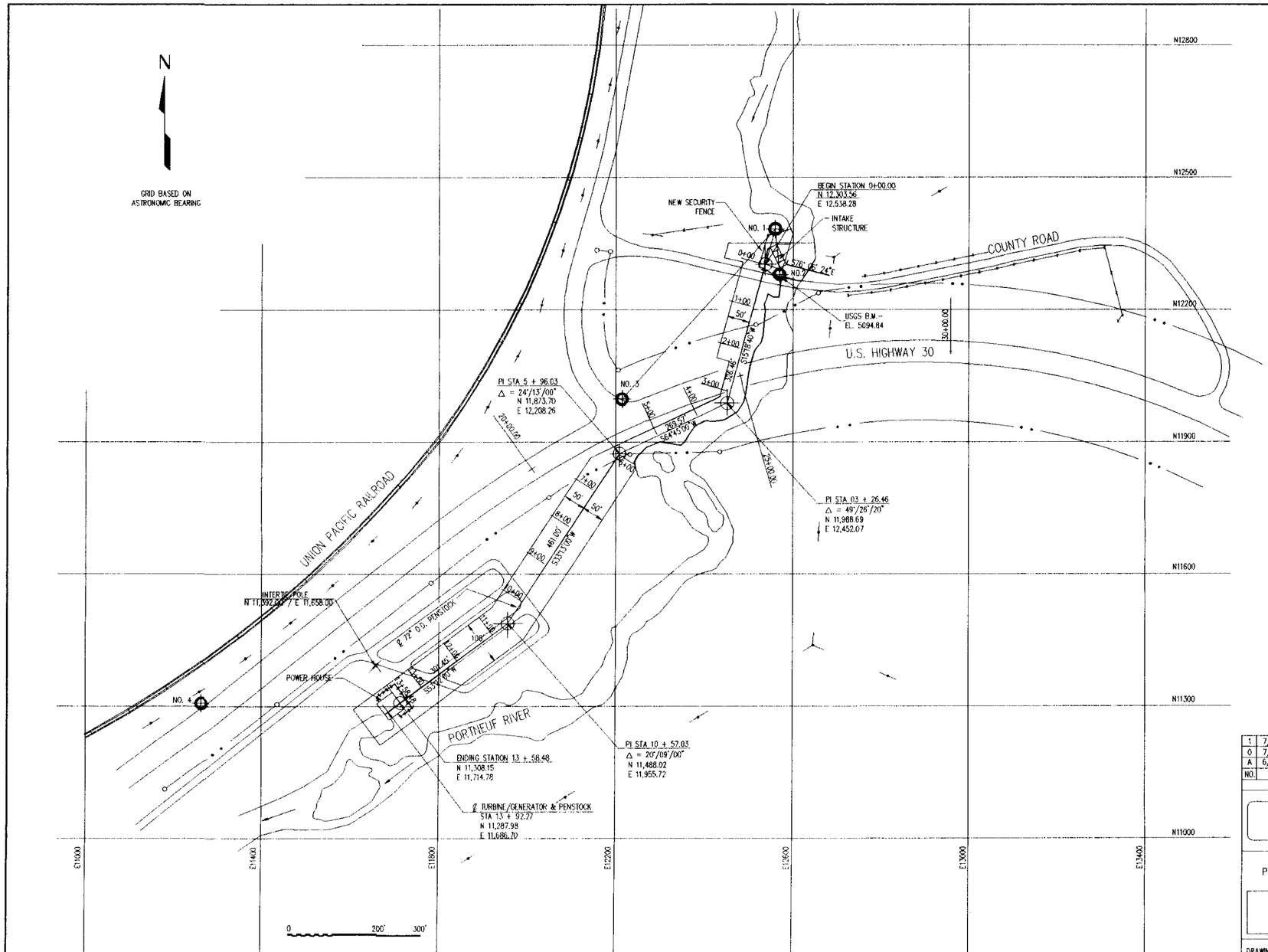
SITE & GRADING PLAN
DIVERSION WEIR & INTAKE STRUCTURES

DRAWING NUMBER: PRH-C-003

DRAWN BY	CHECKED BY	SCALE	DATE
BUTCH	M. WISSA	1"=20'-0	5-13-88

N

GRID BASED ON ASTRONOMIC BEARING



LEGEND

- STEEL PENSTOCK - 2" O.D. BELOW GROUND
- HIGHWAY RIGHT-OF-WAY
- WATER LINE
- PROJECT BOUNDARY LINE
- FENCE EXISTING
- NEW SECURITY FENCE
- POWER POLE
- SURVEYING MONUMENT

MONUMENT INFORMATION

NO.	COORDINATES NORTH	EAST
1	12382.54	12519.90
2	12280.56	12549.52
3	11985.58	12289.36
4	11306.31	11213.63

PROFESSIONAL ENGINEER REGISTERED 5695 STATE OF IDAHO MAHER F. WISSA

9/23/93

NO.	DATE:	DESCRIPTION	APPVL
1	7/21/93	As Built	M.W.
0	7/10/92	Issued for Construction	M.W.
A	6/29/88	Issued for FERC Review/Approval	M.W.

REVISIONS

CEM

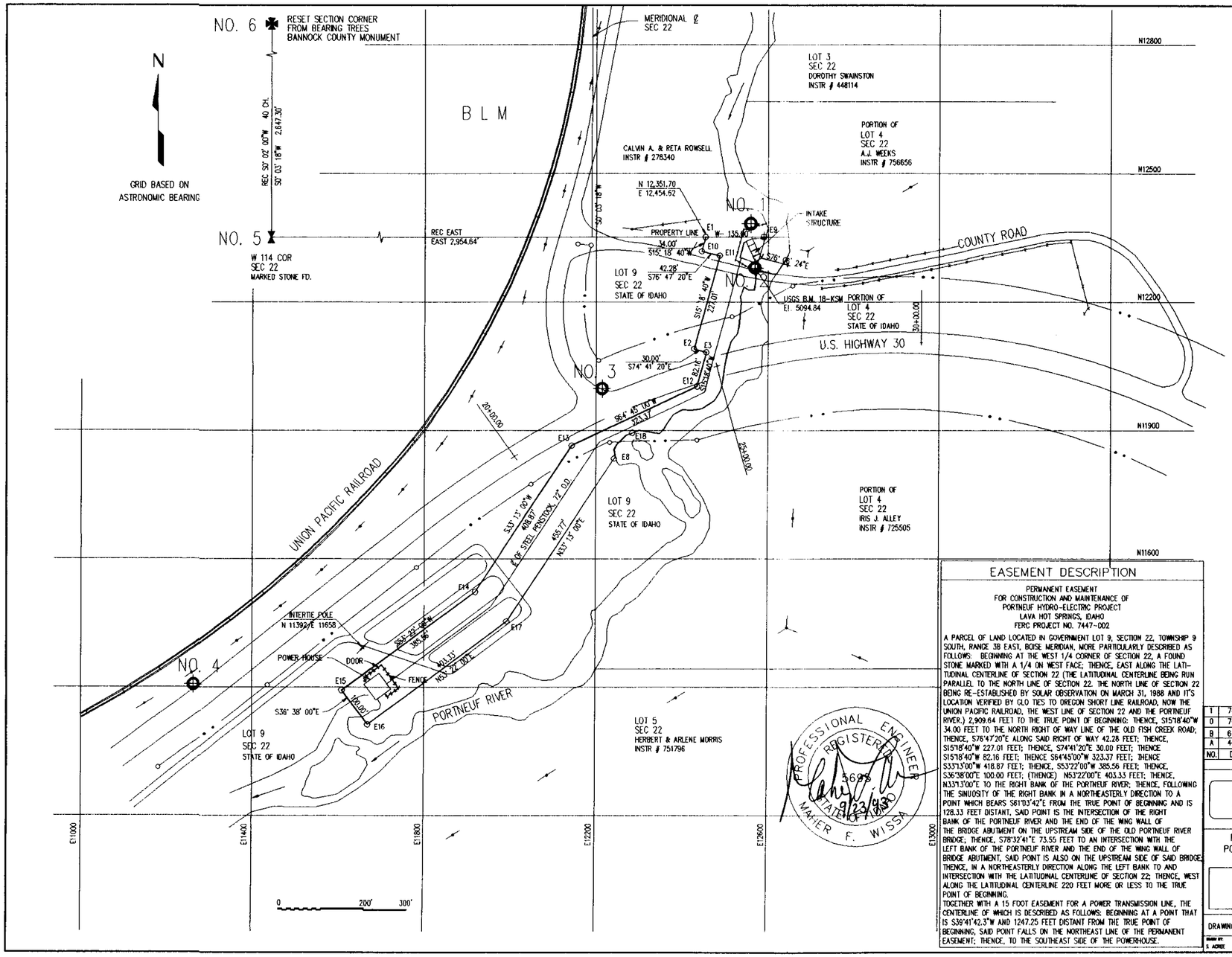
COMMERCIAL ENERGY MANAGEMENT, INC.
1130 YELLOWSTONE, SUITE B
P.O. BOX 4316
Pocatello, Idaho 83205

PORTNEUF RIVER - HYDROELECTRIC PROJECT
POWER PLANT NO. 1, LAVA HOT SPRINGS, IDAHO
FERC PROJECT NO. 7447-002

SITE PLAN

DRAWING NUMBER: PRH-C-002

DRAWN BY	CHECKED BY	SCALE	DATE
S. ACREE	M. WISSA	1"=200'-0	10-21-91



LEGEND

- STEEL PENSTOCK-7'-0" O.D. BELOW GROUND
- HIGHWAY RIGHT-OF-WAY
- WATER LINE
- EASEMENT BOUNDARY LINE
- FENCE EXISTING
- NEW SECURITY FENCE
- POWER POLE
- SURVEYING MONUMENT

MONUMENT INFORMATION

NO.	COORDINATES NORTH	EAST
1	12,382.54	12,559.90
2	12,280.56	12,569.52
3	11,985.58	12,269.36
4	11,306.31	11,263.63
5	12,351.70	9,544.98
6	14,999.00	9,547.52

EASEMENTS

MARK	COORDINATES NORTH	EAST
E1	12,351.70	12,454.62
E2	12,090.03	12,427.97
E3	12,082.11	12,455.91
E8	11,834.50	12,242.36
E9	12,351.70	12,589.62
E10	12,318.91	12,445.64
E11	12,308.98	12,487.92
E12	12,002.85	12,453.21
E13	11,864.91	12,149.74
E14	11,522.84	11,911.76
E15	11,292.78	11,609.35
E16	11,212.53	11,799.02
E17	11,453.20	11,992.68

NOTES:

1. RECORD DEEDS OF ADJOINERS PROVIDED BY AMERICAN LAND TITLE ARE FOR INFORMATION ONLY AND HAVE NOT BEEN SURVEYED.
2. POWER TRANSMISSION EASEMENT.
3. EASEMENT FOR EXISTING ACCESS ROAD WILL BE ADDED UPON RECEIVING EASEMENT PERMIT AND SURVEYING PERFORMANCE.

EASEMENT DESCRIPTION

PERMANENT EASEMENT
FOR CONSTRUCTION AND MAINTENANCE OF
PORTNEUF HYDRO-ELECTRIC PROJECT
LAVA HOT SPRINGS, IDAHO
FERC PROJECT NO. 7447-002

A PARCEL OF LAND LOCATED IN GOVERNMENT LOT 9, SECTION 22, TOWNSHIP 9 SOUTH, RANGE 38 EAST, BOISE MERIDIAN, MORE PARTICULARLY DESCRIBED AS FOLLOWS: BEGINNING AT THE WEST 1/4 CORNER OF SECTION 22, A FOUND STONE MARKED WITH A 1/4 ON WEST FACE; THENCE, EAST ALONG THE LATITUDINAL CENTERLINE OF SECTION 22 (THE LATITUDINAL CENTERLINE BEING RUN PARALLEL TO THE NORTH LINE OF SECTION 22. THE NORTH LINE OF SECTION 22 BEING RE-ESTABLISHED BY SOLAR OBSERVATION ON MARCH 31, 1988 AND IT'S LOCATION VERIFIED BY GLO TIES TO OREGON SHORT LINE RAILROAD, NOW THE UNION PACIFIC RAILROAD, THE WEST LINE OF SECTION 22 AND THE PORTNEUF RIVER.) 2,909.64 FEET TO THE TRUE POINT OF BEGINNING: THENCE, S15°18'40"W 34.00 FEET TO THE NORTH RIGHT OF WAY LINE OF THE OLD FISH CREEK ROAD; THENCE, S76°47'20"E ALONG SAID RIGHT OF WAY 42.28 FEET; THENCE, S15°18'40"W 227.01 FEET; THENCE, S74°41'20"E 30.00 FEET; THENCE S15°18'40"W 82.18 FEET; THENCE S64°45'00"W 323.37 FEET; THENCE S33°13'00"W 418.87 FEET; THENCE, S53°22'00"W 385.56 FEET; THENCE, S36°38'00"E 100.00 FEET; (THENCE) N53°22'00"E 403.33 FEET; THENCE, N33°13'00"E TO THE RIGHT BANK OF THE PORTNEUF RIVER; THENCE, FOLLOWING THE SINUOSITY OF THE RIGHT BANK IN A NORTHEASTERLY DIRECTION TO A POINT WHICH BEARS S81°03'42"E FROM THE TRUE POINT OF BEGINNING AND IS 128.33 FEET DISTANT, SAID POINT IS THE INTERSECTION OF THE RIGHT BANK OF THE PORTNEUF RIVER AND THE END OF THE WING WALL OF THE BRIDGE ABUTMENT ON THE UPSTREAM SIDE OF THE OLD PORTNEUF RIVER BRIDGE; THENCE, S78°32'41"E 73.55 FEET TO AN INTERSECTION WITH THE LEFT BANK OF THE PORTNEUF RIVER AND THE END OF THE WING WALL OF BRIDGE ABUTMENT, SAID POINT IS ALSO ON THE UPSTREAM SIDE OF SAID BRIDGE; THENCE, IN A NORTHEASTERLY DIRECTION ALONG THE LEFT BANK TO AND INTERSECTION WITH THE LATITUDINAL CENTERLINE OF SECTION 22; THENCE, WEST ALONG THE LATITUDINAL CENTERLINE 220 FEET MORE OR LESS TO THE TRUE POINT OF BEGINNING.
TOGETHER WITH A 15 FOOT EASEMENT FOR A POWER TRANSMISSION LINE, THE CENTERLINE OF WHICH IS DESCRIBED AS FOLLOWS: BEGINNING AT A POINT THAT IS S39°41'42.3"W AND 1247.25 FEET DISTANT FROM THE TRUE POINT OF BEGINNING, SAID POINT FALLS ON THE NORTHEAST LINE OF THE PERMANENT EASEMENT; THENCE, TO THE SOUTHEAST SIDE OF THE POWERHOUSE.

NO.	DATE:	DESCRIPTION	APPVL
		REVISIONS	
1	7-21-93	AS BUILT	M.W.
0	7-10-92	ISSUED FOR CONSTRUCTION	M.W.
B	6-28-88	REVISED E1, ADDED E11	M.W.
A	4-25-88	ISSUED FOR EASEMENT NEGOTIATIONS	M.W.

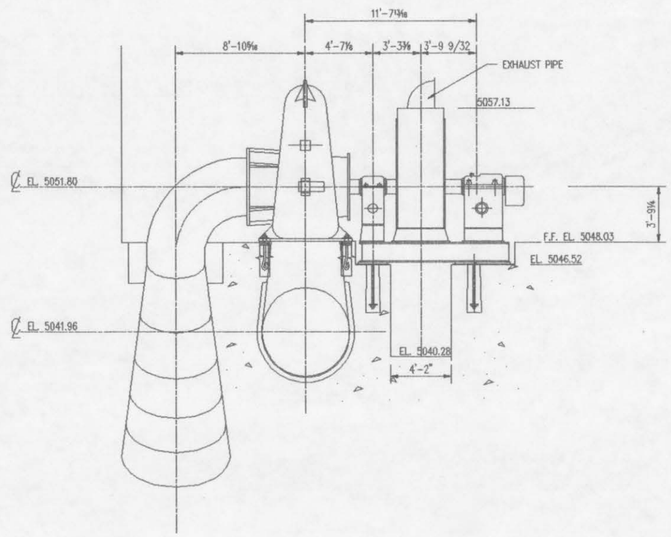
CEM
COMMERCIAL ENERGY MANAGEMENT, INC.
1126 YELLOWSTONE, SUITE E
P.O. BOX 4246
Pocatello, Idaho 83205

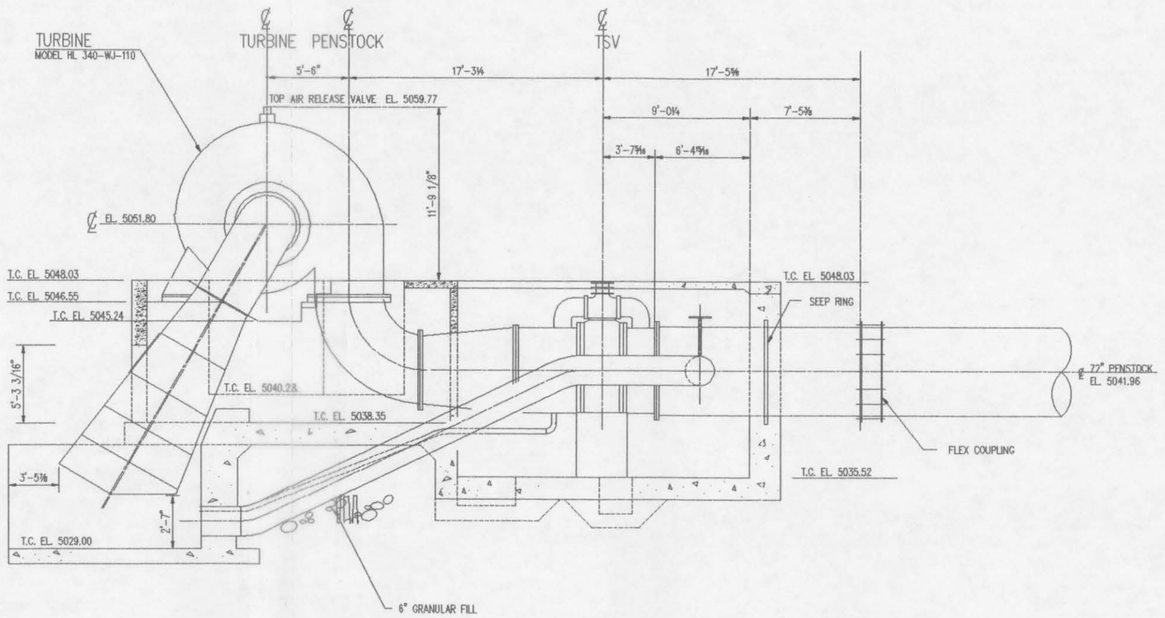
PORTNEUF RIVER - HYDROELECTRIC PROJECT
POWER PLANT NO. 1, LAVA HOT SPRINGS, IDAHO
FERC PROJECT NO. 7447-002

PROJECT EASEMENT
SITE PLAN

DRAWING NUMBER: PRH-C-001

DRAWN BY:	CHECKED BY:	SCALE:	DATE:
S. ACREE	M. WISSA	1"=200'-0	11-16-91





SECTION C
SCALE: 1/8"=1'-0
PRH-G-001

SECTION B
SCALE: 1/8"=1'-0
PRH-G-001

PROFESSIONAL ENGINEER
REGISTERED
5695
9/23/93
STATE OF IDAHO
MAHER F. WISSA

NO.	DATE:	DESCRIPTION	APP'VL
1	7/12/93	As Built	M.W.
0	8/17/92	Issued For Construction	M.W.
C	3/23/92	Revised per ORENCO LTR 34	M.W.
B	1/31/92	Revised per ORENCO Equip. Changes	M.W.
A	12/12/91	Incorporated ORENCO Equip. Information	M.W.

REVISIONS

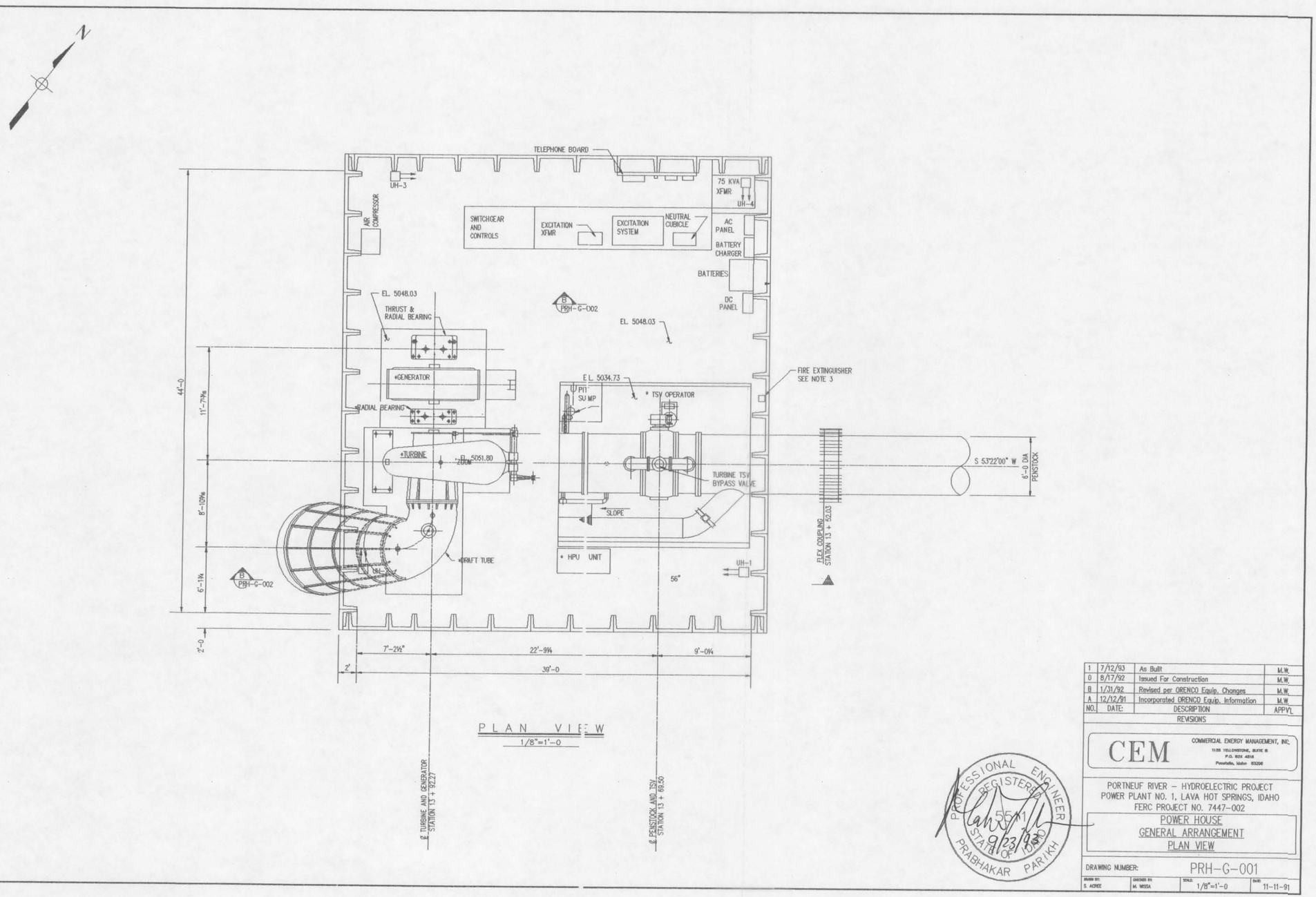
CEM
COMMERCIAL ENERGY MANAGEMENT, INC.
1135 YELLOWSTONE, SUITE B
P.O. BOX 4918
Pocatello, Idaho 83206

PORTNEUF RIVER – HYDROELECTRIC PROJECT
POWER PLANT NO. 1, LAVA HOT SPRINGS, IDAHO
FERC PROJECT NO. 7447-002

POWER HOUSE
EQUIPMENT
SECTIONS "B" AND "C"

DRAWING NUMBER: PRH-G-002

DRAWN BY:	CHECKED BY:	SCALE:	DATE:
S. ACREE	M. WISSA	1/8"=1'-0	11-11-91



PLAN VIEW

1/8"=1'-0

NO.	DATE	DESCRIPTION	APPVL
1	7/12/93	As Built	M.W.
0	8/17/92	Issued For Construction	M.W.
B	1/31/92	Revised per ORENCO Equip. Changes	M.W.
A	12/12/91	Incorporated ORENCO Equip. Information	M.W.

REVISIONS

CEM — COMMERCIAL ENERGY MANAGEMENT, INC.
1105 YELLOWSTONE, SUITE B
P.O. BOX 4516
Pocatello, Idaho 83206

PORTNEUF RIVER - HYDROELECTRIC PROJECT
POWER PLANT NO. 1, LAVA HOT SPRINGS, IDAHO
FERC PROJECT NO. 7447-002

POWER HOUSE
GENERAL ARRANGEMENT
PLAN VIEW

DRAWING NUMBER: PRH-G-001

DRAWN BY:	CHECKED BY:	SCALE:	DATE:
S. ACREE	M. WISSA	1/8"=1'-0	11-11-91

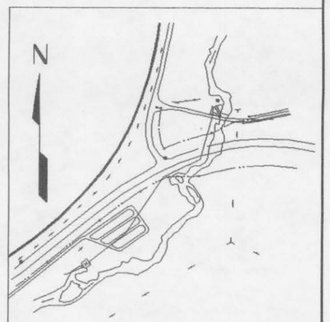
PROFESSIONAL ENGINEER REGISTERED STATE OF IDAHO 5541 PRABHAKAR PARIKH 9/23/93

RECEIVED
SEP 2 8 1993
Department of Water Resources

PORTNEUF RIVER HYDROELECTRIC PROJECT

FERC PROJECT NO. 7447
LAVA HOT SPRINGS, IDAHO

INDEX OF DRAWINGS		
DRAWING NO.	AREA	DRAWING TITLE
PRH-I-001		DRAWING INDEX
PRH-G-001 PRH-G-002	GENERAL	POWER HOUSE – GENERAL ARRANGEMENT PLAN VIEW POWER HOUSE – EQUIPMENT SECTIONS 'B' AND 'C'
PRH-C-001 PRH-C-002 PRH-C-003 PRH-C-004 PRH-C-005	CIVIL	PROJECT EASEMENT–SITE PLAN SITE PLAN DIVERSION WEIR AND INTAKE STRUCTURE – SITE & GRADING PLAN PENSTOCK PLAN AND PROFILE POWER HOUSE – SITE & GRADING PLAN
PRH-S-001 PRH-S-002 PRH-S-003 PRH-S-004 PRH-S-005 PRH-S-006 PRH-S-007 PRH-S-008	STRUCTURAL	DIVERSION WEIR AND INTAKE STRUCTURE – PLAN & DETAILS DIVERSION WEIR AND INTAKE STRUCTURE – SECTION & DETAILS POWER HOUSE – ARCHITECTURAL FLOOR AND ROOF PLANS POWER HOUSE – FLOOR PLAN POWER HOUSE – FOUNDATION PLAN @ EL. 5038.62 POWER HOUSE – SECTIONS & DETAILS POWER HOUSE – SECTIONS & DETAILS POWER HOUSE – EQUIPMENT FOUNDATION PLAN @ EL. 5048.68
PRH-M-001	MECHANICAL	POWER HOUSE – HVAC ROOF PLAN, SECTION & DETAILS
PRH-P-001 PRH-P-002 PRH-P-003	PIPING	POWER HOUSE – PIPING PLAN POWER HOUSE – PIPING SECTIONS & DETAILS POWER HOUSE – PIPING SECTIONS & DETAILS
PRH-E-001 PRH-E-A01 PRH-E-A02 PRH-E-C01 PRH-E-F01 PRH-E-P01 PRH-E-P02	ELECTRICAL	ONE LINE DIAGRAM POWER HOUSE – PENSTOCK – INTAKE – SITE LAYOUT PLAN POWER HOUSE – PENSTOCK – INTAKE – TRANSFORMER PAD POWER HOUSE – ELECTRICAL CONTROL CABLE LAYOUT POWER HOUSE – ELECTRICAL LIGHTING & RECEPTACLE LAYOUT POWER HOUSE – ELECTRICAL POWER FEEDERS INTAKE STRUCTURE – ELECTRICAL POWER FEEDERS



KEY PLAN

NO.	DATE:	DESCRIPTION	APPV'L
1	8/16/93	AS BUILT	M.W.
0	8/11/92	ISSUED FOR CONSTRUCTION	M.W.

REVISIONS

CEM
COMMERCIAL ENERGY MANAGEMENT, INC.
1155 YELLOWSTONE, SUITE B
P.O. BOX 4518
Pocatello, Idaho 83205

PROFESSIONAL ENGINEER
REGISTERED
5695
STATE OF IDAHO
MAHER F. WISSA
9/23/93

PORTNEUF RIVER – HYDROELECTRIC PROJECT
POWER PLANT NO. 1, LAVA HOT SPRINGS, DAHO
FERC PROJECT NO. 7447–002

DRAWING INDEX

DRAWING NUMBER: PRH-I-001

DRAWN BY:	CHECKED BY:	SCALE:	DATE:
S. ACREE	M. WISSA	NO SCALE	11-13-91

August 6, 1993

COMMERCIAL ENERGY MANAGEMENT INC
C/O MAHER F WISSA PRES
PO BOX 4518
POCATELLO ID 83205

PROOF ACKNOWLEDGMENT LETTER

RE: PERMIT NO. 29-07699

Dear Permit Holder:

The department acknowledges receipt of the proof of beneficial use form submitted for the above referenced permit. The next step in the process of developing a water right is for the department to conduct a field examination to determine and confirm the use being made of the water.

If you have questions concerning this matter, please feel free to contact the EASTERN Regional Office in Idaho Falls at (208)525-7161.

Sincerely,

Karen L. Gustafson
Secretary/Records Manager

c: IDWR - Region

ANALYSIS SHEET
FOR
PROOF OF BENEFICIAL USE

Permit No. 29-07699 Reviewed by KDg Date 8/4/93

GENERAL CONSIDERATIONS

Yes Name same as permit?
Yes Address same as permit?
Yes Proof timely received?
If not, complete calculation below.

TYPES OF USE

Power

Correct Uses? Yes

SOURCE OF WATER

✓ Surface water source
____ Ground water source
NA Drilling permit required?
____ Copy in the file? Drilling Permit No. ____
____ Amount paid for permit ____ Correct?
____ Well log in the file?

LICENSE EXAMINATION FEE

Yes Required?
600 Amount Submitted
Yes Correct?

MEASURING DEVICE

Yes Required?
Yes Installed?
NA Waiver requested?

PRIORITY CALCULATION

Date proof received	NA	
Date proof due		-
No. of days late		=
Priority Date		+
New Priority Date		

DEFICIENCIES OR ACTION ITEMS

proof acceptable

DATA ENTRY
New Address ____

Proof Made 7/26/93
8/6/93 KDg

May 31, 1993

COMMERCIAL ENERGY MANAGEMENT INC
C/O MAHER F WISSA PRES
PO BOX 4518
POCATELLO ID 83205

PROOF DUE NOTICE

RE: PERMIT NO. 29-07699

Dear Permit Holder:

One of the conditions of approval of the above referenced water permit was that proof of the extent of your beneficial use must be submitted to this office on or before August 1, 1993. (See last page of your approved permit or your last approved extension request.) Enclosed is a form which when accompanied by the license examination fee or a complete field examination report prepared by a certified water right examiner may be used to submit the required proof.

If you have not fully completed your project, and you or a previous owner of this permit have not received a prior extension of time, you may request an extension of time if the delay is for reasonable cause as provided in Section 42-204, Idaho Code. If you have been prevented from proceeding by a governmental agency or by litigation which might bring title to the water in question, more than one extension of time can be granted. An extension of time request form is enclosed for your convenience.

Either an acceptable proof of beneficial use submittal or an acceptable request for an extension of time must be received by this department on or before the above described proof due date. If neither is received, the department will send you a lapse notice. Within sixty (60) days of the mailing of the lapse notice, the permit will no longer be of any force nor effect.

SINCERELY,

140199

Karen L. Gustafson
Secretary/Records Manager

Enclosures

State of Idaho
DEPARTMENT OF WATER RESOURCES
1301 North Orchard Street, Statehouse Mail, Boise, Idaho 83720-9000
Phone: (208) 327-7900 FAX: (208) 327-7866

November 6, 1992

CECIL D. ANDRUS
GOVERNOR

R. KEITH HIGGINSON
DIRECTOR

Lew Campbell
West One Bank
P.O. Box 8247
Boise, ID 83733

RE: Assignment of Permit to Appropriate Water No. 29-7699

Dear Mr. Campbell:

I have reviewed the security documents which you mailed to me. I find that the assignment satisfies the requirements of Idaho Code § 42-205 through Idaho Code § 42-209, and specifically find that the transfer is made in good faith, and not for purposes of speculation or delay.

The Department of Water Resources normally requires an affidavit or statement from an officer of the bank verifying authority to do business in the State of Idaho, or a certificate from the Secretary of State's office showing proper registration. West One Bank, with its long history of operation in the State of Idaho, need not supply this information.

Because water right permit no. 29-7699 is taken as collateral security, and is not intended as a full assignment, Commercial Energy Management, Inc. will continue to be identified as the current owner of the project. By retaining current owner status, Commercial Energy Management, Inc., will receive all of the correspondence relating to the permit and its ultimate perfection.

West One Bank will be identified in the records of the Department as a secured party or lienholder. If the permit is ever in jeopardy, the Department records will be consulted to determine if there are other interested parties who should be notified.

Sincerely,

Gary Spackman

GARY SPACKMAN, Manager
Water Right Permits Section

GS:js

cc: Eastern Region

State of Idaho
DEPARTMENT OF WATER RESOURCES
1301 North Orchard Street, Statehouse Mail, Boise, Idaho 83720-9000
Phone: (208) 327-7900 FAX: (208) 327-7866

CECIL D. ANDRUS
GOVERNOR

R. KEITH HIGGINSON
DIRECTOR

November 5, 1992

Maher F. Wissa
Commercial Energy Mgmt, Inc.
P.O. Box 4518
Pocatello, ID 83205

RE: PERMIT NO. 29-7699

Dear Mr. Wissa:

I have reviewed your letter dated November 2, 1992 in which you propose the installation of certain equipment to continuously measure the amount of water in the bypassed reach of your hydroelectric project near Lava Hot Springs, Idaho. Your proposal is acceptable with respect to the bypass reach measurement.

Please also note, however, that condition of approval no. 6 of the water right permit also requires you to permanently install and maintain a measuring device and lockable controlling works as a part of the diversion works from the Portneuf River prior to the diversion and use of water under the permit.

Please feel free to contact the department if we can be of assistance or if you have additional questions.

Sincerely,

L. GLEN SAXTON, Chief
Water Allocation Bureau

c: IDWR - E. Region

CEM COMMERCIAL ENERGY MGMT, INC.
1155 Yellowstone Ave • Suite B • P. O. Box 4518 • Pocatello, Idaho 83205 • Telephone (208) 237-8184 • Fax (208) 237-8184

November 2, 1992
Ref: CEM/0889

RECEIVED
NOV 0 4 1992
Water Resources

Mr. L. GLEN SAXTON
Chief, Water Allocation Bureau
State of Idaho, Department of Water Resources
1301 North Orchard Street
Statehouse Mail
Boise, ID 83720-9000

Subject: Portneuf River Hydroelectric Project
Lava Hot Springs, Idaho
FERC Project No. 7447-002
Permit No. 29-7699

Dear Mr. Saxton:

As per our telephone conversation that day, regarding ~~Order 5~~ cond of approv. #6. of the referenced Permit, we are required to install a streamgage device for continuously monitoring and recording the flow in the bypassed reach.

Our plan is to install a level transducer at the diversion weir and a Smartman Level Control System and a printer. This System will provide continuous readings of the water head at the bypass, and by substitution into the following Bazin's Formula, the bypass flow will be obtained:

$$Q = \{(0.405 + .00984/H) * [1 + (0.55 * H^2/(p+H)^2)] * LH * \sqrt{2gH}\}$$

Where:
Q: flow, in cfs
H: Water head on top of the weir, in ft.
L: Length of weir, 40 ft. (in this project)
p: Height of weir, 4 ft. (in this project)
g: 32.17 ft/sec^2

Attached are two drawings showing: 1) the diversion weir and proposed location of the level transducer, and 2) Smartman Control System.

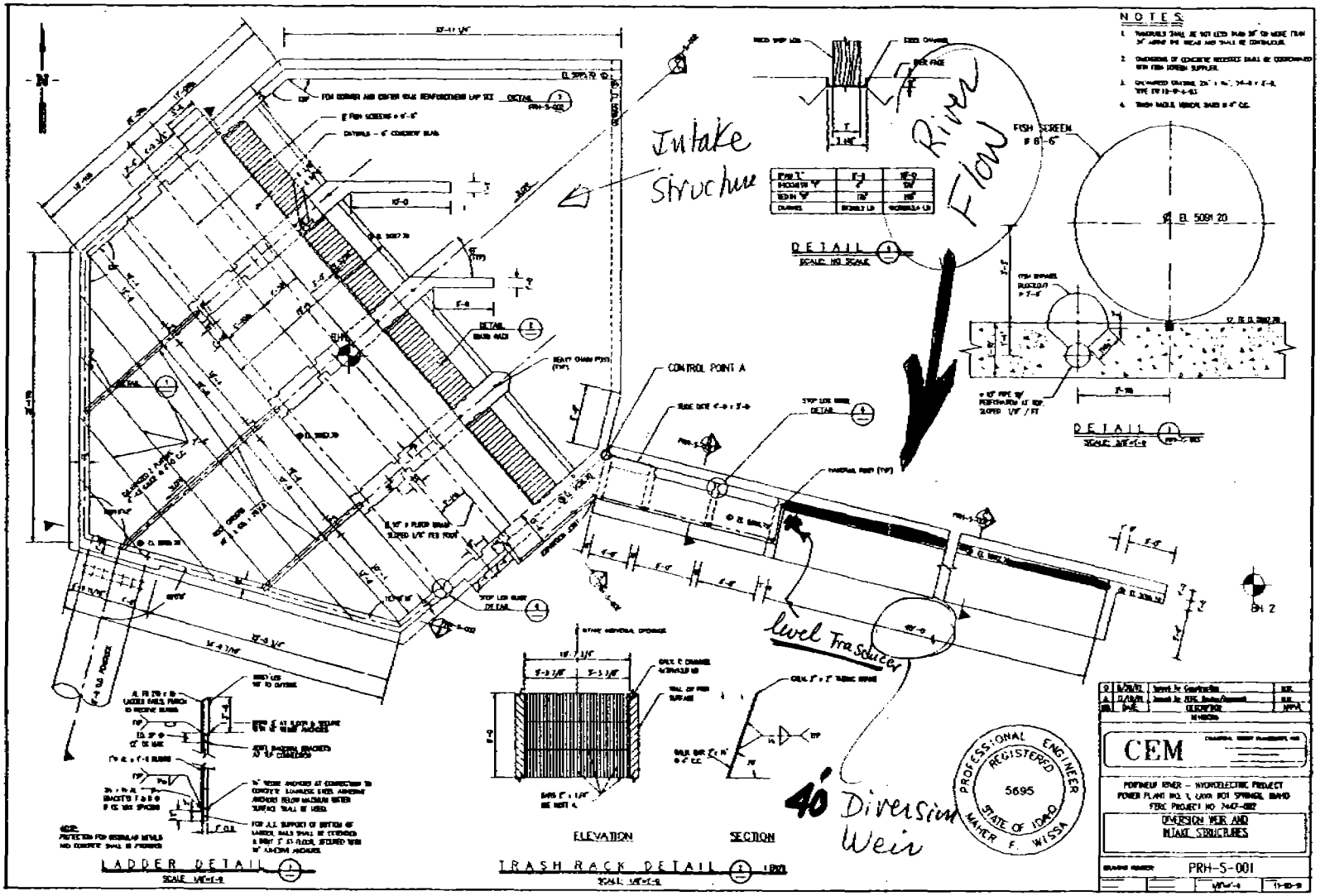
We respectfully request your approval on this system. If you have any questions concerning this matter, please feel free to contact me. Thank you.

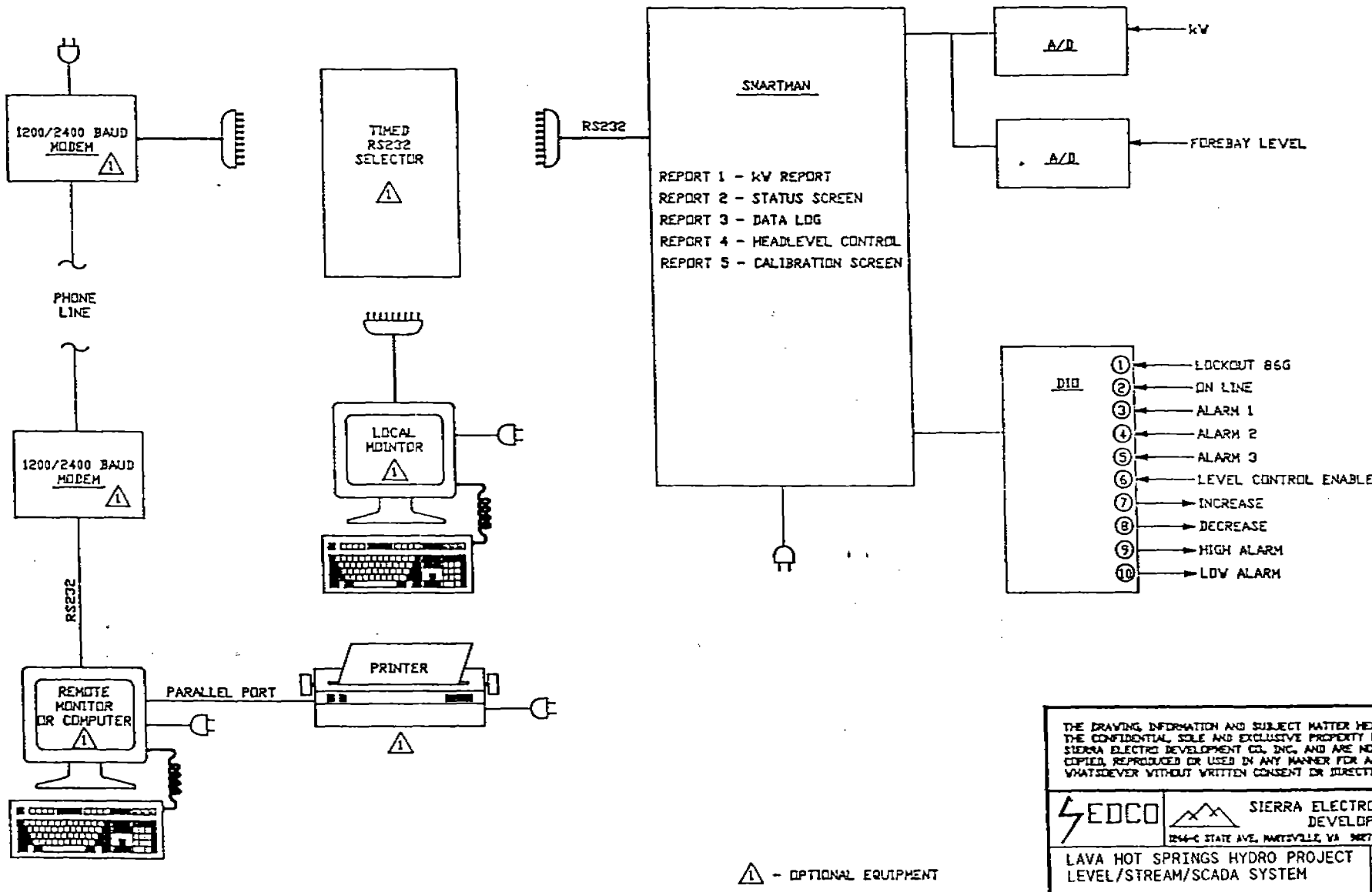
Sincerely,

Maher F. Wissa

Maher F. Wissa, P.E.
President

Attachments: 2


NOTES
Intake Structure
River Flow
FISH SCREEN
DETAIL
CONTROL POINT A
level Trasducer
40' Diversion Weir
LADDER DETAIL
TRASH RACK DETAIL
ELEVATION
SECTION
PROFESSIONAL ENGINEER
REGISTERED
5695
STATE OF IDAHO
MAHER F. WISSA
CEM
OVERSIGHT WEIR AND INTAKE STRUCTURES
PRH-S-001



1 of 0

THE DRAWING, INFORMATION AND SUBJECT MATTER HEREOF ARE THE CONFIDENTIAL, SOLE AND EXCLUSIVE PROPERTY OF SIERRA ELECTRO DEVELOPMENT CO., INC., AND ARE NOT TO BE COPIED, REPRODUCED OR USED IN ANY MANNER FOR ANY PURPOSE WHATSOEVER WITHOUT WRITTEN CONSENT OR DIRECTION.

SEDCO

SIERRA ELECTRO DEVELOPMENT CO.

1266-C STATE AVE, MARYSVILLE, VA 98270 (206) 653-4454

LAVA HOT SPRINGS HYDRO PROJECT
LEVEL/STREAM/SCADA SYSTEM

DRAWING No. 301-628-1

REV.	BY	DATE

DR.BY: DJ ENGR: DB CK BY: DATE: 8-6-92

West One Bank, Idaho, N.A.
Post Office Box 8247
Boise, Idaho 83733
208 383-7100

RECEIVED
OCT 26 1992
Department of Water Resources

October 23, 1992

WESTONE

Gary Spackman
State of Idaho
Department of Water Resources
1301 North Orchard Street
Statehouse Mail
Boise, Idaho 83720

Dear Mr. Spackman:

I spoke to you recently about an assignment of State of Idaho Department of Water Resources Water Rights Permit No. 29-7699, which we have taken as collateral security for our SBA loan to Commercial Energy Management, Incorporated.

We would appreciate the State of Idaho's consent to this assignment as required by the Small Business Administration (SBA) authorization.

I attach a copy of the security agreement and UCC filing which cover the assignment as well as the other collateral.

Thank you for your assistance.

Very Truly Yours,

Lew Campbell

Lew Campbell
Credit Documentation Officer

West One Bank, Idaho, N.A.
Loan Service Administration, #1-5062
P.O. Box 8247, Boise, Idaho 83733

Attachments

cc: Carmela Smizer, #1-5132

SECURITY AGREEMENT

THIS SECURITY AGREEMENT made this 29th day of February, 1992, between the following:

DEBTOR: COMMERCIAL ENERGY MANAGEMENT, INCORPORATED, an Idaho corporation, whose address is:

1155 Yellowstone
Pocatello, Idaho 83201

SECURED PARTY: WEST ONE BANK, IDAHO, N.A., acting by its branch at:

P.O. Box 1709
Pocatello, Idaho 83204

WITNESSETH:

DEBTOR HEREBY IRREVOCABLY ASSIGNS AND GRANTS TO SECURED PARTY a security interest in the property hereinafter described to secure repayment of:

A. The sum of One Million Dollars ($1,000,000), with interest, pursuant to the terms of that certain promissory note dated of even date (the "Note"), evidencing the same, and all modifications, extensions, and renewals thereof;

B. Payment of all other sums, with interest, hereafter advanced, when evidenced by a promissory note or notes reciting this Security Agreement as security; and

C. Performance of all covenants and agreements set forth in the Loan Documents as the term "Loan Documents" is defined in a Construction Loan Agreement of even date.

The rights, interests, and estates encumbered by this Security Agreement include without limitation, all right, title, and estate of Grantor in and to the following property (referred to collectively as "the Personalty"), including any interest therein acquired after the date of this Security Agreement:

1. All equipment, fixtures, and easement improvements, now owned or hereafter acquired, including the hydroelectric generating structure and penstock facility, all accessions, additions, accessories, parts or substitutions thereto, and all proceeds therefrom, including insurance and account proceeds, associated with the Federal Energy Regulatory Commission Project No. 7447-002, Lava Hot Springs, Idaho (hereafter called "the Project");

2. All equipment and proceeds therefrom, including insurance, regardless of location or whether it is associated with the Project;

3. State of Idaho Department of Water Resources Water Rights Permit No. 29-7699;

4. Federal Energy Regulatory Commission Project License No. 7447-002;

5. Power Purchase Agreement between Debtor and Pacificorp doing business in the State of Idaho as Utah Power & Light, including without limitation, all rights to proceeds from said Agreement;

6. State of Idaho Department of Lands Easement No. 5402;

7. Accounts, chattel paper, documents, instruments and general intangibles and the proceeds in all forms therefrom, now owned or hereafter acquired, including but not limited to the proceeds from the Pacificorp Agreement referred to in Paragraph 5 above, rebates, monies, and credits due from anyone and all tax refunds;

8. All tangible personal property now or hereafter located on or used in connection with the construction, operation, or maintenance of the Project, but which may not be considered as fixtures, including, without limitation, all goods, inventory, tools, machinery, furniture, appliances, fans, heater, carpets, maintenance supplies, and other equipment which is not attached to real property, and all plans and specifications relating to the construction of the Project;

9. All intangible personal property rights now or hereafter relating to Debtor's construction, ownership, and operation of the Project, including, without limitation, all contract rights appurtenant to the Project (including contracts for construction), all casualty insurance policies and claims and demands respecting such policies, all undisbursed proceeds of any loans secured hereby, and all awards or payments respecting proceedings in or in lieu of eminent domain.

10. $48,000 in cash to be deposited by Debtor and to be held in an account established by Secured Party upon final completion of the Project as defined in Section 2.04 of the Construction Loan Agreement.

11. Life insurance policies in the amount of $1,000,000 on the life of Maher F. Wissa, and $500,000 on the life of Angus W. Stone (Debtor agrees to execute such additional forms as may be necessary to perfect and/or notify of this Assignment).

Debtor warrants, covenants, and agrees as follows:

1. WARRANTY OF TITLE. Grantor owns all of the Personalty, free from liens and encumbrances of any kind other than installments of ad valorem property taxes which are not in arrears, and at all times shall keep the Personalty free from all liens, encumbrances and adverse claims other than such nondelinquent installments of taxes;

2. COMPLIANCE WITH LOAN DOCUMENTS. Debtor shall pay all amounts described in the Note as and when due, and shall comply with and perform all other conditions, covenants, agreements, and provisions contained in the Note and in this Security Agreement, and in any other of the Loan Documents.

3. SUITS, ACTIONS, ETC. If any action or proceeding shall be commenced which might affect any security interest granted herein, the value of the same, or the rights or remedies of the Secured Party, the Secured Party may at its election appear in such action or proceeding and do such things as Secured Party may elect for the purpose of protecting or preserving its rights and remedies, security interests and the value thereof. Debtor, upon demand, shall reimburse Secured Party for all costs and expenses which Secured Party may incur by reason thereof, including, without limitation, attorneys' fees and fees for other services or advice, including costs of searches and reports, and costs, expenses and fees of accountants, engineers and other professional assistants or advisors, together with interest thereon at the default rate provided in the Note (but not to

exceed the highest rate permitted by law) from the date incurred until repaid, and all such sums shall be secured hereby.

4. REIMBURSE SECURED PARTY FOR EXPENSES. If Debtor fails to perform any covenant or agreement set forth in this Security Agreement or in any other of the Loan Documents, at any time or from time to time, Secured Party at its election may perform the same or cause the same to be performed. Debtor, upon demand, shall repay Secured Party for all expenditures Secured Party may make and for all costs and expenses Secured Party may incur by reason thereof, together with interest thereon at the default rate provided in the Note (but not to exceed the highest rate permitted by law) from the date incurred until repaid, and all such sums shall be secured hereby.

5. DEFAULT. Events of default shall be as enumerated in a Construction Loan Agreement of even date. If such an event of default remains uncured following any notice required by the Construction Loan Agreement, Secured Party shall have all remedies set forth in the Construction Loan Agreement and all remedies of a Secured Party under the Uniform Commercial Code of Idaho and any other applicable law. Any judgment which Secured Party may recover shall bear interest at the default rate provided in the Note, not to exceed, however, the highest rate permitted by law.

6. NONWAIVER. Neither the acceptance by Secured Party of any payment or any other performance, nor any act or failure of Secured Party to act or to exercise any rights, remedies or options in any one or more instances shall be considered as a waiver of any such right, remedy or option or of any other then existing or thereafter accruing right, remedy or option, or of any breach or default then accrued or thereafter accruing. No claimed waiver by Secured Party of any rights, remedies or options shall be binding unless the same shall be in writing signed by Secured Party.

7. SEVERABILITY. If any provision of any of the Loan Documents shall be invalid or unenforceable at any time, such invalidity or unenforceability shall not affect the remaining portions and provisions of any of the Loan Documents, all of which remaining portions and provisions shall be and remain in full force and effect.

8. ATTORNEYS' FEES AND COSTS. If legal action is required or deemed necessary to interpret or enforce any of the provisions of this Security Agreement, or any of the Loan Documents, the Secured Party shall be entitled to recover its costs of suit, including reasonable attorneys' fees, incurred in connection therewith, regardless of whether suit is commenced.

IN WITNESS WHEREOF, Debtor has executed this instrument as of the day and year first hereinabove written.

DEBTOR:

COMMERCIAL ENERGY MANAGEMENT, INCORPORATED

By _____
Maher F. Wissa, President/Treasurer

By _____
Angus W. Stone, Vice Pres./Secretary

STATE OF ~~IDAHO~~ NC)
Mecklenburg ss:
County of ~~Bannock~~)

On this 25 day of February, in the year 1992, before me, Magdy F. Wissa, notary public, personally appeared MAHER F. WISSA and ANGUS W. STONE known or identified to me to be the President/Treasurer and Vice President/Secretary, respectively, of COMMERCIAL ENERGY MANAGEMENT, INCORPORATED, the corporation that executed the instrument or the person who executed the instrument on behalf of said corporation, and acknowledged to me that such corporation executed the same.

X _____
Notary Public for Idaho
Residing at Charlotte, NC
My Commission Expires Aug 22, 1992

1. PLEASE TYPE THIS FORM IN BLACK

2. Enclose filing fee of $6.00 if form is typed, or $10.00 if not typed. For attachments, add $1.00 per printed page.

3. File only the original. Make copies for your file. The original will be returned as your acknowledgment.

4. Enter only one debtor's name or assumed name per debtor block exactly as it is to be indexed. If more than four names, use an attached sheet. Enter individual debtor names: Last, First Middle Title; e.g. Smith, John Alan Jr.

5. When the obligation has been satisfied, complete the Termination Statement and return the original to the filing officer.

Form approved by Pete T. Cenarrusa, Secretary of State, UCC Division, Statehouse, Boise, ID 83720. Ph 208-334-3191.

Debtor #1 (Last name, first, middle, title & mailing address)

COMMERCIAL ENERGY MANAGEMENT, INCORPORATED
1155 Yellowstone
Pocatello, Idaho 83201

Debtor #3

Debtor #2

Debtor #4

Secured Party and Address

WEST ONE BANK, IDAHO, NA
Pocatello Office #1-43
P.O. Box 1709
Pocatello, Idaho 83204

Assignee and Address

Check if Covered ☒ Products of collateral are also covered

Mailing Address for acknowlegement, if not Secured Party

If one of the following boxes is checked, the secured party may sign the financing statement. The collateral described herein is:

- ☐ Brought into this state already subject to a security interest in another jurisdiction.
- ☐ Subject to a security interest in another jurisdiction, and the debtor's location has changed to this state.
- ☐ Proceeds of the original collateral described above in which a security interest was perfected.
- ☐ The subject of a financing statement which has lapsed.
- ☐ Subject to a security interest perfected under a prior name or identity of the debtor.

This financing statement covers the following types or items of property:
(If this is a fixture, timber or mineral filing to be recorded with the County Recorder, include legal description and name of record owner, if required.)

SEE EXHIBIT "A" ATTACHED HERETO AND MADE A PART HEREOF

Signature(s) of Debtor(s)

COMMERCIAL ENERGY MANAGEMENT, INCORPORATED

X _____ President/Treasurer

X _____ Vice Presient/Secretary

Filing Office Use Only

Secured Party Signature WEST ONE BANK, IDAHO, NA

By _____

TERMINATION STATEMENT: The Secured Party no longer claims a security interest under the financing statement.

Secured Party or Assignee of Record _____ Date _____

EXHIBIT A

1. All equipment, fixtures, and easement improvements, now owned or hereafter acquired, including the hydroelectric generating structure and penstock facility, all accessions, additions, accessories, parts or substitutions thereto, and all proceeds therefrom, including insurance and account proceeds, associated with the Federal Energy Regulatory Commission Project No. 7447-002, Lava Hot Springs, Idaho (hereafter called "the Project");

2. All equipment and proceeds therefrom, including insurance, regardless of location or whether it is associated with the Project;

3. State of Idaho Department of Water Resources Water Rights Permit No. 29-7699;

4. Federal Energy Regulatory Commission Project License No. 7447-002;

5. Power Purchase Agreement between Debtor and Pacificorp doing business in the State of Idaho as Utah Power & Light, including without limitation, all rights to proceeds from said Agreement;

6. State of Idaho Department of Lands Easement No. 5402;

7. Accounts, chattel paper, documents, instruments and general intangibles and the proceeds in all forms therefrom, now owned or hereafter acquired, including but not limited to the proceeds from the Pacificorp Agreement referred to in Paragraph 5 above, rebates, monies, and credits due from anyone and all tax refunds;

8. All tangible personal property now or hereafter located on or used in connection with the construction, operation, or maintenance of the Project, but which may not be considered as fixtures, including, without limitation, all goods, inventory, tools, machinery, furniture, appliances, fans, heater, carpets, maintenance supplies, and other equipment which is not attached to real property, and all plans and specifications relating to the construction of the Project;

9. All intangible personal property rights now or hereafter relating to Grantor's construction, ownership, and operation of the Project, including, without limitation, all contract rights appurtenant to the Project (including contracts for construction), all casualty insurance policies and claims and demands respecting such policies, all undisbursed proceeds of any loans secured hereby, and all awards or payments respecting proceedings in or in lieu of eminent domain.

10. $48,000 in cash to be held in an account established by Secured Party.

11. Life insurance policies in the amount of $1,000,000 each on the lives of Maher F. Wissa, Angus W. Stone, and Girgis F. Wissa (Debtor agrees to execute such additional forms as may be necessary to perfect and/or notify of this Assignment).

This is an attachment to the UCC-1 dated NA between COMMERCIAL ENERGY MANAGEMENT, INCORPORATED AND West One Bank, Idaho, n.a. of which this is made a part.

COMMERCIAL ENERGY MANAGEMENT, INCORPORATED

X _____
Maher F. Wissa, President/Treasurer

X _____
Angus W. Stone, Vice Presient/Secretary

CEM COMMERCIAL ENERGY MGMT, INC.
1155 Yellowstone Ave • Suite B • P. O. Box 4518 • Pocatello, Idaho 83205 • Telephone (208) 237-8184 • Fax (208) 237-8184

June 26, 1992
Ref: CEM/0836

RECEIVED
JUN 29 1992
Department of Water Resources

Mr. L. Glen Saxton
Chief, Water Allocation Bureau
State of Idaho, Department of Water Resources
1301 North Orchard Street
Statehouse Mail
Boise, ID 83720-9000

Subject: Portneuf River Hydroelectric Project
Lava Hot Springs, Idaho
FERC Project No. 7447-002
Permit No. 29-7699

Dear Mr. Saxton:

We would like to inform you that the construction work covered by the subject permit will start on the week of July 13, 1992. Attached is a copy of the Project Construction Schedule.

If you have any questions concerning this matter, please feel free to contact me.

Sincerely,

Maher F. Wissa, P.E.
President

Attachments: 1

c: Terry Lane, TEMPLE CONSTRUCTION

Commercial Energy Mangement, Inc.
Portneuf River Hydroelectric Project
Lava Hot Springs, Idaho

PROJECT CONSTRUCTION SCHEDULE

April 15, 1992

ACTIVITY	1992 MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Week begins	4 11 18 25	1 8 15 22 29	6 13 20 27	3 10 17 24	31 7 14 21 28	5 12 19 26	2 9 16 23	30 7 14 28
MOVE-IN MOBILIZATION			xxx					
DIVERSION CHANNEL & COFFER DAM			xxx			xxx	xx	
I- INTAKE STRUCTURE & DIVERSION WEIR								
1) EXCAVATION				xxxxx				
2) CONCRETE				xxxxxx	xxxxxxxxxxxx			
3) ELECTRICAL			xxx		xxxxxx			
4) FISH SCREENS & TRASH RACKS		xxxxxxxxx	xxxxxxxxxxxx	xxxxxxxxxxxx	xxxxxxxxx			
5) BACKFILL					xxxxxx			
6) FENCING					xxxxxx			
7) SEEDING					xxx	xx		
II- PENSTOCK								
1) EARTHWORK				xxxxxx	xxxxxxxxxxxxxxx			
2) FABRICATION/DELIVERY	xxx	xxxxxxxxxxxxxxx	xxxxxxxxxxxx	xxxxxxxxxxxx	xxxxxxxxxxx			
3) INSTALLATION				xxxxxx	xxxxxxxxxxxxxxx			
4) TESTING				xxx	xxxxxxxxxxxxxxx	xx		
5) BACKFILL					xxxxxxxxxxxxxx	xx		
6) SEEDING					xxx			
III- POWER HOUSE								
1) EXCAVATION					xxxxxx			
2) CONCRETE					xxxxxx	xxxxxx		
3) PRECAST CONCRETE						xxxxxx		
4) EQUIPMENT DELIVERY					xxx			
5) MECHANICAL & HVAC						xxxxxxxxxxxx	xx	
6) ELECTRICAL					xxx	xxxxxxxxxxxx	xx	
7) MISC EQUIPMENT						xxxxxx		
8) BACKFILL						xxxxxx		
9) FENCING						xxx		
10) SEEDING						xxx		
IV- INTERCONNECTION BY UP&L								
1) DESIGN		xxxxxx	xxxxxxxxxxxx	xx				
2) SUPPLY/ INSTALLATION				xxxxxxxxx	xxxxxxxxxxxxxx	xxxxxxxxx		
V- TESTING & START UP							xxxxxxxxxxx	

July 3, 1991

COMMERCIAL ENERGY MANAGEMENT INC.
P O BOX 4518
POCATELLO ID 83205

Gentlemen:

Re: Permit No. 29-7699

Enclosed is a copy of the approved request for extension of time. The time within which to submit proof of beneficial use is extended to August 1, 1993.

It is important that you work diligently toward the completion of this project during the construction period allowed. The department may not be able to grant additional requests.

If you have any questions concerning this matter, please feel free to contact this office.

Sincerely,

RITA I. FLECK
Secretary/Records Manager

Enclosure

STAFF REVIEW SHEET - EXTENSION OF TIME

Permit No. 29-7699 Reviewed by [signature] Date 7-2-91

BASIC INFORMATION

- Y Date stamp received
- Y Extension received timely (not too early not too late)
- Y Fee received and receipted
- Y Name and signature same as permit
- N Address change

BASIS FOR EXTENSION REQUEST

- ____ Has adequate work been completed to demonstrate due diligence?
- ____ Has the cost incurred been adequate to demonstrate an intent to complete the project?
- Y Has the permit been involved in litigation?
  - a. Swan Falls No. Dismissed from Swan Falls ____
    Other Y Identify Condemnation Proceedings
  - b. Is supporting documentation needed to complete the file? ____
    Requested ____
  - c. Calculate the period of delay

Date litigation completed		6-12-91
Date litigation began		- 6-2-89
Total period of delay	=	~~4 days~~ - 2yrs
Present proof due date		+ 8-1-91
NEW PROOF DUE DATE	=	8-1-93

____ Is delay by a government agency?
Is supporting documentation needed to complete the file? ____
Requested? ____

ACTION TAKEN - Recommend approval based on litigation - condemnation proceeding

~~N/A~~ Reinstate

Date extention received	=	____
Proof due date	=	- ____
No. of days late	=	____
Priority date	=	+ ____
ADJUSTED PRIORITY DATE	=	____

DATE ENTRY

____ Change proof due date ____ Address change
____ Priority date change

CEM COMMERCIAL ENERGY MGMT, INC.
1155 Yellowstone Ave • Suite B • P. O. Box 4518 • Pocatello, Idaho 83205 • Telephone (208) 237-8184 • Fax (208) 237-8184

June 19, 1991
Ref: CEM/0739

Ms. Rita Fleck
Secretary/Records Manager
Idaho Department of Water Resources
1301 N. Orchard Street
Statehouse Mail, Boise ID 83720-9000

RECEIVED
JUN 21 1991
Department of Water Resources

Subject: Portneuf River Hydroelectric Project
Lava Hot Springs, Idaho
FERC Project No. 7447-002
Project Water Permit No. 29-07699

Dear Ms. Fleck:

Thank you for your letter dated May 31, 1991, regarding "PROOF DUE NOTICE". As per our telephone conversation on June 5, 1991, attached please fined our completed application of "REQUEST FOR EXTENSION OF TIME", along with a check in the amount of $15.00 for its fee.

Please feel free to contact me if you require any additional information. Thank you.

Very truly yours,

Maher F. Wissa, P.E.
President

STATUS OF PROJECT PERMITS

NO.	PERMIT/LICENSE	ORGANIZATION	DATE APPLIED	DATE ISSUED
1	FERC Project License No. 7447-002	Federal Energy Regulatory Commission (FERC)	AUG 29, 1985	DEC 29, 1986
2	Order Amending License	FERC	MAR 16, 1989	APR 07, 1989
3	FERC ARTICLES			
	301-Extention of Time	"	AUG 09, 1988	SEP 09, 1988
	302-Final Contract Drawings and Specifications			
	Phase I-Construction of Penstock	"	JUN 29, 1988	AUG 18, 1988
	Phase II-Diversion Weir and Intake Structures	"	AUG 05, 1988	OCT 18, 1988
	Phase III-Construction of Powerhouse	"		
	-Q/C Plan		JUN 29, 1988	OCT 05, 1988
	-Emergency Action Plan	"	JUN 29, 1988	OCT 25, 1988
	303-Cofferdam and Deep Excavation	"	JUL 20, 1988	OCT 03, 1988
	401-Plan to Mitigate the Permanent Loss of Riparian	"	JUN 22, 1988	AUG 30, 1988
	402-Functional Design Drawing of Fish Screen and Intake Structures	"	JUN 22, 1988	AUG 31, 1988
	403-Plan for Flushing Flow of 350 cfs	"	JUN 22, 1988	SEP 12, 1988
	404-Plan of Monitoring Dissolved Oxygen	"	JUN 22, 1988	AUG 30, 1988
	405-Plan to Control Erosion, Dust, etc.	"	JUN 22, 1988	AUG 31, 1988
	406-Plan to Monitor Minimum and Flushing Flows	"	JUN 22, 1988	SEP 16, 1988
	407-Approval for Ground Disturbance	"	OCT 04, 1988	OCT 05, 1988
4	Project Easement	Idaho Department of Lands/Lava Hot Springs Foundation	AUG 31, 1987	JAN 09, 1989
5	Water Rights	Idaho Department of Water Resources	MAY 09, 1983	JUL 20, 1988
6	Joint Application for Stream Alteration	o Idaho Department of Water Resources (IDWR)	NOV 05, 1987	JUN 16, 1988
		Corps of Engineers	NOV 05, 1987	NOV 02, 1988
		o IDWR Extension to DEC 31, 1999	JUL 12, 1988	OCT 04, 1989
7	Highway Right-of-Way	Idaho Department of Transportation	OCT 16, 1987	SEP 14, 1988
8	County Road Permit	Bannock County Highway Department	APR 19, 1988	APR 21, 1988
9	Design Review of:	~~Idaho Department of Lands/~~		
	Phase I	Idaho Department of Water	JUL 07, 1988	DEC 22, 1988
	Phase II	Resources	AUG 12, 1988	DEC 22, 1988
	Phase III			
10	Building Permit	City of Lava Hot Springs		
	Phase I & II	"	SEP 08, 1988	NOV 14, 1988
	Phase III	"		
11	Commencement of Construction	Federal Energy Regulatory Commission	JUN 29, 1988	OCT 25, 1988
12	Construction Schedule	Idaho Department of Lands	NOV 02, 1988	NOV 09, 1988

FEDERAL ENERGY REGULATORY COMMISSION

WASHINGTON, D. C. 20426

JUN 28 1990

Project No. 7447-Idaho
Portneuf River Project
Commercial Energy MGMT, Inc.

Maher F. Wissa, President
Commercial Energy MGMT, Inc.
P.O. Box 4518
Pocatello, ID 83205

Dear Mr. Wissa:

This is in reply to your letter dated May 10, 1990, requesting a start of construction determination based on the contract for major equipment for the Portneuf River Project, FERC No. 7447.

We reviewed the material you submitted and have determined that construction was started on the date you filed copies of your equipment fabrication contract and the photographs showing the fabrication process (i.e. May 10, 1990).

You should provide our Portland Regional Office and this office with quarterly reports on the status of your eminent domain proceedings and payments made for the purchase of the equipment.

Should you have any questions, please contact J. W. Flint at (202) 357-0667.

Sincerely,

J. Mark Robinson
Director, Division of Project
Compliance and Administration

JUN 12 1991

U. S. DISTRICT COURT
DISTRICT OF IDAHO
Filed at 3:00 P. M

JUN 12 1991

CLERK, U. S. DISTRICT COURT
By [illegible] Deputy

RACINE, OLSON, NYE, COPPER
& BUDGE, CHARTERED
P. O. Box 1391, Center Plaza
Pocatello, Idaho 83204
Telephone: (208) 232-6101

Recd 6/12/91 J.

IN THE UNITED STATES DISTRICT COURT

FOR THE DISTRICT OF IDAHO

COMMERCIAL ENERGY MANAGEMENT INC., an Idaho Corporation, Plaintiff, vs HAROLD C. LLOYD and ENID LLOYD, husband and wife; DEAN J. LABRUM and HELEN LABRUM, husband and wife; WILLIS M. YOUNG and IRENE A. YOUNG, husband and wife; A. GRANT HUNSAKER and JOELYNNE T. HUNSAKER, husband and wife; KENNETH L. KUNZ and BARBARA KUNZ, husband and wife; MICHAEL J. NORKEVICH and JO ELLEN NORKEVICH, husband and wife; BANK OF IDAHO, formerly CASSIA NATIONAL BANK, a corporation; INTERNAL REVENUE SERVICE; and BANNOCK COUNTY, Defendants.	Case No. 89-4072 STIPULATION AND ORDER

COME NOW, MICHAEL J. NORKEVICH and JO ELLEN NORKEVICH, by and through their counsel of record, Fred J. Lewis, and

COMMERCIAL ENERGY MANAGEMENT, INC., by and through its attorney of record, Donald L. Harris, and hereby stipulate and agree as follows:

1. That pursuant to a settlement reached between the parties, the $1,200 that is currently on deposit with the Court in this case shall be paid over to the Internal Revenue Service and applied against amounts now due and owing by Michael J. Norkevich and Jo Ellen Norkevich.

2. That Michael J. Norkevich and Jo Ellen Norkevich shall not have to pay any portion to Commercial Energy Management, Inc. of the $4,800 that was withdrawn by Internal Revenue Service to be applied to the personal income taxes due and owing by Michael J. Norkevich and Jo Ellen Norkevich. Both Commercial Energy Management, Inc. and Michael J. Norkevich and Jo Ellen Norkevich waive any right to any costs and attorney fees that may have been awarded by the Court.

3. That Michael J. Norkevich and Jo Ellen Norkevich withdraw their post-trial Motions and waive all rights to appeal the jury verdict in this case.

DATED this 21st day of May, 1991.

Fred J. Lewis, Attorney for Michael J. Norkevich and Jo Ellen Norkevich

Donald L. Harris, Attorney for Commercial Energy Management, Inc.

ORDER

Upon a review of the foregoing Stipulation and good cause appearing therefor,

IT IS SO ORDERED and this case is closed. E/S

DATED this 12th day of June, 1991.

Edward J. Lodge
United States District Court Judge

138610

May 31, 1991

COMMERCIAL ENERGY MANAGEMENT INC.
C/O MAHER F. WISSA, PRES.
P.O. BOX 4518
POCATELLO, ID 83205

PROOF DUE NOTICE

RE: PERMIT NO. 29-07699

Dear Permit Holder:

One of the conditions of approval of the above referenced water permit was that proof of the extent of your beneficial use must be submitted to this office on or before August 1, 1991. (See last page of your approved permit or your last approved extension request.) Enclosed is a form which when accompanied by the license examination fee or a complete field examination report prepared by a certified water right examiner may be used to submit the required proof.

If you have not fully completed your project, and you or a previous owner of this permit have not received a prior extension of time, you may request an extension of time if the delay is for reasonable cause as provided in Section 42-204, Idaho Code. If you have been prevented from proceeding by a governmental agency or by litigation which might bring title to the water in question, more than one extension of time can be granted. An extension of time request form is enclosed for your convenience.

Either an acceptable proof of beneficial use submittal or an acceptable request for an extension of time must be received by this department on or before the above described proof due date. If neither is received, the department will send you a lapse notice. Within sixty (60) days of the mailing of the lapse notice, the permit will no longer be of any force nor effect.

SINCERELY,

Rita Fleck
Secretary/Records Manager

Enclosures

CEM COMMERCIAL ENERGY MGMT, INC.
515 East Benton, Suite 201, P.O. Box 4518 • Pocatello, Idaho 83205 • Telephone (208) 233-0360 • TLX: 144111 OCOM UT

DDF

Please File
29-7699

April 19, 1989
Ref: CEM/0477

RECEIVED
APR 20 1989
Department of Water Resources

Mr. Fred A. Kisabeth
Assistant Director
Lands, Minerals, and Range Mgmt.
State of Idaho, Department of Lands
Statehouse Mail
Boise, ID 83720

Subject: Portneuf River Hydroelectric Project
Lava Hot Springs, Idaho
FERC Project No. 7447
Penstock Realignment

References: 1) CEM/0469 dated April 12, 1989
2) CEM/0468 dated April 12, 1989

Dear Mr. Kisabeth:

Further to our letter (reference 1), attached please find a copy of FERC's letter, (ref: OHL-PRO-7447-ID) dated April 17, 1989, of approval on CEM's proposed realignment of the penstock segment (reference 2), which runs through the camp ground area.

Very Truly Yours,

Maher F. Wissa, P.E.
President

MW/bo
Attachments: 1

cc: Mr. Bobby D. Fleenor, IDWR, Boise, ID

FEDERAL ENERGY REGULATORY COMMISSION
PORTLAND REGIONAL OFFICE
1120 S.W. 5th AVENUE, SUITE 1340
PORTLAND, OREGON 97204

APR 17 1989

In reply refer to:
OHL-PRO-7447-ID

Mr. Maher F. Wissa, President
Commercial Energy Management, Inc.
P.O. Box 4518
Pocatello, Idaho 83205

Dear Mr. Wissa:

This is in response to your April 12, 1989 letter concerning the proposed realignment of a segment of penstock to avoid disturbance of existing underground utility lines at the Portneuf River Hydroelectric Project, FERC No. 7447. The proposal, as indicated in your letter, is acceptable.

This realignment should be reflected in the project "as-built" drawings that are to be submitted to the Commission following completion of construction.

If you have any questions, please call Mr. Bill Lagnion, of this office, at (503) 326-5844.

Sincerely,

Arthur C. Martin

Arthur C. Martin
Regional Director

CEM COMMERCIAL ENERGY MGMT, INC.
515 East Benton, Suite 201, P.O. Box 4518 • Pocatello, Idaho 83205 • Telephone (208) 233-0360 • TLX: 144111 OCOM UT

BDF

April 12, 1989 File 29-7699
Ref: CEM/0468

Mr. Arthur C. Martin
Regional Director
Federal Energy Regulatory Commission
Portland Regional Office
1120 S.W. 5th Avenue , Suite 1340
Portland, OR 97204

RECEIVED
APR 13 1989
Department of Water Resources

Subject: Portneuf River Hydroelectric Project
Lava Hot Springs, Idaho
FERC Project No. 7447
Penstock Alignment

Dear Mr. Martin:

Please be advised that the lease holder of the campground area, where the last segment of the project penstock will be placed, has demanded that this segment be realigned to avoid the disturbance of the existing underground utility lines.

Attached please find a copy of a reduced site plan providing you with the penstock original alignment (as shown on the Project Easement- Site Plan, and the Site Plan, CEM Drawings' Nos. PRH - CIV - 002, and PRH - CIV - 002, respectively), and the proposed realignment through the camp ground area.

We have contacted Mr. Fred A. Kisabeth, Assistant Director of Idaho Department of lands, regarding the Department's procedure for easement revision approval. Mr. Kisabeth stated that, as long as the easement width is kept the same as specified in the project easement, the department will issue easement revision after receiving CEM's As-Built Drawings.

We respectfully request your approval on the realignment of the penstock segment, which runs through the camp ground area. Thank you for your cooperation.

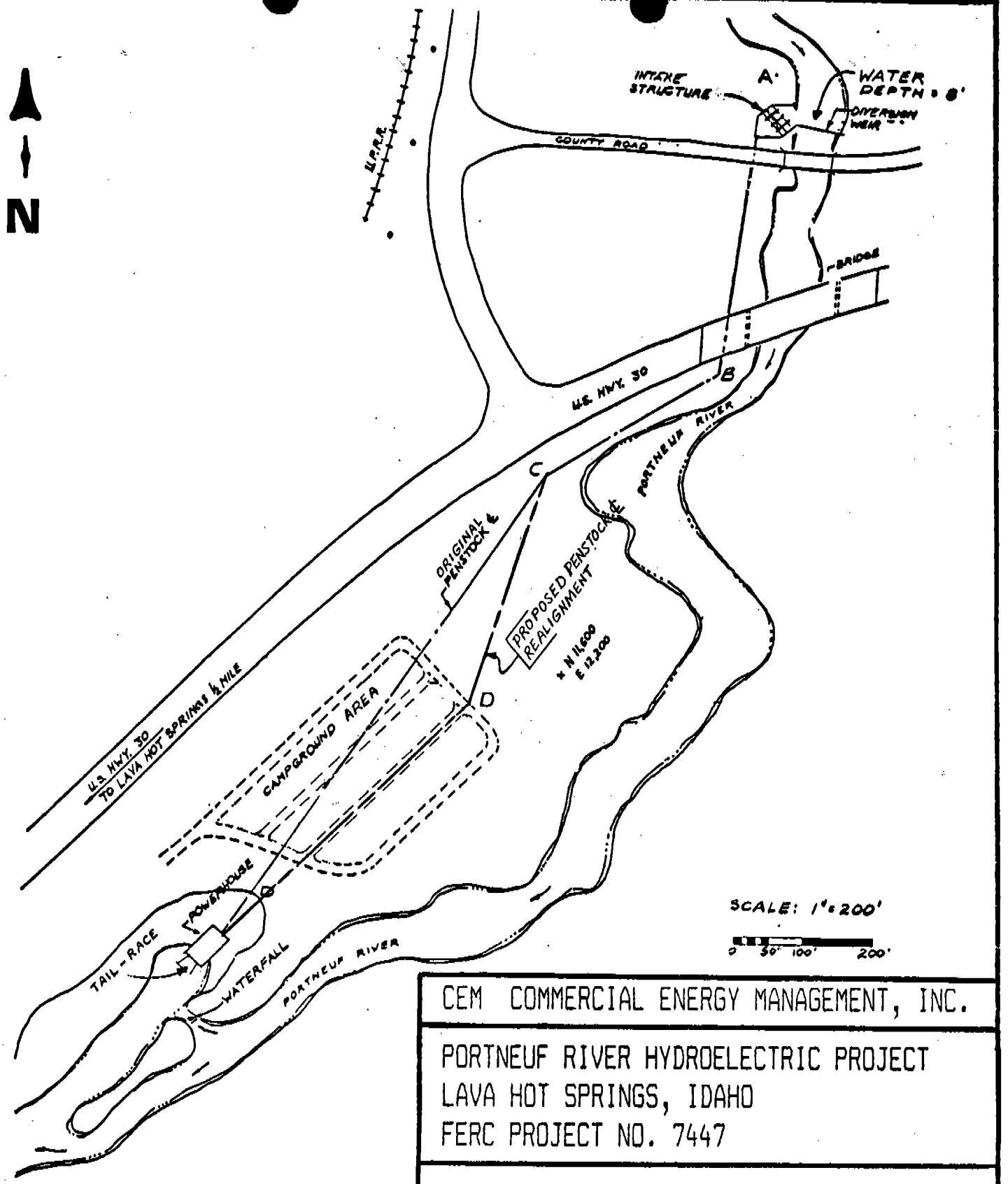
Very Truly Yours,

Maher F. Wissa

Maher F. Wissa, P.E.
President

MW/bo
Attachments: 1

cc: Mr. William Lagnion, FERC, PRO, Portland, OR
Mr. Fred A. Kisabeth, IDL, Boise, ID
Mr. Bobby D. Fleenor, IDWR, Boise, ID



CEM COMMERCIAL ENERGY MANAGEMENT, INC.

PORTNEUF RIVER HYDROELECTRIC PROJECT
LAVA HOT SPRINGS, IDAHO
FERC PROJECT NO. 7447

SITE PLAN

REVISION NO.: A

DATE: 4/12/1989

IDAHO DEPARTMENT OF LANDS
STATEHOUSE, BOISE, IDAHO 83720

STANLEY F. HAMILTON
DIRECTOR

RECEIVED
FEB 16 1989
Department of Water Resources

BOARD OF LAND COMMISSIONERS
CECIL D. ANDRUS
Governor
PETE T. CENARRUSA
Secretary of State
JIM JONES
Attorney General
JOE R. WILLIAMS
State Auditor
JERRY L. EVANS
Sup't of Public Instruction

February 15, 1989

BDF

Mr. Bob Fleenor
Chief of the Regional Bureau
Department of Water Resources
STATEHOUSE MAIL

Subject: The Lava Hot Springs Hydro Project

Dear Bob:

Enclosed is a copy of the project permit status received recently from Commercial Energy Management, Inc.

You will note that everything appears to be in order with exception of the design of Phase III (Powerhouse). It is my understanding that the design is currently in progress. Upon receipt of the design materials, a copy will be forwarded to your office for subsequent review.

Sincerely,

FRED A. KISABETH
Assistant Director
Lands, Minerals & Range Mgt.

FAK:mm

Enclosure

STATUS OF PROJECT PERMITS

NO.	PERMIT/LICENSE	ORGANIZATION	DATE APPLIED	DATE ISSUED
1	FERC Project License No. 7447-002	Federal Energy Regulatory Commission	AUG 29, 1985	DEC 29,1986
2	FERC ARTICLES			
	301-Extention of Time	"	AUG 9, 1988	SEP 9, 1988
	302-Final Contract Drawings and Specifications			
	Phase I-Construction of Penstock	"	JUN 29, 1988	AUG 18,1988
	Phase II-Diversion Weir and Intake Structures	"	AUG 5, 1988	OCT 18,1988
	Phase III-Construction of Powerhouse	"	----------	----------
	-Q/C Plan		JUN 29, 1988	OCT 5, 1988
	-Emergency Action Plan	"	JUN 29, 1988	OCT 25,1988
	303-Cofferdam and Deep Excavation	"	JUL 20, 1988	OCT 3, 1988
	401-Plan to Mitigate the Permanent Loss of Riparian	"	JUN 22, 1988	AUG 30,1988
	402-Functional Design Drawing of Fish Screen and Intake Structures	"	JUN 22, 1988	AUG 31,1988
	403-Plan for Flushing Flow of 350 cfs	"	JUN 22, 1988	SEP 12,1988
	404-Plan of Monitoring Dissolved Oxygen	"	JUN 22, 1988	AUG 30,1988
	405-Plan to Control Erosion, Dust, etc.	"	JUN 22, 1988	AUG 31,1988
	406-Plan to Monitor Minimum and Flushing Flows	"	JUN 22, 1988	SEP 16,1988
	407-Approval for Ground Disturbance	"	OCT 4, 1988	OCT 5, 1988
3	Project Easement	Idaho Department of Lands/Lava Hot Springs Foundation	AUG 31, 1987	SEP 20,1988
4	Water Rights	Idaho Department of Water Resources	MAY 9, 1983	JUL 20,1988
5	Joint Application for Stream Alteration	Idaho Department of Water Resources (IDWR)	NOV 5, 1987	JUN 16,1988
		Corps of Engineers	NOV 5, 1987	NOV 2, 1988
		IDWR Extension to DEC 31, 1989	OCT 3, 1988	NOV 25,1988
6	Highway Right-of-Way	Idaho Department of Transportation	OCT 16, 1987	SEP 14,1988
7	County Road Permit	Bannock County Highway Department	APR 19, 1988	APR 20,1988
8	Design Review of	Idaho Department of Lands/		
	Phase I	Idaho Department of Water Resources	JUL 7, 1988	DEC 22,1988
	Phase II		AUG 12, 1988	DEC 22,1988
	Phase III		----------	----------
9	Building Permit	City of Lava Hot Springs		
	Phase I & II	"	SEP 8, 1988	NOV 14,1988
	Phase III	"	----------	----------
10	Commencement of Construction	Federal Energy Regulatory Commission	JUN 29, 1988	OCT 25,1988
11	Construction Schedule	Idaho Department of Lands	NOV 2, 1988	NOV 9, 1988

CEM COMMERCIAL ENERGY MGMT, INC.
515 East Benton, Suite 201, P.O. Box 4518 • Pocatello, Idaho 83205 • Telephone (208) 233-0360 • TLX: 144111 OCOM UT

January 18, 1989
Ref: CEM/0428

RECEIVED
JAN 23 1989
Department of Water Resources

Mr. L. Glen Saxton
Chief, Operations Bureau
State of Idaho, Department of Water Resources
Statehouse Mail
Boise, ID 83720

Subject: Portneuf River Hydroelectric Project
Lava Hot Springs, Idaho
FERC Project No. 7447-002
Project Water Permit No. 29-7699

Dear Mr. Saxton:

Thank you for your letter dated July 29, 1988, of which you have provided us with the approval on the above subject.

Please be advised that the utility company (Utah Power and Light), with which we are in process of entering into a power purchase agreement, requires that we provide it with evidence of down-stream water rights, including the allocated water quantities for each. It would be appreciated if you would provide us with the list of such evidence, including the allocated water quantities.

Thank you for your cooperation.

Very Truly Yours,

Maher F. Wissa

Maher F. Wissa, P.E.
President

MW/se

Sent report
2-14-89

Re: 29-7699

December 19, 1988

Mr. Fred Kisabeth
Idaho Department of Lands
Statehouse
Boise, ID 83720

Dear Fred:

We have reviewed the design drawings for the Portneuf River Hydroelectric Project at Lava Hot Springs.

Our review was more general than technical. Our scope was to assure as much as possible the safety of the public and protection of downstream irrigation pumpers from extensive river fluctuations in the event of a turbine/generator shutdown or failure.

One of our engineers met on the site with Mr. Maher Wissa, President of Commercial Energy Management, Inc. in August of this year. As a result of that meeting, we requested Mr. Wissa submit a proposal providing for the sizing and installation of a turbine bypass relief valve, to eliminate rapid flow fluctuations in the Portneuf River in the event of a generator shutdown.

We subsequently received a report from Mr. Wissa providing for a turbine bypass relief valve capable of bypassing 110 cfs. On October 20, 1988, we sent a letter to Mr. Wissa approving this proposal. We requested Mr. Wissa send us a copy of the final powerhouse design, showing the relief valve, as soon as it is completed. We also requested a certification that condition 14 of the order issuing the permit, which requires the procedures for design, construction, and operation be certified as to adequacy and safety by a Registered Professional Engineer. Mr. Wissa has submitted that certification and therefore has fulfilled the requirements of the Department of Water Resources.

Sincerely,

Bobby D. Fleenor, Chief
Resource Protection Bureau

BDF:LIR:cjk

IDAHO DEPARTMENT OF LANDS
STATEHOUSE, BOISE, IDAHO 83720

RECEIVED
NOV 10 1988
Department of Water Resources

STANLEY F. HAMILTON
DIRECTOR

BOARD OF LAND COMMISSIONERS
CECIL D. ANDRUS
Governor
PETE T. CENARRUSA
Secretary of State
JIM JONES
Attorney General
JOE R. WILLIAMS
State Auditor
JERRY L. EVANS
Sup't of Public Instruction

29-7699

November 9, 1988

BDF

Bob Fleenor
Department of Water Resources
1301 N. Orchard
Boise, ID 83720

Subject: Portneuf River Hydroelectric Project
Lava Hot Springs, Idaho
FERC Project No. 7447-002

Dear Bob:

Enclosed is a copy of Mr. Wissa's November 2nd letter together with a copy of FERC's notification of approval of construction commencement for Phase I and II of the above described hydroelectric project.

I am also enclosing a copy of the project construction schedule approved by the Department of Lands. This was a culmination of our on-site meeting with the principals involved that was held on November 2, 1988. I feel confident that largely with Bob Melines influence, Mr. Wissa is making progress in negotiating an agreement mitigating campground impacts with the campground manager Mr. Norkevich. It appears to us that Mr. Wissa is making excellent progress in getting all of his required permits and other clearances in order, reference the attached Summary of Permit Application status.

Sincerely,

FRED A. KISABETH
Assistant Director
Lands, Minerals, & Range Mgt.

FAK:mm

CC: Jay Biladeau

Attachments: 4

CEM COMMERCIAL ENERGY MGMT, INC.
515 East Benton, Suite 201, P.O. Box 4518 • Pocatello, Idaho 83205 • Telephone (208) 233-0360 • TLX: 144111 OCOM UT

November 2, 1988
Ref: CEM/0342

Mr. Fred A. Kisabeth
Assistant Director
Lands, Minerals, and Range Mgmt.
State of Idaho, Department of Lands
Statehouse Mail
Boise, ID 83720

Subject: Portneuf River Hydroelectric Project
Lava Hot Springs, Idaho
FERC Project No. 7447-002
Approval of Construction Commencement for Phases I and II, and Schedule

References: 1) CEM/0329 dated October 27, 1988.

Dear Mr. Kisabeth:

Further to our referenced letter, attached please find a copy of the Federal Energy Regulatory Commission (FERC) Portland Regional Office's letter of approval for the commencement of construction on the project penstock and intake/diversion weir structures, Phases I and II.

Also, attached is Revision 5 of the Master Summary Schedule dated November 2, 1988, for the Department of Lands' review/approval, in conclusion to today's meeting held on the project site (at the campground) attended by Mr. Fred A. Kisabeth, Idaho Department of Lands, Mr. Bob Meline, Director of Lava Hot Springs Foundation, Mr. Mike Norkevich, campground manager, and Mr. Steven Wood, Ms. Barbara Orr and Mr. Maher Wissa, representatives of CEM.

Very Truly Yours,

Maher F. Wissa, P.E.
President

MW/se
Attachments: 2

FEDERAL ENERGY REGULATORY COMMISSION
PORTLAND REGIONAL OFFICE
1120 S.W. 5th AVENUE, SUITE 1340
PORTLAND, OREGON 97204

OCT 25 1988

In reply refer to:
OHL-PRO-7447-ID

Mr. Maher F. Wissa, President
Commercial Energy Management, Inc.
P.O. Box 4518
Pocatello, Idaho 83205

Dear Mr. Wissa:

Based on our review of the files for the Portneuf River Hydroelectric Project, FERC No. 7447, construction may be initiated on the project penstock and intake/diversion structures, Phases I and II. These structures are to be constructed in accordance with the plans and specifications and comments in the Division of Dam Safety and Inspections' August 18, 1988 and October 18, 1988 letters concerning the project.

The progress of work on both structures should be addressed in monthly construction progress reports submitted to this office.

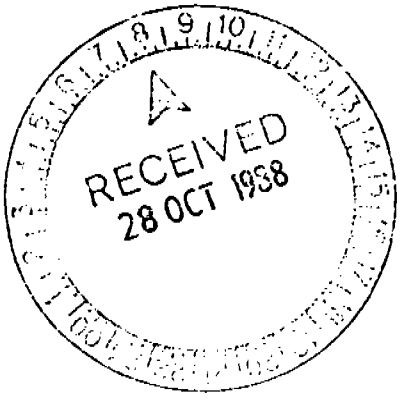
Additionally, the Construction Emergency Action Plan, as requested by our July 12, 1988 letter and forwarded by your August 29, 1988 letter, is acceptable.

As a reminder, you should file plans and specifications for Phase III, powerhouse structure, at least 60 days prior to start of construction on the structure.

If you have any questions, please call Mr. Bill Lagnion, of this office, at (503) 294-5844.

Sincerely,

for Arthur C. Martin
Regional Director

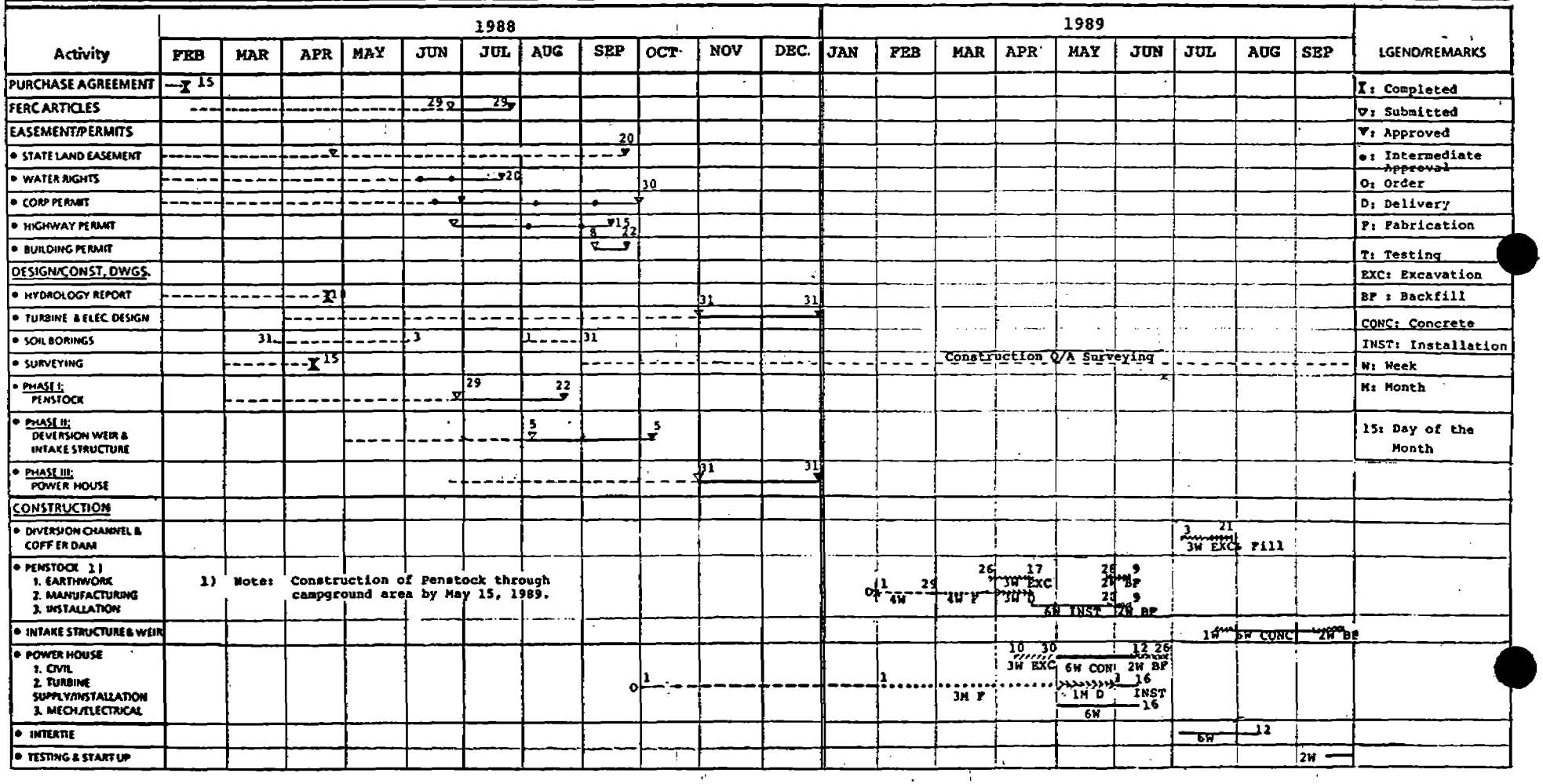


CEM COMMERCIAL ENERGY MANAGEMENT, INC.

PORTNEUF RIVER – HYDROELECTRIC PROJECT
POWER PLANT NO. 1, LAVA HOT SPRINGS, IDAHO

MASTER SUMMARY SCHEDULE

FERC Project No. 7447-002
Revision No. 5
Revision Date 11/2/88



State of Idaho (Department of Lands) Approval: Stanley F. Hamilton 11-8-88
SFH
Name Date

COMMERCIAL ENERGY MGMT, INC. REV 4 10/27/88

STATUS OF PROJECT PERMITS

NO.	PERMIT/LICENSE	ORGANIZATION	DATE APPLIED	DATE ISSUED
1	FERC Project License No. 7447-002	Federal Energy Regulatory Commission	AUG 29, 1985	DEC 29,1986
2	FERC ARTICLES			
	301-Extention of Time	"	AUG 9, 1988	SEP 9, 1988
	302-Final Contract Drawings and Specifications			
	Phase I-Construction of Penstock	"	JUN 29, 1988	AUG 18,1988
	Phase II-Diversion Weir and Intake Structures	"	AUG 5, 1988	OCT 18, 1988
	Phase III-Construction of Powerhouse	"	----------	----------
	-Q/C & Emergency Action Plan	"	JUN 29, 1988	OCT 5, 1988
	303-Cofferdam and Deep Excavation	"	JUL 20, 1988	OCT 3, 1988
	401-Plan to Mitigate the Permanent Loss of Riparian	"	JUN 22, 1988	AUG 30,1988
	402-Functional Design Drawing of Fish Screen and Intake Structures	"	JUN 22, 1988	AUG 31,1988
	403-Plan for Flushing Flow of 350 cfs	"	JUN 22, 1988	SEP 12,1988
	404-Plan of Monitoring Dissolved Oxygen	"	JUN 22, 1988	AUG 30,1988
	405-Plan to Control Erosion, Dust, etc.	"	JUN 22, 1988	AUG 31,1988
	406-Plan to Monitor Minimum and Flushing Flows	"	JUN 22, 1988	SEP 16,1988
	407-Approval for Ground Disturbance	"	OCT 4, 1988	OCT 5, 1988
3	Project Easement	Idaho Department of Lands/ Lava Hot Springs Foundation	AUG 5, 1985	SEP 20,1988
4	Water Rights	Idaho Department of Water Resources	MAY 9, 1983	JUL 20,1988
5	Joint Application for Stream Alteration	Idaho Department of Water Resources	NOV 5, 1988	JUN 16,1988
		Corps of Engineers	NOV 5, 1988	----------
6	Highway Right-of-Way	Idaho Department of Transportation	OCT 16, 1987	SEP 14,1988
7	County Road Permit	Bannock County Highway Department	APR 19, 1988	APR 20,1988
8	Building Permit	City of Lava Hot Springs		
	Phase I & II	"	SEP 8, 1988	----------
	Phase III	"	----------	----------

Authorized but not issued from 11/2/88

STEVEN G. WOOD
ATTORNEY AT LAW

746 EAST LANDER
POCATELLO, IDAHO 83201

RECEIVED
NOV 04 1988
Department of Water Resources

AREA CODE 208
TELEPHONE 234-1234

October 31, 1988

State of Idaho
Department of Water Resources
Attn: Norman C. Young
1301 North Orchard St.
Statehouse Mail
Boise, Idaho 83720

Re: Permit No. 29-7699
Your letter of October 20, 1988, to Commercial Energy Management, Inc.

Dear Mr. Young:

In response to your letter of October 20, 1988, to Commercial Energy Management, Inc., requesting a certification by an Idaho licensed engineer, I have enclosed a certification from Mr. Maher F. Wissa.

Please let me know if anything further is needed.

Sincerely,

Steven G. Wood

Steven G. Wood

cc: Mr. Wissa

State of Idaho)
) ss.
County of Bannock)

Maher F. Wissa, being first duly sworn, States:

I, the undersigned, Maher F. Wissa, a duly registered proffessional engineer, under No. 5695 (Civil Engineering), with the State of Idaho, do hereby certify that the procedures for design, construction, and the operations for the Portneuf River Hydroelectric Power Plant Project, FERC No. 7447-002, are being performed under the undersigned's supervision and that the plans, specifications, construction and operations will be certified to adequacy and safety by placing Maher F. Wissa's proffesional engineering stamp and his signature.

Maher F. Wissa

Maher F. Wissa, P. E.

October 27, 1988
Date

SIGNED AND SWORN TO before me on October 27, 1988.

Steven H Woods

(seal)

Notary Public for Idaho
Residing at Pocatello

Department of Lands
TRANSMITTAL SLIP

Date 10/28/88

TO: Bob Fleenor BSDF

FROM: Fred A. Kisabeth

ACTION

- ☐ Note And File
- ☐ Note And Return To Me
- ☐ Return Correspondence
- ☐ Note And See Me About This
- ☐ Please Answer
- ☐ Prepare Reply For My Signature
- ☐ Take Appropriate Action
- ☐ Per Our Conversation
- ☐ Per Your Request
- ☐ For Your Approval
- ☐ For Your Information
- ☐ For Your Comments
- ☐ Signature
- ☐ Investigate And Report

Comments:

You are welcome to have a representative participate if convenient.

29-7097

RECE[illegible]

OCT 31 1988

Department of Water Resources

IDAHO DEPARTMENT OF LANDS — STATEHOUSE, BOISE, IDAHO 83720

STANLEY F. HAMILTON
DIRECTOR

BOARD OF LAND COMMISSIONERS
CECIL D. ANDRUS
Governor
PETE T. CENARRUSA
Secretary of State
JIM JONES
Attorney General
JOE R. WILLIAMS
State Auditor
JERRY L. EVANS
Sup't of Public Instruction

October 28, 1988

Maher F. Wissa, P.E.
Commercial Energy Mgmt., Inc.
P.O. Box 4518
Pocatello, ID 83205

Dear Mr. Wissa:

This will confirm scheduling arrangements between our office for an on-site meeting at the Lava Hot Springs easement site beginning at 9:30 a.m. November 2, 1988.

This meeting time has also been coordinated with Mr. Robert Meline, Director of the Lava Hot Springs Foundation, who will join us on-site. Additionally, Mr. Meline will encourage the campground lessee, Mr. Norkevich, to be present also.

The purpose of the meeting will be to review your proposed project construction schedule and to address questions and comments prior to receiving department approval of the proposed schedule.

I will plan to ride with you to Lava Hot Springs. My plane arrives at the Pocatello airport at 7:50 a.m., November 2nd.

Thank you for your coopertion in this regard.

Sincerely,

Fred A. Kisabeth

FRED A. KISABETH
Assistant Director
Lands, Minerals, & Range Mgt.

FAK:mm

CC: Bob Meline

KEEP IDAHO GREEN
PREVENT WILDFIRE

CEM COMMERCIAL ENERGY MGMT, INC.
515 East Benton, Suite 201, P.O. Box 4518 • Pocatello, Idaho 83205 • Telephone (208) 233-0360 • TLX: 144111 OCOM UT

October 27, 1988
Ref: CEM/0329

RECEIVED
OCT 31 1988
Department of Water Resources

Mr. Fred A. Kisabeth
Assistant Director
Lands, Mineral & Range Mgmt.
State of Idaho, Department of Lands
Statehouse Mail
Boise, ID 83720

Subject: Portneuf River Hydroelectric Project
Lava Hot Springs, Idaho
FERC Project No. 7447-002
Approval of Phase I and II, Plans and Specifications

Reference: 1) Idaho Department of Lands' letter to Idaho Department of Water Resources (IDWR) dated October 24, 1988.
2) CEM/0197 dated August 12, 1988.

Dear Mr. Kisabeth:

Thank you for your letter (referenced 1), of which you have requested IDWR to expedite its approval on the above subject.

Further to our letter (referenced 2), attached, please find a copy of the Federal Energy Regulatory Commission's (FERC) letter for approval of Phase II.

Anything you can do to expedite the approval of Phase I and II would be greatly appreciated.

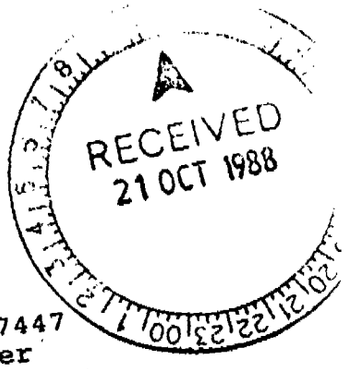
Very Truly Yours,

Maher F. Wissa, P.E.
President

MW/se
Attachments: 1

cc: Mr. Stanley F. Hamilton, Director, Idaho Department of Lands, Boise, Idaho.
Mr. Bob Fleenor, Chief of the Regional Bureau, Idaho Department of Water Resources, Boise, Idaho (with Attachments).

FEDERAL ENERGY REGULATORY COMMISSION
WASHINGTON, D. C. 20426



OCT 18 1988

Project No. 7447
Portneuf River
Commercial Energy
Management, Inc.

Mr. Mahor F. Wissa
President
Commercial Energy
Management, Inc.
515 East Benton Suite 201
P.O. Box 4518
Pocatello, ID 83205

Dear Mr. Wissa:

Our review of the plans and specifications submitted September 8, 1988, for the Portneuf River Project, Phase II did not find any significant deficiencies or errors that would affect the safety of project structures or the adequacy of the project works to perform their intended functions.

It is noted that the crest elevation for the diversion weir in the plans and specifications is different than shown in your license, 5092.7 ft. vs 5089.4 ft. Your letter dated September 30, 1988 stated that the difference in elevation was due to a survey error. Staff review of this has determined that an amendment will not be required at this time as long as the surveyed crest elevation does not exceed elevation 5092.7. The change should be reflected in the revised exhibits showing the project as built as required by Article 304 of the license upon completion of construction.

Sincerely,

Ronald A. Corso

Ronald A. Corso, Director
Division of Dam Safety and
Inspections

RECEIVED
OCT 24 1988
Department of Water Resources

IDAHO DEPARTMENT OF LANDS
STATEHOUSE, BOISE, IDAHO 83720

STANLEY F. HAMILTON
DIRECTOR

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State Auditor
JERRY L. EVANS
Sup't of Public Instruction

October 24, 1988

Mr. Bob Fleenor
Chief of the Regional Bureau
Department of Water Resources
1301 North Orchard Street
Boise, Idaho 83720

RE: Portneuf Hydroelectric Project

Dear Bob:

This is a follow up to our telephone conversation of last Friday.

Mr. Wissa has expressed concern about not receiving approval on Phase I - Construction of Penstock. He was expecting to receive notice of approval on a phase-by-phase basis as the review of each phase is completed. Reference the attached copy of his October 6th letter.

Mr. Wissa has been submitting the project design materials in packages to Lands as the design of each phase is completed. We in turn have been forwarding these documents to IDWR for review and approval.

Normally the applicant would send the transmittals direct to IDWR but we surmise in this case, because of the controversy, political sensitivity and Land Board involvement, that Mr. Wissa opted to channel all submittals through Lands.

Anything you can do to accommodate Mr. Wissa's request will be appreciated. Suggest that in the interests of time that notices of approvals be sent direct to Mr. Wissa with copies to my office.

Sincerely,

FRED A. KISABETH
Assistant Director
Lands, Minerals & Range Mgt.

FAK:mm

CC: Maher F. Wissa
Vernon R. Ravenscroft
Jay Biladeau

October 20, 1988

Maher F. Wissa, P.E.
Commercial Energy Management, Inc.
P. O. Box 4518
Pocatello, ID 83205

Dear Mr. Wissa:

Re: Permit No. 29-7699

You recently sent us a Report for Determination of Flow for Turbine Bypass Relief Valve Design and requested our approval of a relief valve that will bypass 110 cfs.

Your calculations have been reviewed and it appears that a valve capable of bypassing 110 cfs will be adequate to protect the downstream irrigation water rights and also to prevent a safety hazard along the bypassed channel of the Portneuf River. Please send a copy of your final powerhouse design showing the relief valve as soon as possible.

Condition 14 of the order issuing the permit requires that the procedures for design, construction, and the operation be certified as to adequacy and safety by an Idaho licensed engineer. Please send us that certification also.

If you have any questions please let us know.

Sincerely,

Norman C. Young
Administrator, Rosource
Allocation Division

State of Idaho
DEPARTMENT OF WATER RESOURCES
1301 North Orchard Street, Statehouse Mail, Boise, Idaho 83720 - (208) 334-7900

CECIL D. ANDRUS
GOVENOR
R. KEITH HIGGINSON
DIRECTOR

MEMORANDUM

TO: Bob Fleenor

FROM: Lotwick Reese LR

DATE: October 14, 1988

SUBJECT: Portneuf River Hydro

I have reviewed the proposal submitted by Maher Wissa, Engineer and President of Commercial Energy Management, Inc. for sizing a Turbine Bypass Relief Valve for the Portneuf River Hydroelectric Project.

Mr. Wissa submitted a study by Cecil Thomas showing a correlation between the mean flows at the proposed diversion for the penstock and the Portneuf River gaging station at Topaz. Mr. Thomas based this correlation on four measurements made at the diversion over a period of 20 years, 1968 through 1988. Each of these four measurements was taken during non irrigation months. I have tried to contact Cecil Thomas and inquire if other measurements were made, but have not been able to reach him. I would assume that if other records were available, Cecil would have included them.

Cecil's correlation shows the average of the mean flows at the project site during July/August of 157 cfs. Mr. Wissa then computes the capacity of the proposed relief valve by subtracting the required minimum 40 cfs flowing in the bypass channel from 157 cfs, resulting in 110 cfs. Technically, my arithmetic shows the relief valve should be designed to pass 117 cfs.

My calculations show there will be a 100 cfs differential flow in the bypass channel in the event of a turbine/generator shutdown. My calculations also show a maximum water surface elevation differential in the bypass channel under such a shutdown of 0.53 ft. With an estimated 2 feet per second bypass channel velocity, the approximate time for the overflow wave surge to reach the tailrace in the event of a turbine shutdown is 16 minutes. (See computation sheet 1)

Mr. Wissa should provide the Department a set of plans for the proposed bypass relief valve as soon as possible. He should also prepare a certification that the project will be designed, constructed and operated to assure the safety of the public.

LR:hb

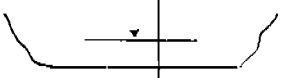
Date	Weir	Turbine	Turbine Shutdown: Bypass Relief Valve	Turbine Shutdown: Immed Avail downst	Total
Jan 1	40	110	117	157	150
Feb 1	40	110	117	157	150
Mar 1	40	140	117	157	180
April 1	40	215 (max)	117	157	255
May 1	85	"	117	202	340
June 1	155	"	117	272	370
July 1	75	175	117	192	290
Aug 1	40	175	117	157	215
Sept 1	40	155	117	157	195
Oct 1	40	130	117	157	170
Nov 1	"	"			"
Dec 1	"	"			"

8/4/88 Approx Q = 150 cfs Est V = 1.0 fps

PADMASTER® Made in U.S.A.

Jan 1

Location		Width	d (normal) (40 cfs)		d (gen failure) (150 cfs)		Δd
Wier		38	0.33'		0.79'		0.46'
Sect	1-1	80	1.00'	V=0.5	1.88'	V=1.0	0.88'
	2-2	25	1.60'	V=1.0	3.00'	V=2.0	1.40'
	3-3	100	0.80'	V=0.5	1.50'	V=1.0	0.70'
	4-4	80	same as Sect 1-1				0.88'
	5-5	50	0.80'	V=1.0	2.00'	V=1.5	1.20'



$Q = AV$

$A = Q/V$

$A = wd$

$d = A/w$

Data from consultant - 240 cfs causes a 1 ft rise in river.

Data from Hydrology - Flow at Topaz Station 7/20/87 75 cfs

$y_c = \left(\frac{q^2}{g}\right)^{1/3}$ $\left[\frac{(40/38)^2}{32.2}\right]^{1/3}$

June 1

			(155 cfs)		(370 cfs)		
Wier		38	0.80		1.43		0.63'
Sect	1-1	80	1.94	V=1.0	3.08	V=1.5	1.14'
	2-2	25	3.10	V=2.0	4.23	V=3.5	1.13'
	3-3	100	1.55'	V=1.0	2.47	V=1.5	0.92'
	4-4	80	same as Sect 1-1				1.14'
	5-5	50	2.07	V=1.5	2.96	V=2.5	0.89'

1,900 ft river bypass channel

1,900 ft × $\frac{\text{sec}}{1\text{ ft}}$ × $\frac{\text{min}}{60\text{ sec}}$ = 31.7 min

1,900 ft × $\frac{\text{sec}}{2\text{ ft}}$ × $\frac{\text{min}}{60\text{ sec}}$ = 15.8 min

1,900 ft × $\frac{\text{sec}}{3\text{ ft}}$ × $\frac{\text{min}}{60\text{ sec}}$ = 10.6 min

Wave Theory - Gradually varied unsteady flow.

CEM COMMERCIAL ENERGY MGMT, INC.
515 East Benton, Suite 201, P O. Box 4518 • Pocatello, Idaho 83205 • Telephone (208) 233-0360 • TLX: 144111 OCOM UT

RECEIVED
OCT 12 1988
Department of Water Resources

October 10, 1988
Ref: CEM/0309

Mr. Keith Higginson
Director
State of Idaho, Department of
Water Resources
450 West State Street
Boise, ID 83720

Subject: Portneuf River Hydroelectric Project
Lava Hot Springs, Idaho
FERC Project No. 7447-002
Water Permit No. 29-7699

Dear Mr. Higginson:

In compliance with condition 15 of the subject permit, transmitted herewith please find the Report for Determination of Flow for Turbine Bypass Relief Valve Design.

It would be appreciated if you would provide us with your approval on the report's conclusion, so that we can proceed with the selection of relief valve and bypass size required for the finalization of the powerhouse design.

Very Truly Yours,

Maher F. Wissa, P.E.
President

MW/se
Attachments: 1

cc: Mr. Bobby D. Fleenor, Chief, Regional Offices Bureau, Idaho Department of Water Resources, Boise, Idaho.

REPORT FOR DETERMINATION OF FLOW FOR TURBINE BYPASS RELIEF VALVE DESIGN

1.0 IRRIGATION FLOW DURING SUMMER MONTH DOWNSTREAM OF PROJECT AT MARSH VALLEY:

1.1 The mean flow values required for irrigation at Marsh Valley area during the summer months (July/August), shown on Table-1, are as follows:

°July = 206 cfs
°August = 178 cfs
Average= 192 cfs

1.2 The mean flow values estimated by Mr. Cecil Thomas, consulting hydrologist, at the project site have been determined to be equal to 74.2% of the mean flow measurements recorded at Topaz Station (see attached report of Mr. Thomas). Table-2 presents the mean monthly flow at Topaz Station for the recent 20 years hydrology from 19661986. From this table, the mean flow during July/August at the project site can be determined as follows:

°July = 221 x 0.742 = 164 cfs
°August = 202 x 0.742 = 150 cfs
Average = 157 cfs

Why not use the higher value 164 cfs

1.3 As required by the Idaho Department of Fish and Game, 40 cfs must pass over the project diversion weir. Therefore, the mean flow through the penstock/turbine during July/August month is calculated as follows:

Mean Flow Thru Turbine = 157 - 40 = 110 cfs

164 - 40 = 124 cfs must be [illegible] July flow not adequate

1.4 From 1.1 and 1.2 above, it can be seen that the contributary channels between the downstream of the project and Marsh Valley irrigation area provide a mean flow of 35 cfs (192 - 157). Thus, the steady mean flow at Marsh Valley during July/August will be equal to 35 + 40 = 75 cfs.

2.0 FLOW FOR TURBINE BYPASS, RELIEF VALVE DESIGN: should be equal to 110 cfs as shown in 1.3 above.

3.0 CONCLUSIONS:

3.1 Relief valve should be designed to accomodate 110 cfs.

3.2 Steady mean flow through project diversion weir and contributary channels to Portneuf River at Marsh Valley area during July/August is estimated to be 75 cfs.

PROFESSIONAL ENGINEER REGISTERED 5695 STATE OF IDAHO MAHER F. WISSA 9/10/88

Prepared By:
Maher F. Wissa
Maher F. Wissa, P.E.
Date: 9/10/1988

TABLE 1

HYDRO GENERATION PROJECTS

STREAM FLOW--ENERGY--DEMAND

BY MONTHS

MARSH VALLEY

	CFS	MWH	KW
January	153	684.1	830.8
February	170	650.6	607.0
March	204	854.3	1051.8
April	268	966.3	1271.5
May	342	1080.3	1430.6
June	* 266	190.0	473.0
July	* 206	0	0
August	* 178	0	0
September	* 151	202.8	221.5
October	143	631.2	834.0
November	154	672.2	887.7
December	154	689.5	885.6

* Most of this flow will be diverted for irrigation.

Note: This table was obtained from Power Sales Contract between Marsh Valley Hydro Electric Company and Utah Power and Light Company dated November 21, 1986.

Cecil A. Thomas
Consulting Hydrologist, Civil Engineer, Land Surveyor
Idaho License No. 645

3775 N. Locust Grove
Meridian, ID 83642
Ph. (208) 888-3087

March 8, 1988

HYDROLOGY OF FLOW IN PORTNEUF RIVER ABOVE FISH CREEK AT LAVA HOT SPRINGS, IDAHO

In general, Portneuf River is a gaining stream near Lava Hot Springs. Considerable inflow occurs between the proposed point of diversion and the gaging station Portneuf River at Topaz. A long record, more than 72 years, is available at Topaz.

No such long record is available at or near the proposed diversion near the upstream edge of the city of Lava Hot Springs.To estimate the flow at the diversion site several complications exist. Two canals carry irrigation water past the site, one on each bank. Springs and seeps and several tributaries enter Portneuf River between the diversion site and the gage at Topaz. The watermaster of Portneuf River reports flows in the canals of near 40 cfs during the irrigation season, about June 1 to September 20. No doubt some, probably as much as 6 to 10 cfs of the measured inflow between the diversion site and the Topaz gage comes from these diversions. The remainder evidently comes from springs including the hot springs at the natatorium, as well as seeps, and the unused flows in Dempsey Creek, Bob Smith Creek, and seeps and other sources.

The amount of the increase was measured by measurements of discharge at the diversion site and recorded discharge at Topaz as follows:

Site	Date	discharge	Inflow in reach	% of Diversion/Topaz
At diversion	Oct. 24, 1968	92 cfs		
At Topaz	do.	132 cfs	40 cfs	70
At diversion	Dec. 4, '68	107 cfs		
At Topaz	do.	142 cfs	35 cfs	75
At diversion	Mar. 19, '69	120 cfs		
At Topaz	do.	166 cfs	46 cfs	72
At diversion	Feb. 1 '88	120 cfs		
At Topaz	do.	151 cfs	31 cfs	79
			Average percentage	74

The above results from reports of the U. S. Geological Survey are the only known concurrent data comparing discharge at the proposed diversion and the gaging station at Topaz. A reasonable interpretation of the data appears that the discharge at the proposed diversion is 74% of the discharge at Topaz, or the average percentage of the above table. The maximum, minimum, and median discharge hydrographs and the duration curve have been adjusted on this basis to represent these discharge characteristics at the proposed diversion point above Fish Creek above the city of Lava Hot Springs.

I believe this is as reasonable an interpretation as can be made with the data which are available.

Cecil A. Thomas

Cecil A. Thomas, P.E.

TABLE 2
PORTNEUF RIVER BASIN-RECORD OF DISCHARGE (cfs) AT TOPAZ STATION
20 Yrs. HYDROLOGY FROM 1966-1986

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	YEARLY AVERAGE
66-67	93	115	130	123	122	173	176	248	274	161	180	134	161
67-68	129	130	128	134	162	198	164	200	249	196	164	121	165
68-69	131	142	138	230	162	183	485	498	263	203	199	155	232
69-70	127	139	143	185	164	176	163	326	336	203	184	152	192
70-71	137	146	148	159	183	288	434	789	450	244	238	232	287
71-72	211	200	196	196	211	475	501	620	410	249	226	217	309
72-73	209	232	227	211	205	210	345	454	253	210	179	171	242
73-74	160	184	178	180	172	342	437	567	289	217	214	177	260
74-75	148	179	172	176	173	229	251	456	532	232	205	198	246
75-76	216	184	181	150	154	200	514	654	347	223	214	168	267
76-77	177	165	168	170	163	170	166	203	187	181	145	113	167
77-78	112	135	150	129	139	223	337	429	280	188	179	145	204
78-79	127	144	146	138	139	163	217	235	220	181	157	106	164
79-80	112	132	121	159	237	183	217	394	292	186	164	129	193
80-81	139	143	133	125	139	140	158	261	219	191	151	120	160
81-82	95	113	125	119	153	209	269	672	361	236	199	194	229
82-83	197	183	168	174	175	332	389	710	580	286	244	245	326
83-84	231	233	238	264	254	262	366	875	735	347	271	255	364
84-85	284	283	279	271	262	271	527	382	254	225	189	194	285
85-86	200	196	178	164	334	447	589	574	370	263	331	361	267
MONTHLY AVERAGE	162	169	167	174	185	245	335	477	345	221	202	179	238

October 11, 1988

Fred A. Kisabeth, Assistant Director
Idaho Department of Lands
Statehouse
Boise, ID 83720

Dear Fred:

We received a copy of your October 5, 1988 letter to Maher F. Wissa concerning the construction of his hydroelectric power project.

You are correct that a re-hearing was scheduled on the project at the request of Mr. Wissa. However, the request for re-hearing has been withdrawn by Mr. Wissa and he has agreed to abide by the conditions of approval of the water right permit originally issued.

We hope this has brought you up to date on the status of Mr. Wissa's water right permit No. 29-7699.

If you have any questions please let me know.

Sincerely,

BOB FLEENOR
Chief of the Regional Bureau

c: Maher F. Wissa

IDAHO DEPARTMENT OF LANDS
STATEHOUSE, BOISE, IDAHO 83720

RECEIVED
OCT 05 1988
Department of Water Resources

STANLEY F. HAMILTON
DIRECTOR

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State Auditor
JERRY L. EVANS
Sup't of Public Instruction

October 5, 1988

Maher F. Wissa, P.E.
Commercial Energy Mgmt., Inc.
P.O. Box 4518
Pocatello, ID 83205

Dear Mr. Wissa:

This will acknowledge your September 29th letter in which you provided us a copy of the FERC approval of Phase I - Construction of Penstock.

I inquired of the Department of Water Resources, this date, as to the status of their review of your earlier submittals. Mr. Lotwick Reese advises that they plan to hold another public hearing to obtain input regarding safety considerations and warning devices. It is my understanding that you have been made aware of this recent development. As to scheduling of the hearing, if you have not been advised of a date, you may want to contact Mr. Norm Young, Administrator of the Natural Resources Division, at 334-7902.

Sincerely,

Fred A. Kisabeth

FRED A. KISABETH
Assistant Director
Lands, Minerals & Range Mgt.

FAK:mm

CC: Norm Young

44 FERC ¶ 62,252

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Commercial Energy Management, Inc. Project No. 7447-008
Idaho

ORDER APPROVING AND MODIFYING PLAN
TO PROVIDE FLUSHING FLOW

(Issued September 12, 1988)

On June 28, 1988, Commercial Energy Management, Inc. (licensee) filed a plan to provide flushing flows as required by article 403 of the license for the Portneuf Hydroelectric Project.

Article 403 requires the licensee, after consulting with the Idaho Department of Fish and Game (IDFG) and the U.S. Fish and Wildlife Service (FWS), to file a plan to implement a flushing flow of 350 cubic feet per second (cfs) past the diversion for a 10-day period each year. The plan is to include implementation criteria for initiation of flow releases and contingencies for altering the required releases during varying hydrologic years.

The licensee proposes to provide a flushing flow of 350 cfs past the diversion for a 10-day period each year. The licensee proposed to provide the flushing flows either when the water depth on the top of the weir is equal to or greater than 1.92 feet or when the project is shutdown for maintenance.

The IDFG recommends by letter dated May 31, 1988, that project shutdown occur from May 10 through May 20. The IDFG further states in a letter dated June 20, 1988, that either of the licensee's two proposals are acceptable as long as the appropriate flows is bypassed during the time frame specified. The FWS recommends by letter dated June 8, 1988, that flow fluctuations be gradual and that a change in water surface elevation of 1 foot per hour would protect the fishery and maintain safe conditions in the bypassed reach.

The licensee's proposed plan is adequate for providing the required flushing flow. The recommendations by the resource agencies would provide additional protection for the fishery resource and would help to protect public safety. The ramping rate recommended by the FWS would prevent fish stranding and protect public safety in the bypassed reach. The licensee should limit discharges from the diversion to ensure that the maximum change in the water level does not exceed 1 foot per hour.

The recommendations by the IDFG that if flushing flows occur as a result of project shutdown, that project shutdown occur between May 10 through May 20 is overly restrictive for efficient project operation. The same level of fishery protection would be provided as long as the flushing flow is provided after snow melt and prior to emergence of fry from the gravel. Flushing flows made during project shutdown should be released after snow melt and prior to fry emergence. In order to ensure that the flushing flows are completed after snow melt and prior to fry emergence, the flushing flows should be made between April 1 and May 20.

A flushing flow of 350 cfs for 10 consecutive days each year with the resources agency's proposed ramping rate and the staff's recommended schedule would adequately protect the fishery habitat in the bypassed reach.

The Director orders.

(A) The plan for providing and implementing the flushing flow filed on June 28, 1988, with modifications required by paragraphs B and C, is approved.

(B) The licensee shall ramp the change of flows in the bypassed reach during flushing operation so that the change of water surface level, as measured in the bypassed reach immediately downstream of the dam, does not exceed 1 foot per hour.

(C) The flushing flow provided during periods of project shutdown shall be released between April 1 and May 20.

(E) This order is issued under authority delegated to the Director and is final unless appealed to the Commission under Rule 1902 within 30 days from the date of this order.

J. Mark Robinson
Director, Division of Project
Compliance and Administration

FEDERAL ENERGY REGULATORY COMMISSION
WASHINGTON, D.C. 20426

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IDAHO DEPARTMENT OF WATER RESOURCES
STATEHOUSE

BOISE, ID 83720

September 13, 1988

Vernon F. Ravenscroft
Consulting Associates, Inc.
1843 Broadway, Suite 102
Boise, ID 83706

Dear Mr. Ravenscroft:

Re: Permit No. 29-7699 - Commercial Energy Management - Rehearing

This office acknowledges receipt of your letter requesting withdrawal of the request for rehearing. This letter will serve as notice that the rehearing scheduled for September 23, 1988 has been vacated.

If you have any questions or concerns regarding this matter, please feel free to contact this office.

Sincerely,

Bobby D. Fleenor

BOBBY D. FLEENOR
Chief, Regional Bureau Chief

C: Commerical Energy Management
Archie Service
Karen Keller
Monte Whittier

Consulting Associates, Incorporated

BOISE OFFICE –
VERNON RAVENSCROFT
HELEN CHENOWETH

PHONE (208) 345-2670
1843 BROADWAY, SUITE 102
BOISE, IDAHO 83706

September 13, 1988

Bobby D. Fleenor, Hearing Officer
Water Resources Department
1301 North Orchard Street
Boise, ID 83720

SEP 13 1988
Department of Water Resources

Re: Re-hearing of Application for Permit No. 29-7699.

Dear Mr. Fleenor,

I have received a copy of your order scheduling a re-hearing on the referenced application for September 23, 1988 at Pocatello, Idaho. I have attached to this correspondence a copy of my letter of August 17, 1988, which you referenced in that order. My letter indicates that I was acting upon the authority of my client in order to protect his rights for a re-hearing (if necessary), and that additional work and negotiations in progress would well prompt a motion to vacate the requested hearing.

I am now advised by my client, Commercial Energy Management, Inc. (C.E.M. Inc.), that they are willing to accept the July 29, 1988, Order (Adopting Proposed Memorandum Decision and Order) as originally submitted to them by your Department.

Please accept this letter as my withdrawal of the August 17th request and as Commercial Energy Management, Inc.'s motion to vacate the scheduled re-hearing.

Sincerely,

Vernon Ravenscroft

Vernon F. Ravenscroft

CERTIFICATION OF MAILING: I certify that I have on this date delivered, or, in the alternative, placed in the U.S. mail, copies of this communication to:

1. Bobby D. Fleenor
   Department of Water Resources
   Boise, ID

2. Maher Wissa
   C. E. M., Inc.
   Pocatello, ID

3. Archie Service
   Attorney
   Pocatello, ID

Signed Vernon Ravenscroft
Date 9/13/88

CERTIFICATE OF RECEIPT: I hereby acknowledge that on this date Vernon Ravenscroft did deliver to me the original copy, with attachment, of a motion to vacate the re-hearing of Water Permit Application No. 29-7699.

Signed_____ Date_____

Consulting Associates, Incorporated

BOISE OFFICE —
VERNON RAVENSCROFT
HELEN CHENOWETH

PHONE (208) 345-2670
1843 BROADWAY, SUITE 102
BOISE, IDAHO 83706

August 17, 1988

HAND DELIVERED

Mr. Norman Young
Assistant Director
Department of Water Resources
1301 N. Orchard Street
Boise, Idaho 83706

Dear Norm:

As per our phone conference Tuesday, August 16, 1988, this letter is provided to reserve and request a re-hearing for my client (the Portneuf River Hydro project FERC No. 7447-002) in regard to their water application for that project. In Mr. Saxton's letter of July 29, 1988 to Mr. Maher Wissa it was indicated that a request for said rehearing should be made in writing prior to August 18, 1988.

I am authorized by my client to request said hearing with the understanding that your department and my office have certain studies and negotiations in progress and that a favorable resolution of those activities would prompt a motion to vacate the requested hearing. This request is made to protect my client's rights as outlined in Mr. Saxton's letter.

Personal regards,

Vernon F. Ravenscroft

VFR:jb

cc: Maher Wissa

FOR REGISTERED, INSURED, C.O.D., CERTIFIED, AND EXPRESS MAIL

NAME AND ADDRESS OF SENDER

DEPARTMENT OF WATER RESOURCES
STATEHOUSE
BOISE, IDAHO 8372[illegible]

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1	138466	Maher F. Wissa, P.E.; Commercial Energy Management Inc. P. O. Box 4518, Pocatello, ID										29-7699
2	138467	Vernon F. Ravenscroft, Consultino Associates Inc. 1843 Broadway, Suite 102, Boise, ID										
3	138468	Archie W. Service Green, Service, Gasser & Kerl, P. O. Box 4883, Pocatello, ID 83205-4883										
4	138469	Karen Keller Lava Hot Springs Foundation, Lava Hot Springs, ID 83246										
5	138470	Monte Whittier 635 E. Center, Pocatello, ID										
6												
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Department of Water Resources

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PS Form 3877, Feb. 1982

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BEFORE THE DEPARTMENT OF WATER RESOURCES

OF THE STATE OF IDAHO

IN THE MATTER OF APPLICATION FOR PERMIT NO. 29-7699 IN THE NAME OF COMMERCIAL POWER MANAGEMENT, INC.	NOTICE OF REHEARING

On July 29, 1988, the Department issued an Order Adopting Proposed Memorandum Decision and Order. On August 17, 1988, the Department received a request for rehearing from Vernon F. Ravenscroft on behalf of Commerical Power Management Inc.

The Department has set the matter for rehearing for 10:30 a.m., Friday, September 23, 1988. The rehearing will be at the Pocatello Municipal Airport, Pocatello, Idaho. The rehearing will be held in accordance with the provisions of Chapter 2, Title 42, of the Idaho Code and adopted Rules of Practice and Procedure of the Department of Water Resources. Opportunity shall be afforded all parties to respond and present evidence and argument on all issues involve.

Dated this 6 day of September, 1988.

Bobby D. Fleenor

BOBBY D. FLEENOR

Chief, Regional Offices Bureau

Consulting Associates, Incorporated

BOISE OFFICE —
VERNON RAVENSCROFT
HELEN CHENOWETH

PHONE (208) 345-2670
1843 BROADWAY, SUITE 102
BOISE, IDAHO 83706

August 17, 1988

HAND DELIVERED

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AUG 17 1988
11:27 a.
Department of Water Resources

Mr. Norman Young
Assistant Director
Department of Water Resources
1301 N. Orchard Street
Boise, Idaho 83706

Dear Norm:

As per our phone conference Tuesday, August 16, 1988, this letter is provided to reserve and request a re-hearing for my client (the Portneuf River Hydro project FERC No. 7447-002) in regard to their water application for that project. In Mr. Saxton's letter of July 29, 1988 to Mr. Maher Wissa it was indicated that a request for said rehearing should be made in writing prior to August 18, 1988.

I am authorized by my client to request said hearing with the understanding that your department and my office have certain studies and negotiations in progress and that a favorable resolution of those activities would prompt a motion to vacate the requested hearing. This request is made to protect my client's rights as outlined in Mr. Saxton's letter.

Personal regards,

Vernon F. Ravenscroft

VFR:jb

cc: Maher Wissa

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3. Article Addressed to: (29-7699)

Maher F. Wissa, P. E.
Commercial Energy Management Inc.
P. O. Box 4518
Pocatello, ID 83205

4. Article Number
138466

Type of Service:
☐ Registered ☐ Insured
☑ Certified ☐ COD
☐ Express Mail

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5. Signature — Addressee
X Maher F. Wissa

6. Signature — Agent
X

7. Date of Delivery

8. Addressee's Address *(ONLY if requested and fee paid)*

PS Form **3811**, Mar. 1987 ★ U.S.G.P.O. 1987-178-268 **DOMESTIC RETURN RECEIPT**

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Department of Water Resources

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DEPARTMENT OF WATER RESOURCES
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BOISE, IDAHO 83720

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1. ☐ Show to whom delivered, date, and addressee's address. *(Extra charge)*
2. ☐ Restricted Delivery *(Extra charge)*

3. Article Addressed to: (29-7699)

Vernon F. Ravenscroft
Consulting Associates, Inc.
1843 Broadway, Suite 102
Boise, ID 83706

4. Article Number
138467

Type of Service:
☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail

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5. Signature – Addressee
Vernon Ravenscroft

6. Signature – Agent
X

7. Date of Delivery 12 Jan 88

8. Addressee's Address *(ONLY if requested and fee paid)*

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Department of Water Resources

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~~STATEHOUSE~~
BOISE, IDAHO 83720

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2. ☐ Restricted Delivery *†(Extra charge)†*

3. Article Addressed to: (29-7699)

Archie W. Service
Green, Service, Gasser, & Kerl
P. O. Box 4883
Pocatello, ID 83205-4883

4. Article Number
138468

Type of Service:
☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail

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5. Signature – Addressee
X

6. Signature – Agent
X Laura Sells

7. Date of Delivery

8. Addressee's Address *(ONLY if requested and fee paid)*

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SEP 12 1988

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Department of Water Resources

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DEPARTMENT OF WATER RESOURCES
STATEHOUSE
BOISE, IDAHO 83720

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1. ☐ Show to whom delivered, date, and addressee's address. *†(Extra charge)†*
2. ☐ Restricted Delivery *†(Extra charge)†*

3. Article Addressed to: (29-7699)

Monte Whittier
635 E. Center
Pocatello, ID 83205

4. Article Number
138470

Type of Service:
☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature – Addressee
X

6. Signature – Agent
X

7. Date of Delivery

8. Addressee's Address *(ONLY if requested and fee paid)*

PS Form **3811**, Mar. 1987 ★ U.S.G.P.O. 1987-178-268 **DOMESTIC RETURN RECEIPT**

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BOISE, IDAHO 83720

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1. ☐ Show to whom delivered, date, and addressee's address. *↑(Extra charge)↑*
2. ☐ Restricted Delivery *↑(Extra charge)↑*

3. Article Addressed to:

Karen Keller
Lava Hot Springs Foundation
Lava Hot Springs, ID 83246

4. Article Number
138469

Type of Service:
☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail

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5. Signature — Addressee
X

6. Signature — Agent
X Katherine Hartwell

7. Date of Delivery
9/9/88

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Department of Water Resources

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DEPARTMENT OF WATER RESOURCES
STATEHOUSE
BOISE, IDAHO 83720

NCY
Fleenor BDE

AUG 11 1988

Department of Water Resources

US Army Corps
of Engineers
Walla Walla District
Bldg. 602, City-Cnty Airport
Walla Walla, WA 99362-9265

Public Notice of Application for Permit

REFERENCE NO. 071-OYC-4-003292

NAME Commercial Energy Management, Incorporated

PUBLIC NOTICE DATE August 8, 1988

EXPIRATION DATE September 7, 1988

30-Day Notice

Interested parties are hereby notified that application has been received for Department of the Army permit for certain work in waters of the United States described below and shown on the attached plan.

APPLICANT - Commercial Energy Management, Incorporated, Post Office Box 4518, Pocatello, Idaho 83205, telephone (208) 233-0360. For further information contact Dale Pape, same address and telephone number as above. For information from the Corps of Engineers contact Ed Proefrock at (509) 522-6721.

LOCATION - Portneuf River, Sec. 22, T.9S., R.38E., B.M., Bannock County, Idaho.

WORK - Applicant proposes to place the following fills: 700 cubic yards of earth fill, to be faced with riprap as a temporary upstream cofferdam; approximately 3 cubic yards of sand, in sand bags, will be used as a temporary cofferdam in the water falls channel; 55 cubic yards of concrete to be placed for the diversion weir, 200 cubic yards for the intake structure, and 10 cubic yards for the outlet structure; and 10 cubic yards of rock as riprap around the outlet structure. In the event of high water, 10 cubic yards of earth filled sand bags may be placed as a temporary cofferdam below the tailrace. Location and description as shown on the attached drawing sheets.

ADDITIONAL INFORMATION - River flow will be diverted around the site by means of a temporary channel. Channel will be riprapped and will be backfilled upon completion of the project. Permit will be conditioned to require removal of the sand bags in such a manner that material will not be discharged to the stream.

PURPOSE (PER APPLICANT) - Hydropower plant.

SPECIAL CONDITIONS - The following conditions have been agreed to by the applicant and will become part of the permit if issued:

1. All construction debris will be disposed of on land in such a manner that it cannot enter into the waterway.

2. All piling and lumber treated with creosote or other protective material will be completely dry before use in or near the waterway.

3. Care will be taken to prevent any petroleum products, chemicals, or other deleterious materials from entering the water.

4. The riprap, bank, or excavation will be no steeper than a 2-foot-vertical to 1-foot-horizontal slope.

5. Only clean, durable riprap will be used.

6. All areas along the bank disturbed or newly created by the construction activity will be seeded, riprapped, or given some other equivalent type of protection against subsequent erosion.

7. Work in the waterway will be done so as to minimize turbidity increases in the water which tend to degrade water quality and damage aquatic life.

8. Excavation or dredging shall be conducted behind a berm of sufficient size to isolate the operation from the free-flowing stream.

9. Land disposal of dredging spoils will be accomplished behind adequately maintained protective berms which will prevent the materials from returning to the waterway.

10. If a bucket dredge of any type is used, including but not limited to grab or clamshell, dipper, dragline, or backhaul bucket, all digging passes of the bucket shall be completed without returning material to the wetted area.

11. Screening devices over the intake shall have openings not in excess of 1/4 inch, and the approach velocity to the intake shall not exceed 1 foot per second.

OTHER AUTHORIZATIONS - Other authorizations obtained or requested include, but are not necessarily limited to: FERC license No. 7447-002, dated December 29, 1986; Idaho Department of Water Resources Water Rights Approval No. 20-7699, pending; Idaho Department of Lands Easement, pending; and Idaho Department of Water Resources Stream Channel Alteration No. 29-S-100, dated June 16, 1988.

WATER QUALITY CERTIFICATION - This will also serve as public notice of the intent of the Idaho Department of Health and Welfare, Statehouse, Boise, Idaho 83720, to consider certifying that the project or discharge herein will not violate existing water quality standards and that the permit will not be issued until such certification, as required by Section 401 of the Clean Water Act, has been issued or waived by the State of Idaho.

PUBLIC HEARING - Any person may request in writing, within the comment period specified in this notice, that a public hearing be held to consider this application. Requests for a public hearing shall state with particularity the reasons for holding a public hearing.

CULTURAL RESOURCES - The latest version of the National Register of Historic Places has been consulted, and this site is not listed. This review constitutes the extent of cultural resource investigations by the District Engineer, and he is otherwise unaware of the presence of such resources. A copy of this public notice has been provided to the State Historic Preservation Officer.

ENDANGERED SPECIES - Preliminary determinations indicate that the activity will not affect endangered species, or their critical habitat, designated as endangered or threatened (Endangered Species Act). Formal consultation under Section 7(c) of the Act is not required.

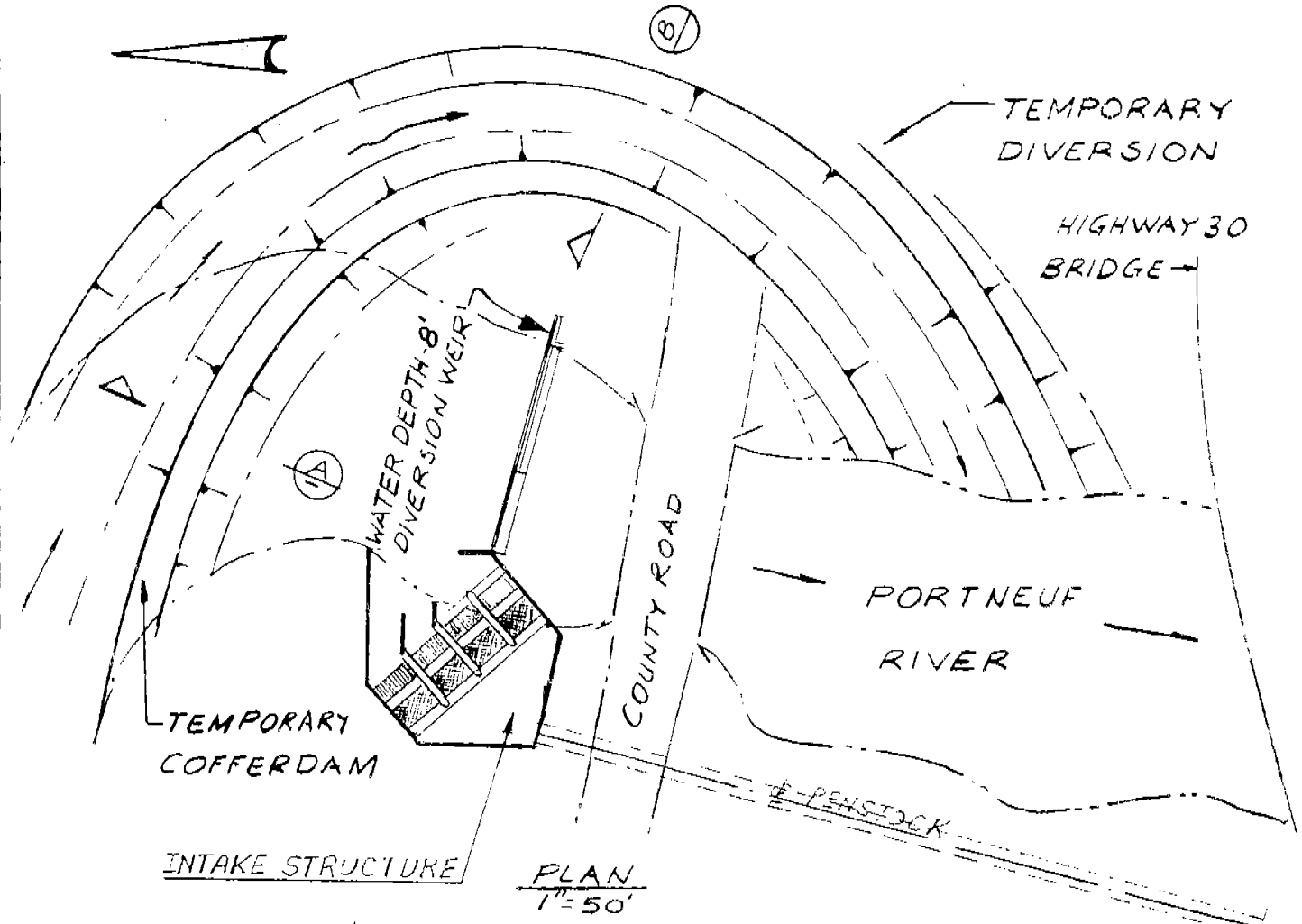
AUTHORITY - This permit will be issued or denied under the following authority:

Discharge of dredged or fill material into waters of the United States - Section 404, Clean Water Act (33 U.S.C. 1344).

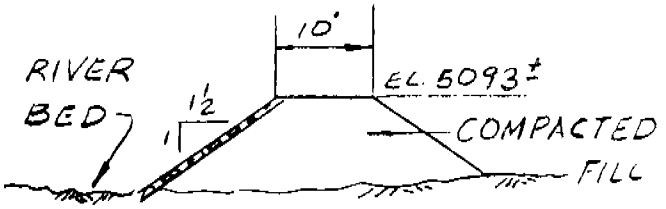
EVALUATION - The decision whether to issue a permit will be based on an evaluation of the probable impact, including cumulative impacts, of the activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit which reasonably may be expected to accrue from the activity must be balanced against its reasonable foreseeable detriments. All factors which may be relevant to the activity will be considered including the cumulative effects thereof; among those are conservation, economics, aesthetics, general environmental concerns, wetlands, cultural values, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shoreline erosion, and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food production, and in general the needs and welfare of the people. In addition, if the activity will discharge dredged or fill material, the impact of the activity on the public interest will include application of the EPA Guidelines (40 CFR 230) as required by Section 404(b)(1) of the Clean Water Act.

COMMENT AND REVIEW PERIOD - Interested parties are invited to provide their views on the work, which will become a part of the record and will be considered in the decision. Comments should be mailed to: District Engineer, Walla Walla District Corps of Engineers, ATTN: NPWOP-RF, Walla Walla, Washington 99362. Comments must be postmarked not later than the expiration date of this notice to receive consideration. Lack of response within the designated comment period, or responses received which do not present specific reasons for delaying final action on this permit application will be considered as no objection to the activity described herein.

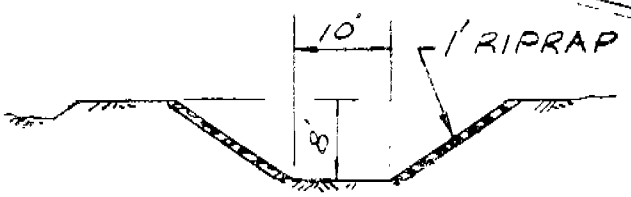
G. Dean Hilliard
Chief, Regulatory Branch



PLAN
1" = 50'



SECTION (A)
1" = 20'



SECTION (B)
1" = 20'

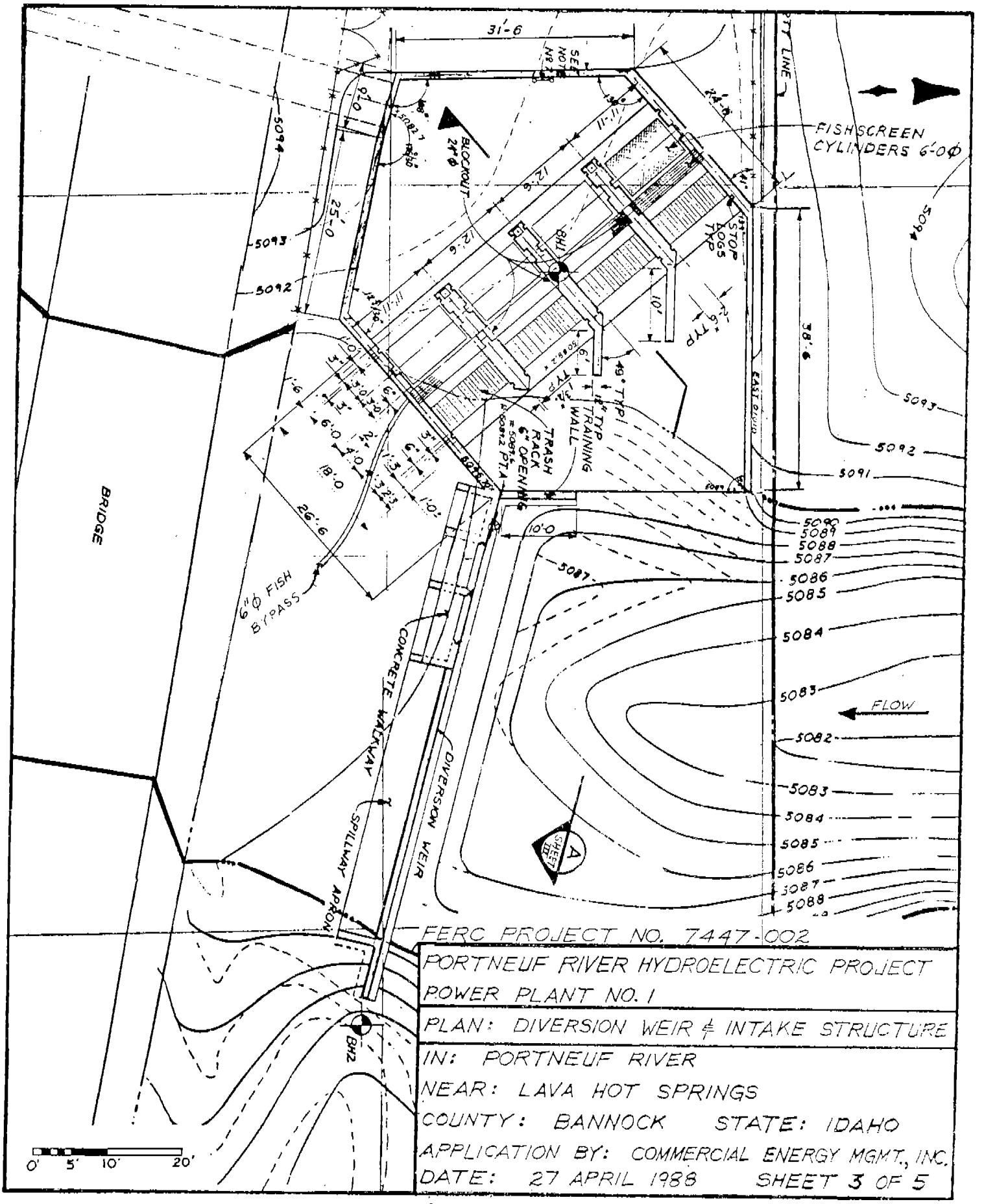
FERC PROJECT NO. 7447-002

PORTNEUF RIVER HYDROELECTRIC PROJECT
POWER PLANT NO. 1

TEMPORARY COFFERDAM AND DIVERSION

IN: PORTNEUF RIVER
NEAR: LAVA HOT SPRINGS
COUNTY: BANNOCK STATE: IDAHO
APPLICATION BY: COMMERCIAL ENERGY MGMT., INC.
DATE: 27 APRIL 1988 SHEET 5 OF 5

071-0YC-4-003292



FERC PROJECT NO. 7447-002

PORTNEUF RIVER HYDROELECTRIC PROJECT

POWER PLANT NO. 1

PLAN: DIVERSION WEIR & INTAKE STRUCTURE

IN: PORTNEUF RIVER

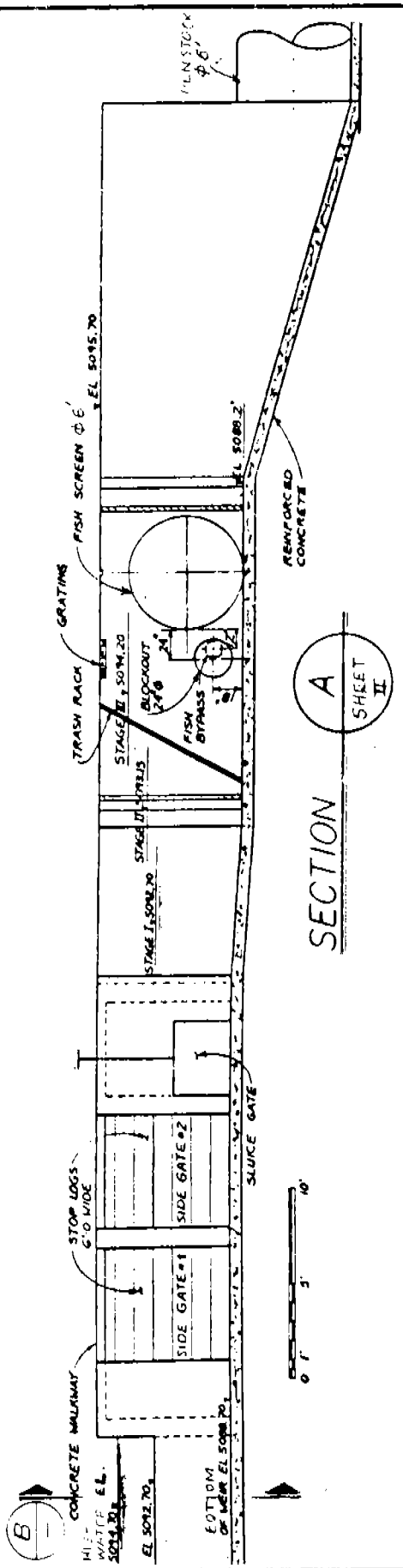
NEAR: LAVA HOT SPRINGS

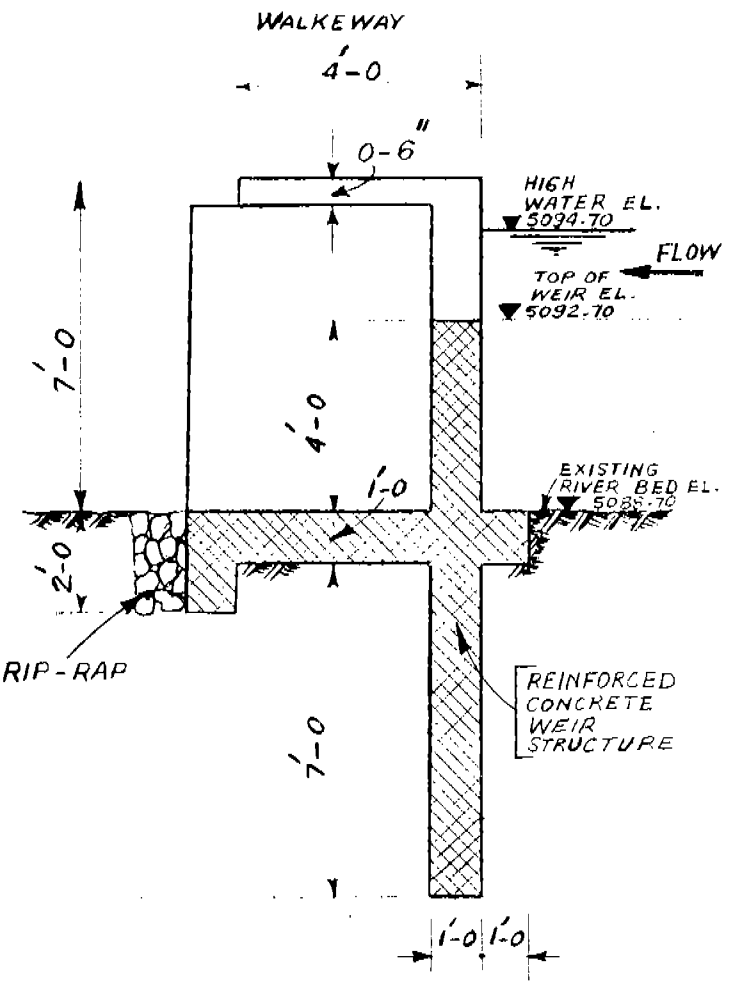
COUNTY: BANNOCK STATE: IDAHO

APPLICATION BY: COMMERCIAL ENERGY MGMT., INC.

DATE: 27 APRIL 1988 SHEET 3 OF 5

071-0YC-4-003292





SECTION B

SCALE: 1/4" = 1'-0

FERC PROJECT NO. 7447-002

PORTNEUF RIVER HYDROELECTRIC PROJECT

POWER PLANT NO. 1

PLAN: CROSS SECTIONS — WEIR & INTAKE STRUC.

IN: PORTNEUF RIVER

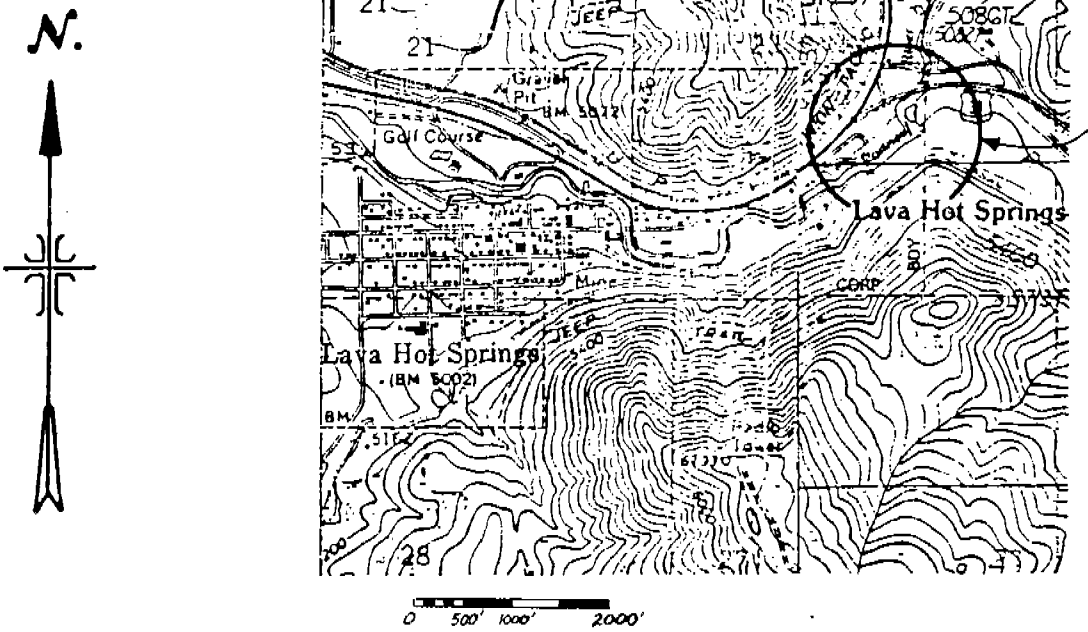
NEAR: LAVA HOT SPRINGS

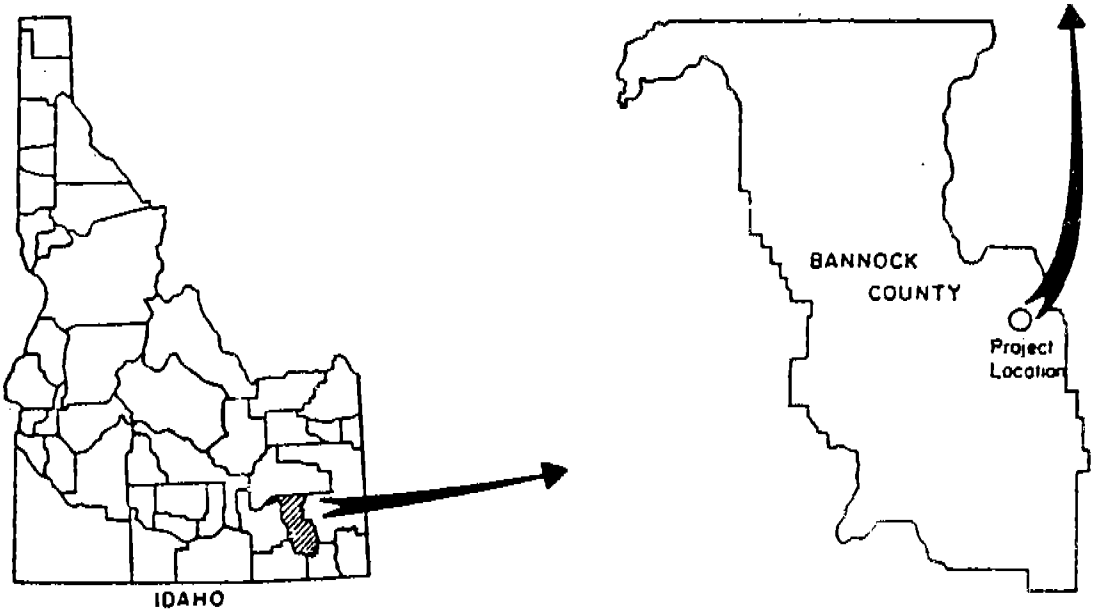
COUNTY: BANNOCK STATE: IDAHO

APPLICATION BY: COMMERCIAL ENERGY MGMT., INC.

DATE: 27 APRIL 1988 SHEET 4 OF 5

071-0YC-4-003292





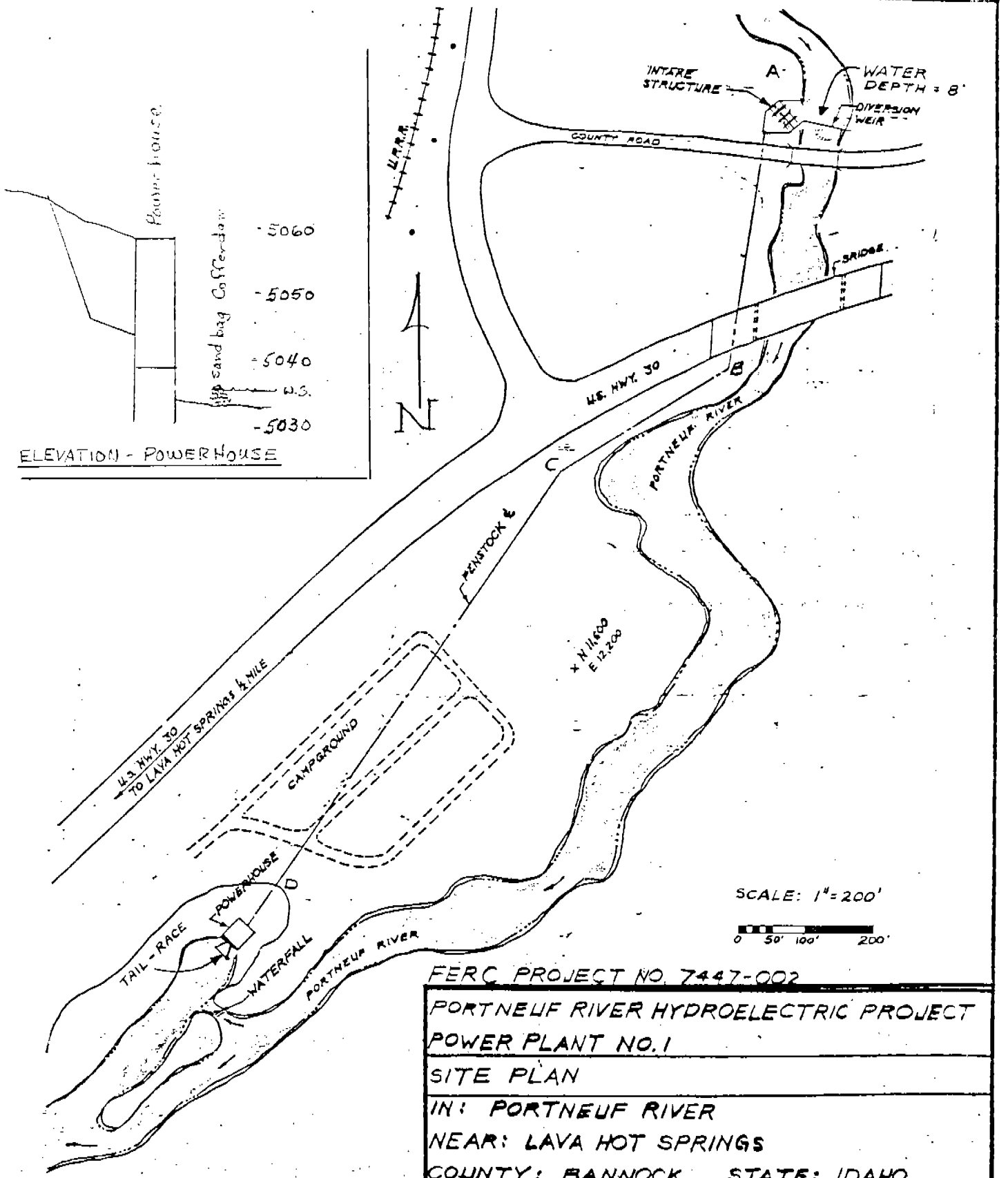
071-OYC-4-003292

FERC PROJECT NO. 7447-002

PORTNEUF RIVER HYDROELECTRIC PROJECT
POWER PLANT NO. 1

VICINITY MAP

IN: PORTNEUF RIVER
NEAR: LAVA HOT SPRINGS
COUNTY: BANNOCK STATE: IDAHO
APPLICATION BY: COMMERCIAL ENERGY MGMT., INC.
DATE: 27 APRIL 1988 SHEET 1 OF 5



FERC PROJECT NO. 7447-002

PORTNEUF RIVER HYDROELECTRIC PROJECT

POWER PLANT NO. 1

SITE PLAN

IN: PORTNEUF RIVER

NEAR: LAVA HOT SPRINGS

COUNTY: BANNOCK STATE: IDAHO

APPLICATION BY: COMMERCIAL ENERGY MGMT., INC.

DATE: 27 APRIL 1988 SHEET 2 OF 5

071-OYC-4-003292

DEPARTMENT OF THE ARMY
WALLA WALLA DISTRICT, CORPS OF ENGINEERS
BUILDING 602, CITY-COUNTY AIRPORT
WALLA WALLA, WASHINGTON 99362-9265

NPWOP

IDAHO DEPARTMENT OF WATER RESOURCES (2)
ATTN: KEN DUNN, DIRECTOR
STATEHOUSE
BOISE, ID 83720-0201

COMMERCIAL ENERGY MGMT, INC.

515 East Benton, Suite 201, P.O. Box 4518 • Pocatello, Idaho 83205 • Telephone (208) 233-0360 • TLX: 144111 OCOM UT

RECEIVED
AUG 10 1988
Department of Water Resources

August 8, 1988
Ref: CEM/0189

Mr. Keith Higginson
Director
State of Idaho, Department of Water Resources
450 West State Street
Boise, ID 83720

Subject: Portneuf River Hydroelectric Project
Lava Hot Springs, Idaho
FERC Project No. 7447-002
Water Permit Application No. 29-7699

References: 1. CEM/0140, dated June 21, 1988.
2. Approved application and order adopting the proposed memordandum decision and order, transmitted by Mr. Saxton's letter dated July 29, 1988.

Dear Mr. Higginson:

Further to our objection on condition No. 15 stated in Reference 1, a project site meeting was conducted on August 4, 1988, with Mr. Lotwick I. Reese, Engineering Section Manager of your Department. In accordance to Reference 2, and as a result of our meeting, we are hereby resubmitting our clarification, in response to the Department's concern of public safety as follows:

1. Operational Senario:

The results of plotting the maximum turbine flow of 193 cfs and the minimum flow of 40 cfs required by Idaho Fish and Game on the Hydrograph shown on Figure A-1, are summarized as follows:

A. Between November and the end of March (cold weather months) the flow through the turbine will be less than the maximum design flow. In case of emergency shut down of the turbine generator, the diverted flow through the diversion weir will not likely cause a public safety hazard because during this period, fishing is not allowed, and the ambient weather temperature will not allow public recreational usage of the river water.

B. Between April and the end of July, the flow in the river's mainstream will have a high mean daily flow of approximately 210 cfs. In case of

emergency, the shut down of the turbine generator will add another 193 cfs, which would result in a minor increase in stream water depth due to a larger water surface area. Considering the cross sections of the river (upstream of diversion weir and downstream of the powerhouse, respectfully), shown on Exhibits A, and B, the rise of water is calculated as high as 1.0'.

C. Between August and October, the flow through the turbine will be the same as described above in A with the exception that diversion of the turbine flow through the river's mainstream will go through the diversion weir during the recreational season, of which, public safety is required. From Table-1, it can be seen that the effect of the turbine's average flow of 140 cfs during this season, when it is diverted through the diversion weir, will cause an approximate 1-foot rise of the water surface over the weir, based on its 40-foot length. Considering the variation of the mainstream water width shown on the site plan (Exhibit "C") by Sections I through VII, the rise of water in these various sections is shown on this plan, and will vary from 1.7" to 9.6". This clearly indicates that such water rise will not be higher than 1 foot in the river's mainstream. Accordingly, this insignificant rise of water will not cause any public safety hazard.

2. Safety Alarm:

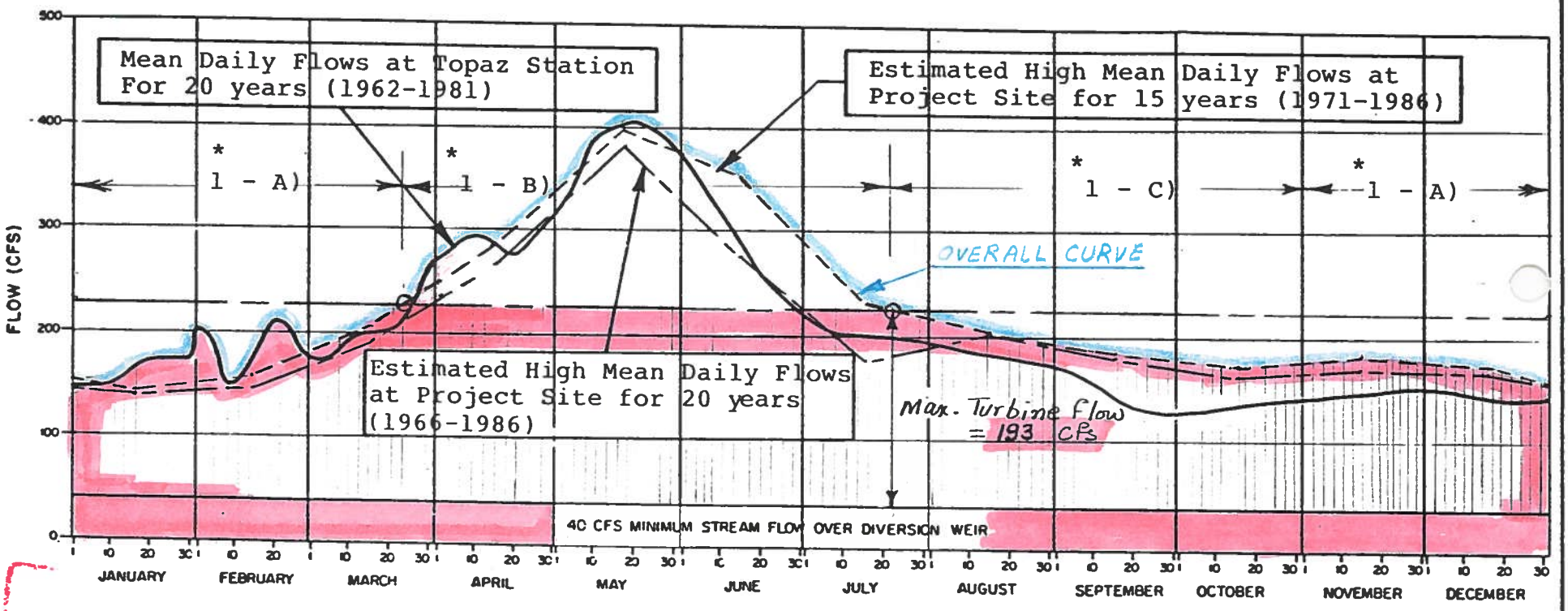
The powerhouse and intake structure will be equipped with an audible alarm system, designed to be activated immediately upon receiving the signal from the shut off of the turbine butterfly valve. Combined with this audible alarm, posted signs will be errected on the rivershore around the effected area warning the public that upon hearing the alarm sound, they should evacuate the waterway area. Also, a battery pack will be provided on the intake structure alarm as a stand by power source in case of a main power failure. The powerhouse alarm will be backed up by the station battery.

We trust that the above will meet your approval. Please contact me if you have any questions.

Very Truly Yours,

Maher F. Wissa, P.E.
President

MW/se
cc: Mr. Lotwick I. Reese, Engineering Section Manager of the Idaho Department of Water Resources, Boise, Idaho.



NOTE: The Estimated High Mean Daily Flows at the Project Site, Shown Herein, Were Added by Commercial Energy Management, Inc., as of May 11, 1988.

* See CEM/0189 for Explanation

SEP 20 1988

— TOPAZ STATION
USGS Station # 13073000
Mean Daily Flows for 20 years (1962-1981)

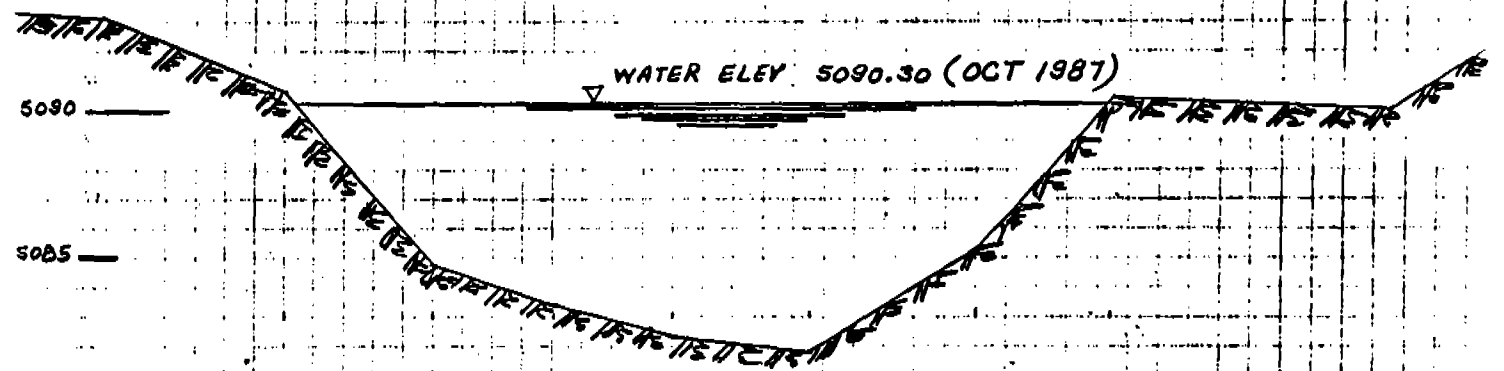
FIGURE A-1
PORTNEUF RIVER HYDROELECTRIC PROJECT
HYDROGRAPH - TOPAZ STATION

J-U-B ENGINEERS, INC.
Engineers Surveyors Planners
Twin Falls, Idaho

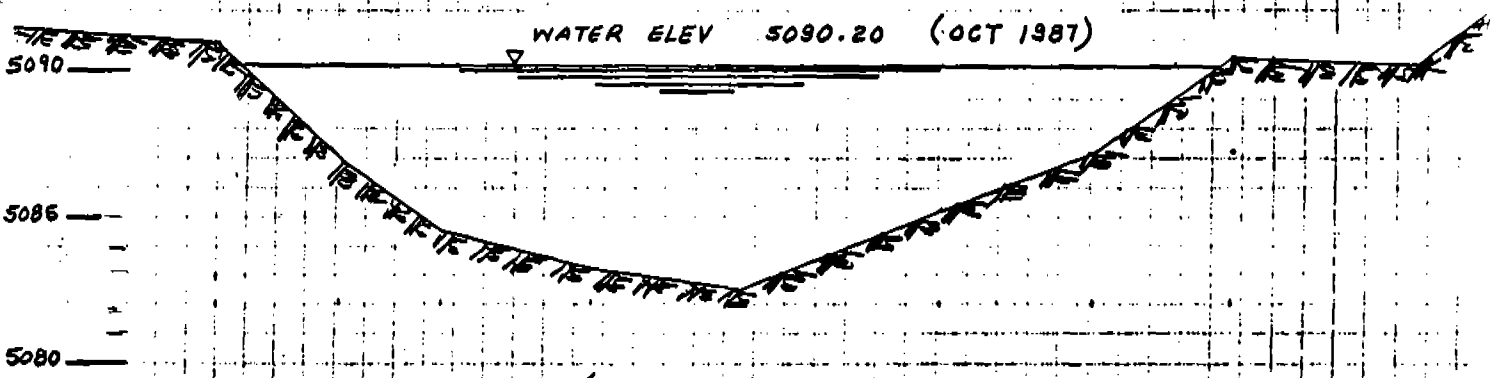
DE.	DR K.K.	CK	SHEET OF
SCALE AS SHOWN	DATE JULY, 1985		DWG NO

Upstream X-Sechns.

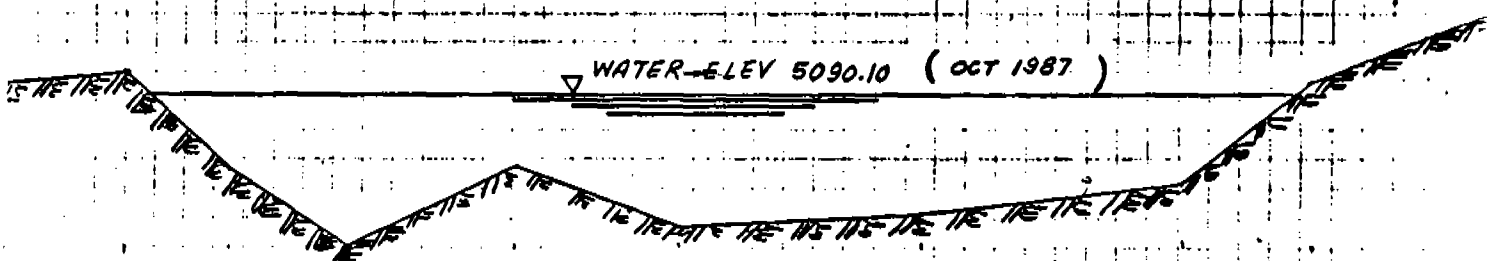
EXHIBIT "A"



STA -53.00'



STA -37.00'



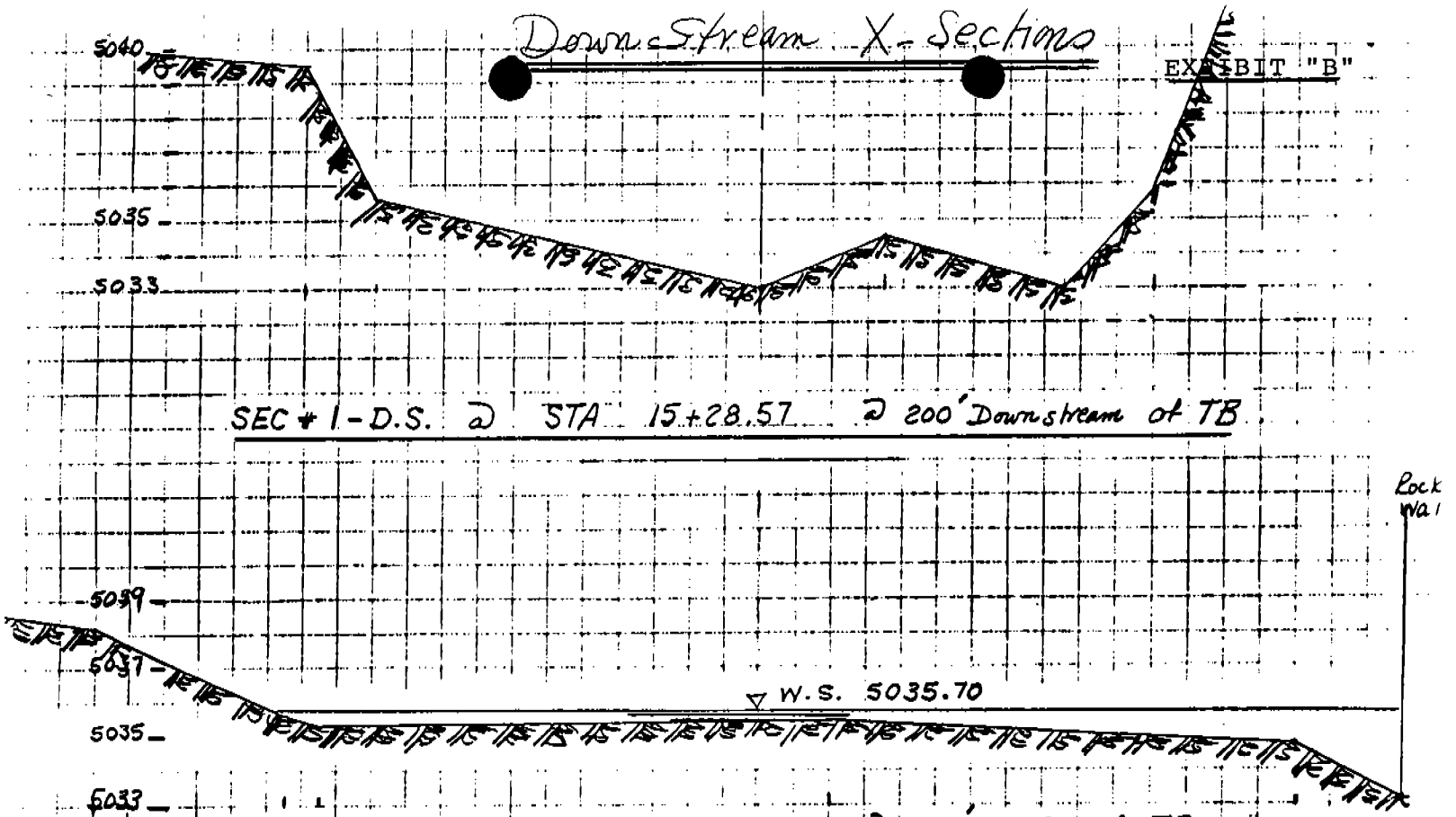
CROSS SECTION OF THE PORTNEUF RIVER - UPSTREAM OF THE DIVERSION

STA - 11.00'

Scale: Horizontal-- one Square = 2 ft.
Vertical -- one Square = 1 ft.

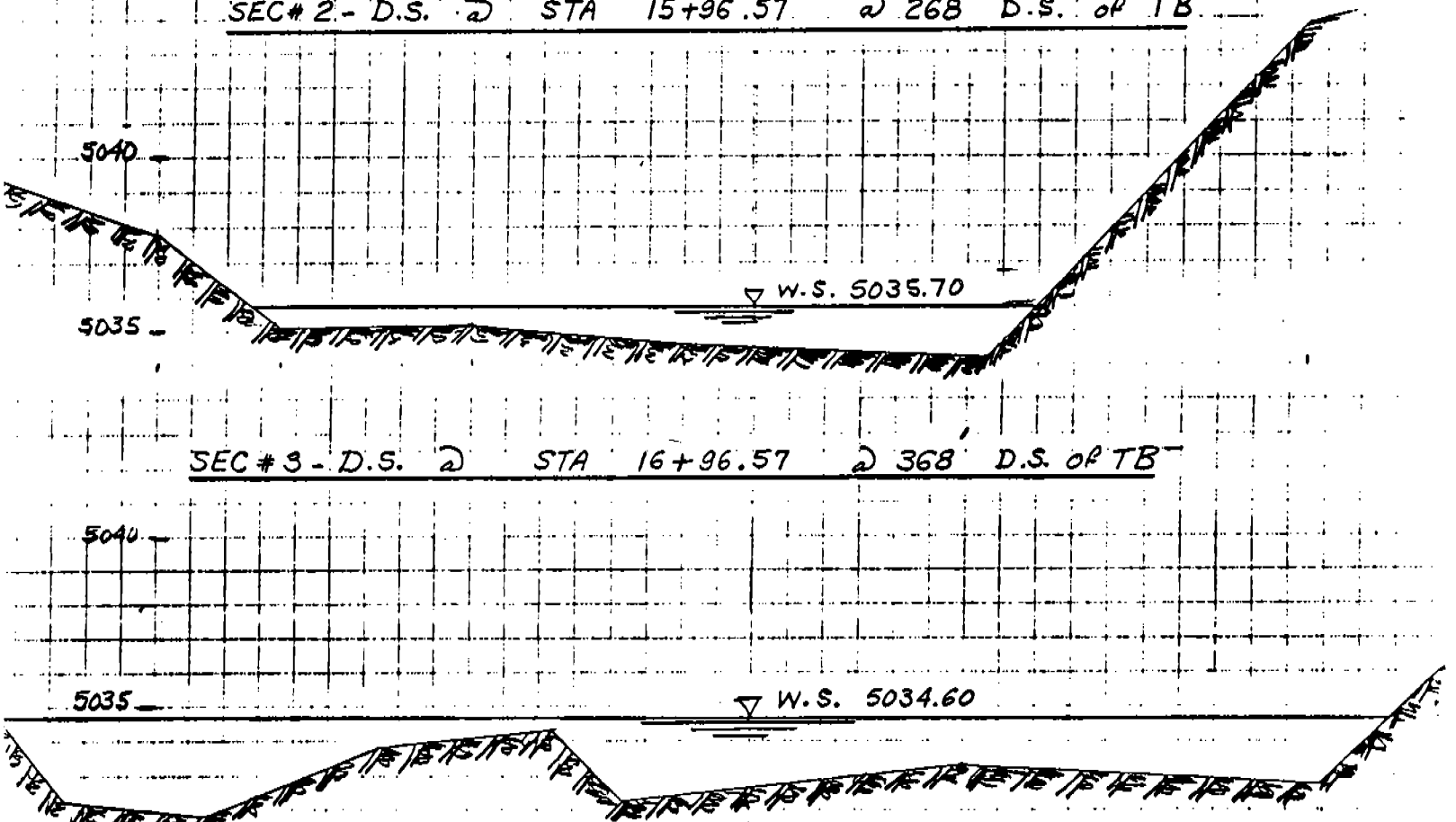
Down Stream X-Sections

EXHIBIT "B"

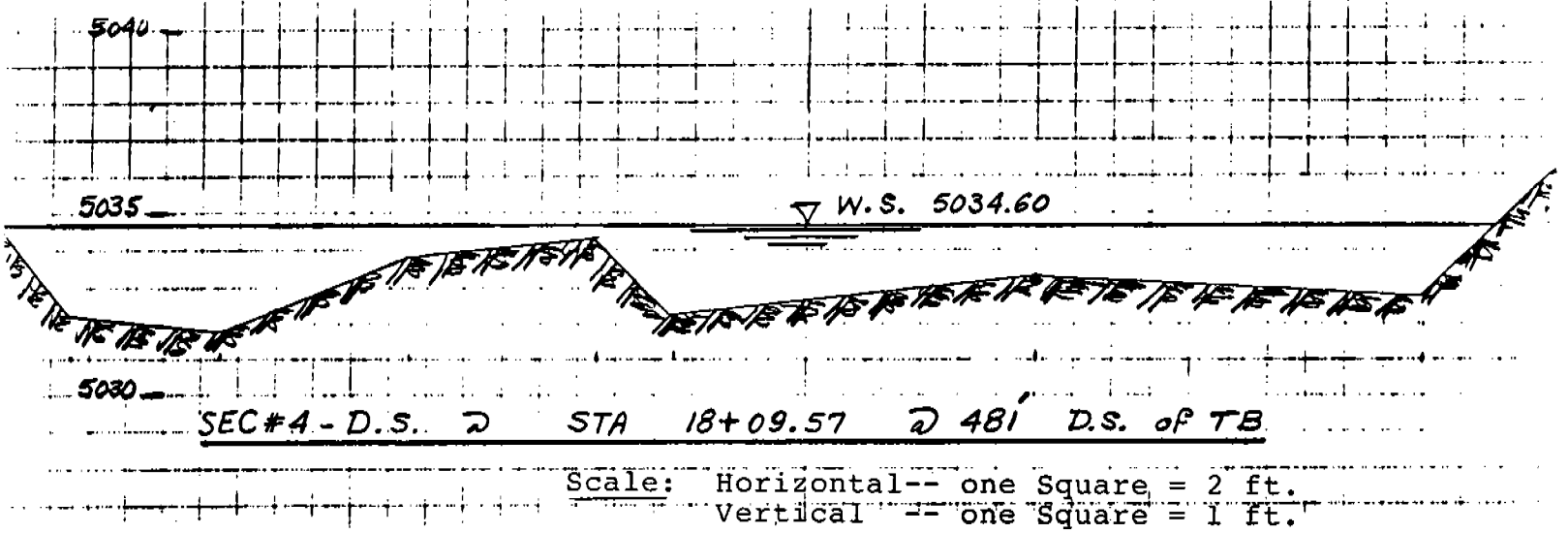


SEC # 1 - D.S. @ STA 15+28.57 @ 200' Downstream of TB

SEC # 2 - D.S. @ STA 15+96.57 @ 268' D.S. of TB



SEC # 3 - D.S. @ STA 16+96.57 @ 368' D.S. of TB



SEC # 4 - D.S. @ STA 18+09.57 @ 481' D.S. of TB

Scale: Horizontal -- one Square = 2 ft.
Vertical -- one Square = 1 ft.

TABLE 1 - DISCHARGE STAGES THROUGH WEIR STRUCTURE

Discharge Operation	Water		Total Discharge (cfs)	Slide Gate Discharge (cfs)	Side Gate #1 Discharge (cfs)	Side Gate #2 Discharge (cfs)	Weir		Screens/Turbine	
	Elevation	Depth (ft.)					Water Depth Over Weir	Discharge (cfs)	Water Depth (ft.)	Discharge (cfs)
Stage I water elev. at or below 5092.70	5088.70	0.00								
	5089.70	1.00	110	x	19	19			1.50	72
	5090.70	2.00	136	x	40*	x			2.50	96
	5091.70	3.00	159	40*	x	x			3.50	119
	5092.70	4.00	183	40	x	x			4.50	143
Stage II water elev. at or below 5093.15	5093.15	4.45	196	x	x	x	0.45	40	4.95	156
Stage III water elev. above 5093.15	5093.70	5.00	308	x	x	x	1.00	133	5.50	175
	5093.95	5.25	372	x	x	x	1.25	185	5.75	187
	5094.05	5.35	401	x	x	x	1.35	208	5.85	193

Notes:
1) Water depth shown on the above table represents depth of water as measured from the bottom of weir elevation.
2) Discharge figures are rounded to the nearest digit.
3) See Figure 1 for the different discharge operation stages.

x: Devise is closed.
*: Devise is partially open.

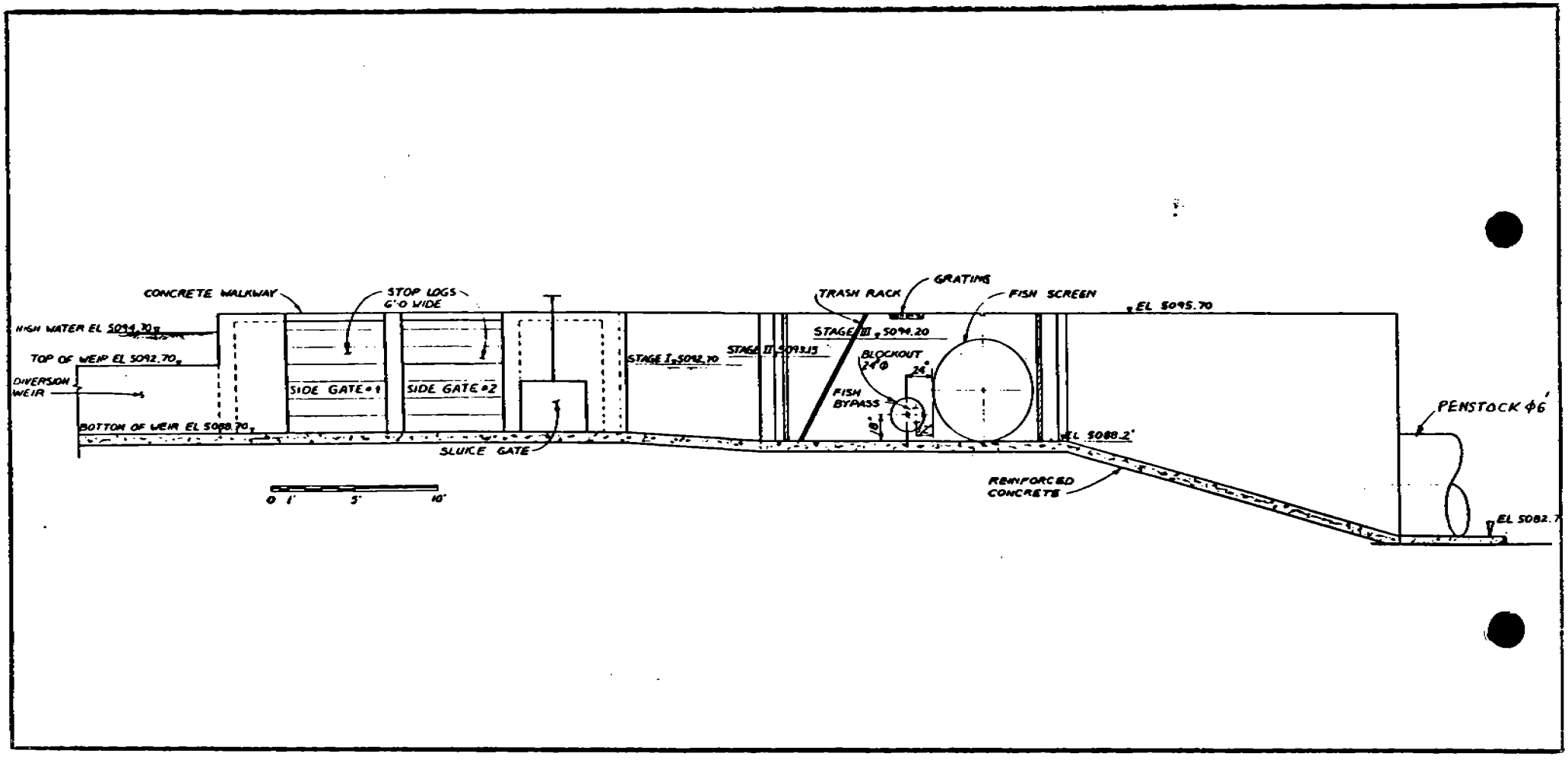
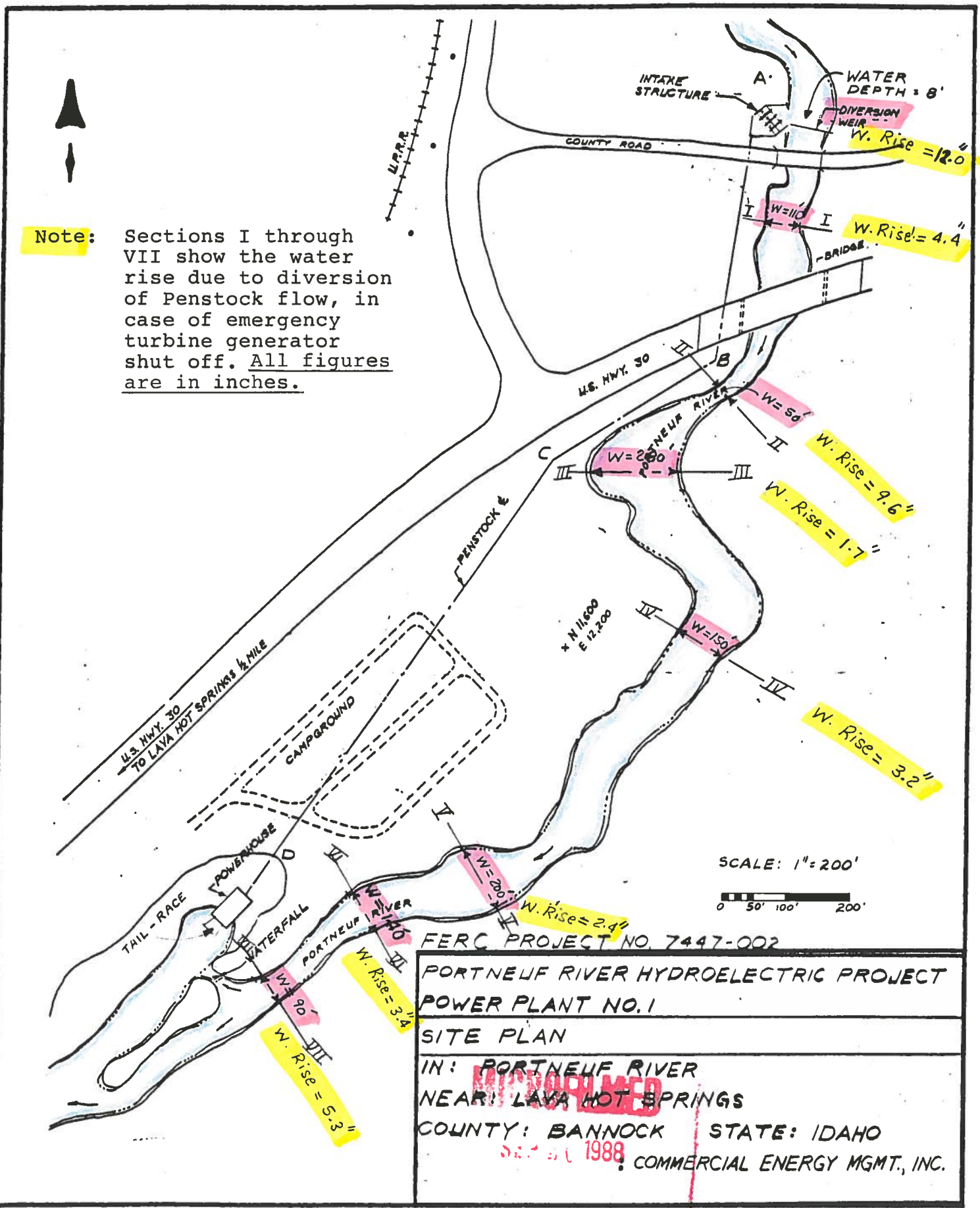


FIGURE 1 - CROSS SECTION OF WEIR AND INTAKE STRUCTURE, DEPICTING STAGES OF DISCHARGE OPERATION

EXHIBIT "C"



FERC PROJECT NO. 7497-002

PORTNEUF RIVER HYDROELECTRIC PROJECT
POWER PLANT NO. 1

SITE PLAN

IN: PORTNEUF RIVER
NEAR: LAVA HOT SPRINGS
COUNTY: BANNOCK STATE: IDAHO

SEPT 1988 COMMERCIAL ENERGY MGMT., INC.

COMMERCIAL ENERGY MGMT, INC.

515 East Benton, Suite 201, P.O. Box 4518 • Pocatello, Idaho 83205 • Telephone (208) 233-0360 • TLX: 144111 OCOM UT

JUN 23 1988

Department of Water Resources

June 21, 1988
Ref: CEM/0140

Mr. Keith Higginson, Director
Idaho Department of Water Resources
450 West State Street
Boise, ID 83720

Subject: Portneuf River Hydroelectric Project
Lava Hot Springs, Idaho
FERC Project No. 7447-002
Water Permit - Application No. 29-7699

Reference: Order Issuing Proposed Memorandum Decision dated June 10, 1988

Dear Mr. Higginson:

On behalf of the subject permit applicant (see attached copy of "Consent for Use of Name") we have reviewed the referenced document and hereby are our exceptions listed below in accordance to their order of conditions specified under "ORDER":

Condition No. 6: As agreed with the Idaho Department of Fish and Game, a staff gage will be installed just downstream of the diversion weir and be positioned to be visible from the Old County Road Bridge, so it may be read without leaving a vehicle. A continuous strip chart record is not required for a small size project as in the case of this project.

Condition No. 15: We object to this condition, because of the following design criteria:

1) The project consists of a diversion weir structure and not a dam with two side gates (controlled by stop logs), and sluice gate which will control the discharge through the weir structure (see attached Table - 1 and Figure 1.).

July 29, 1988

Hydro Power Management, Inc.
c/o Bob Nestor
4850 Valenty Rd
Chubbuck, ID 83202

Maher F. Wissa, P.E.
Commerical Energy Management, Inc.
P. O. Box 4518
Pocatello, ID 83205

Gentlemen:

Re: Application for Permit No. 29-7699

Enclosed is a copy of the approved Application for Permit No. 29-7699 along with a copy of the Proposed Memorandum Decision and Order and Order Adopting the Proposed Memorandum Decision and Order. Please note the conditions of approval as set forth in the Proposed Memorandum Decision and Order.

Also, this office acknowledges the assignment conveying the permit to Commercial Energy Management, Inc. The department has changed its records to reflect the change in ownership.

Any person who does not agree with the decision of the department may request a rehearing before the director within 20 days, or may appeal directly to the district court within 30 days of the date the decision is mailed.

Sincerely,

L. GLEN SAXTON
Chief, Operations Bureau

LGS:rf

Enc.

c w/order: Archie W. Service
Karen Keller
Monte Whittier

CONSENT FOR USE OF NAME

COMES NOW, Hydro Power Management, Inc., and hereby consents and agrees that during the pendency of the transfer of the FERC License Project No. 7447-002, to the new owners, Commercial Energy Management, Inc., that any and all documents that need to be submitted to, or filed with the Federal Energy Regulation Commission, may be done so in the name of Hydro Power Management, Inc.

Further, Hydro Power Management, Inc., does hereby give and grant to Commercial Energy Management, Inc., the right to use and submit any and all documents as required by the Federal Energy Regulation Commission in the name of Hydro Power Management, Inc., for the period of time that is necessary for the License to be transferred to the name of Commercial Energy Management, Inc., and that this right to Commercial Energy Management, Inc., is limited to the filing of papers with the Federal Energy Regulation Commission, and Commercial Energy Management, Inc., may not act in the name of Hydro Power Mangement, Inc., for any other purposes.

DATED this 11th day of April, 1988.

HYDRO POWER MANAGEMENT, INC.:

BOB NESTOR, President

CINDY NESTOR, Secretary

STATE OF IDAHO)
: ss
County of Bannock)

On this 11th day of April, 1988, before me, a Notary Public in and for the State of Idaho, personally appeared BOB NESTOR, known to me to be the President of Hydro Power

Management, Inc., whose name is subscribed to the within instrument and acknowledged to me that he executed the same, individually and behalf of said Corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written.

(SEAL) NOTARY PUBLIC MONTE WHITTIER STATE OF IDAHO

My Commission Expires On: 3/15/93

NOTARY PUBLIC for Idaho
Residing at Pocatello, Idaho

STATE OF IDAHO)
: ss
County of Bannock)

On this 11th day of April, 1988, before me, a Notary Public in and for the State of Idaho, personally appeared CINDY NESTOR, known to me to be the Secretary of Hydro Power Management, Inc., whose name is subscribed to the within instrument and acknowledged to me that she executed the same, individually and behalf of said Corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written.

(SEAL) NOTARY PUBLIC MONTE WHITTIER STATE OF IDAHO

My Commission Expires On: 3/15/93

NOTARY PUBLIC for Idaho
Residing at Pocatello, Idaho

Certificate of Mailing

I, Dale K. Pape of Commercial Energy Management, Inc., hereby certify that on this 21st day of June, 1988, a true and correct copy of the foregoing Commercial Energy Management, Inc. letter (CEM/0140) to Mr. Keith Higginson, Director of the Idaho Department of Water Resources, on the subject of Water Permit Application No. 29-7699, was hand-delivered to:

Archie W. Service
Green, Service, Gasser & Kerl
P. O. Box 4883
Pocatello, ID 83205-4883

Receipt Acknowledgment:

By: Jackie McClung
Date: June 21, 1988

Dale K. Pape
6/21/88

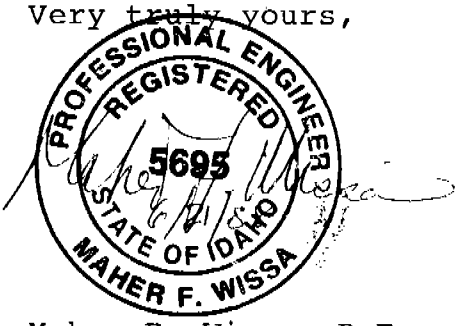
2) Control of flow through the Penstock will be provided by stop logs located in the intake structure (see attached design drawing).

3) In compliance with IDF&G requirements, as specified in FERC Article 406, flushing of 350 cfs is to be conducted through the weir structure into the main stream of the river.

4) During flood, all controlling devices in the weir structure will be fully opened to accommodate the high flow as shown in Table - 1.

We understand that Idaho Code (I.C.) 42-207 prohibits the transfer of the permit without the consent of the Director. As you may know, Hydro Power Management, Inc. has assigned its rights in the permit to the new owners of Commercial Energy Management, Inc. I am sure that we can comply with the requirements of I.C. 42-207, and we are ready to provide you with any information you may need to expedite the transfer.

Very truly yours,



Maher F. Wissa, P.E.
President

MW/bf
Attachments: 3
CC: Archie W. Service
Monte Whittier
Steven G. Wood

TABLE 1 - DISCHARGE STAGES THROUGH WEIR STRUCTURE

Discharge Operation	Water		Sluce Gate	Side Gate #1	Side Gate #2	Weir		Screens/Turbine	
	Elevation	Depth (ft.)	Discharge (cfs)	Discharge (cfs)	Discharge (cfs)	Water Depth Over Weir	Discharge (cfs)	Water Depth (ft.)	Discharge (cfs)
Stage I	5088.70	0.00							
water	5089.70	1.00	13	19	19			1.50	72
elev. at	5090.70	2.00	34	53	53			2.50	96
or below	5091.70	3.00	59	93	93			3.50	119
5092.70	5092.70	4.00		139	139			4.50	143
Stage II water elev. at or below 5093.15	5093.15	4.45		160	160	0.45	40	4.95	156
Stage III	5093.70	5.00		186	186	1.00	133	5.50	175
water	5094.20	5.50		210	210	1.50	243	6.00	215
elev.	5094.50	5.80		225	225	1.80	319	6.00	215
above	5094.62	5.92		231	231	1.92	351	6.00	215
5093.15	5094.70	6.00		235	235	2.00	373	6.00	215

Notes:
1) Water depth shown on the above table represents depth of water as measured from the bottom of weir elevation.
2) Discharge figures are rounded to the nearest digit.
3) See Figure 1 for the different discharge operation stages.

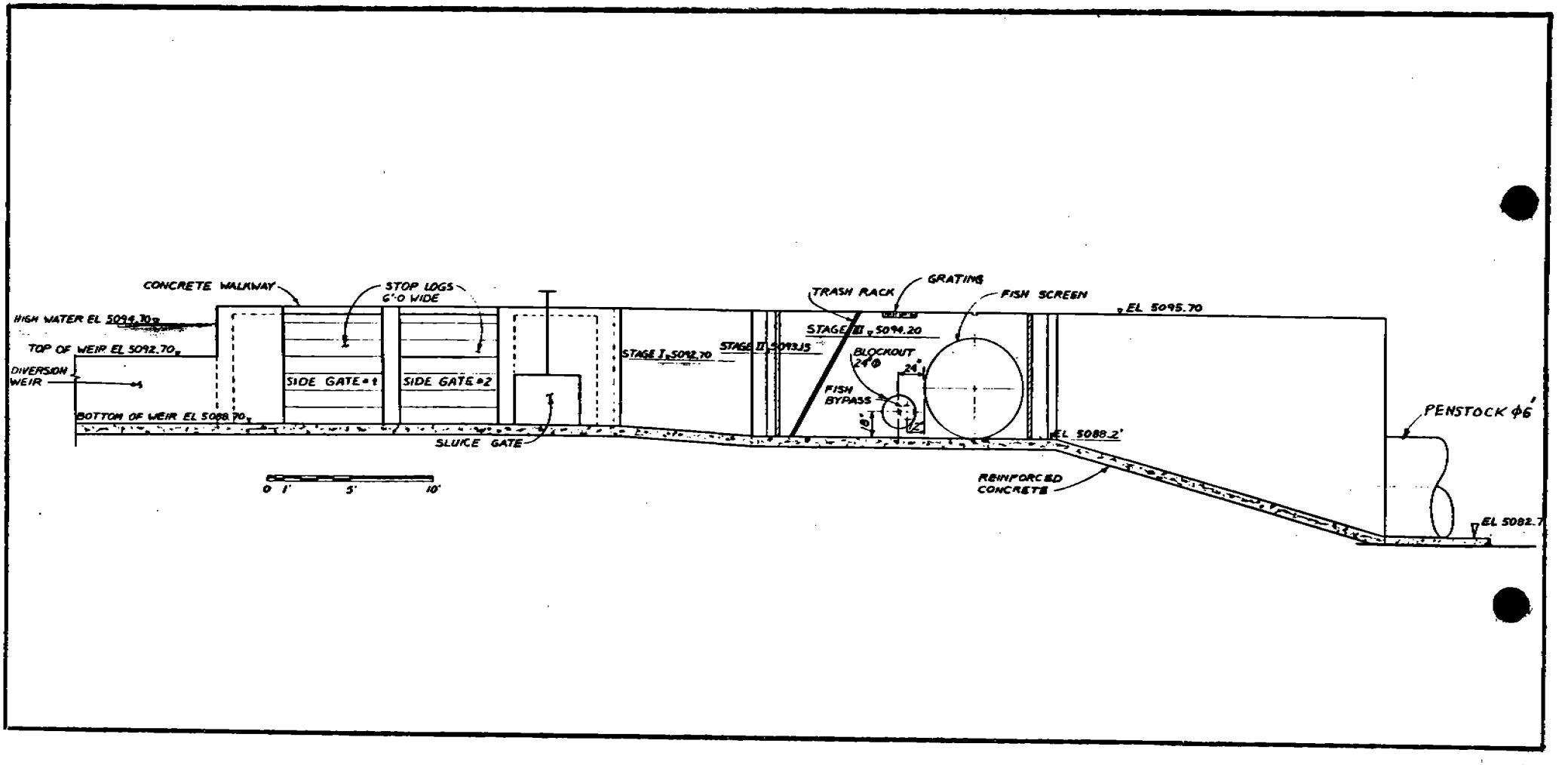


FIGURE 1 - CROSS SECTION OF WEIR AND INTAKE STRUCTURE, DEPICTING STAGES OF DISCHARGE OPERATION

POWER CALCULATIONS FOR APPLICATION NO. 29-7699

P = Kilowatts .74 X hp (744)

Q = cfs 210.0

H = feet 49.2

e = efficiency

ok for Hydropower Mgmt.

1.) Affidavit of Residency ✓
2.) Ownership of Facilities ✓
3.)*Financial Ability ✓
4.) Feasibility of Project ✓
a. Plans, drawings
b. Economic analysis
5.)*Compliance w/FERC ✓
License Issued 12-29-86
*only for projects of more than 25 cfs or more than 500 horsepower.

$$e = \frac{P(11.8)}{QH} = \frac{744 \times 11.8}{210 \times 49.2} = \frac{8779.2}{10332} = 0.85$$

Based on the above calculations the proposed project must have an 85 % efficiency.

****

OVERLAP REVIEW per ~~manual~~ VAX

P/D none

P/U 29-3283 – both are irrig. rights – use W4
29-2053 – in cover letter.

BYPASSED AREA

KW 5/27/88

State of Idaho
DEPARTMENT OF WATER RESOURCES
Eastern Region

CECIL D. ANDRUS
Governor

R. KEITH HIGGINSON
Director

Mailing Address:
150 Shoup Ave., Suite 15
Idaho Falls, Idaho 83402
(208) 525-7161

23 May 1988

Maher F. Wissa, P.E.
President
Commercial Energy Mgmt, Inc.
P.O. Box 4518
Pocatello, Idaho 83205

RE: Application for Permit 29-7699

Dear Mr. Wissa:

A Proposed Memorandum Decision and Order for the above captioned application has been forwarded to the department's state office for final review. This process normally takes a minimum of two weeks.

The Proposed Decision is based on the record created at the hearing in Pocatello on 23 February 1988. Therefore, any administrative consideration of the assignment from Hydro Power Mgmt, Inc. to Commercial Energy Mgmt, Inc. will be deferred until the decision has been issued.

Respectfully submitted,

Ernest Carlsen
Water Rights Supervisor

COMMERCIAL ENERGY MGMT INC.

515 East Benton, Suite 201, P.O. Box 4518 • Pocatello, Idaho 83205 • Telephone (208) 233-0360 • TLX: 144111 OCOM UT

May 11, 1988
Ref: CEM/0092

Mr. Ernest Carlsen
Water Rights Supervisor
Department of Water Resources
Eastern Region
150 Shoup, Suite 15
Idaho Falls, ID 83402

Subject: Portneuf River Hydroelectric Project
Lava Hot Springs, Idaho
FERC Project No. 7447-002
Water Permit Application No. 29-7699 submitted in 1985

Reference: CEM/0081 Dated April 26, 1988

Dear Mr. Carlsen:

I would appreciate it if you could provide us with your response to our referenced letter, and the status on the subject water permit application.

Very truly yours,

Maher F. Wissa

Maher F. Wissa, P.E.
President

MW/sg
PC: Director, Department of Water Resources, Boise, ID

RECEIVED
MAY 12 1988
Department of Water Resources
Eastern District Office

COMMERCIAL ENERGY MGMT INC.

515 East Benton, Suite 201, P.O. Box 4518 • Pocatello, Idaho 83205 • Telephone (208) 233-0360 • TLX: 144111 OCOM UT

May 4, 1988
Ref: CEM/0087

RECEIVED
MAY 6 1988
Department of Water Resources
Eastern District Office

Mr. Archie W. Service
Green, Service, Gasser & Kerl
Attorneys at Law
P.O. Box 4883
Pocatello, ID 83205-4883

Subject: Portneuf River Hydroelectric Project
Lava Hot Springs, Idaho
FERC Project No. 7447-002
Easement Negotiations

Dear Mr. Service:

Thank you for your letter dated May 2, 1988, in which you have stated your concern as to "with whom we are dealing and with whom the FERC permit rests." Attached please find the following documents, listed in chronological order, which will provide you with a clear understanding of the present status of the FERC license owner and the principals of our corporation.

Attachment No.	Date	Description
1	FEB 1, 1988	A letter from Whittier to FERC providing: a) A request for withdrawal of the application for transfer of FERC license No. 7447-002 from Commercial Energy Management, Inc. to Hydropower Management, Inc. b) The names of new officers of Commercial Energy Management, Inc. as Angus W. Stone, Maher F. Wissa, and Girgis F. Wissa.
2	MAR 7, 1988	The filing date for the Articles of Incorporation of Commercial Energy Management, Inc. (CEM) with the Secretary of State of the State of Idaho.
3.	MAR 28, 1988	A letter from CEM (ref: CEM/0006) to FERC providing information on the project's new owner (CEM), its address, telephone number, and the officer of the company (Maher F. Wissa, President), who is in charge of the project.

Attachment No.	Date	Description
4	MAR 28, 1988	A letter from CEM (ref: CEM/0015) to Mr. Hamilton, Director of the State Land Board, stating the same as in attachment-3.
5	MAR 28, 1988	A letter from CEM (ref: CEM/0016) to Ms. Keller, Director of the Lava Hot Springs Foundation, stating the same as in attachment-3.

I would appreciate it if you could expedite the process of scheduling a meeting for easement negotiations. Please note that the finalization of this subject is very important in order for us to proceed with the final design and construction within the period specified in the project FERC license, Article 301, which requires the project construction to start this year and be completed before the end of next year.

Please feel free to contact me if you have any questions or require additional information on the above subject.

Very truly yours,

Maher F. Wissa, P.E.
President

MW/sg
Enclosures: Five
PC: Mr. Stanley F. Hamilton, Director, State Land Board, Boise, ID
Ms. Lois Cashell, Acting Secretary, FERC, Washington, DC
Mr. Harry Hall, FERC, Portland Regional Office, Portland, OR
Mr. Ernest Carlsen, Dept. of Water Resources, Idaho Falls, ID
Director, Dept. of Water Resources, Boise, ID

Attachment- 1

WHITTIER & SOUZA, P.A.
ATTORNEYS AT LAW
653 EAST CENTER
POCATELLO, IDAHO 83205

R.M. WHITTIER
JOHN C. SOUZA
MONTE R. WHITTIER

P.O. BOX 4082
PHONE 233-6444

February 26, 1988

Ms. Lois D. Cashell
Acting Secretary
Federal Energy Regulation Commission
825 North Capitol Street, N.E.
Washington, D.C. 20426

Re: Project No. 7447-002

Dear Madame Secretary:

On behalf of Hydro Power Management, Inc. this letter is being written to request that the applicatin for transfer of FERC License No. 7447-002 from Commercial Energy Management, Inc. to Hydro Power Management, Inc., a copy of which is attached hereto and incorporated herein by reference as Exhibit A, be withdrawn and that the publication for comment on the application for approval of transfer of license not be followed through with at the present time and further, that the license be retained in the name of Commercial Energy Management, Inc.

At the present time, Hydro Power Management, Inc. has purchased the entire corporate assets of Commercial Energy Management, Inc. and therefore, the transfer of the license from Commercial Energy Management, Inc. to Hydro Power Management, Inc. will not be necessary in that the new owners of Commercial Energy Management, Inc. will continue to operate under and follow through with project no. 7447-002 under the name of Commercial Energy Management, Inc.

The new officers of Commercial Energy Management, Inc. will be Angus W. Stone, President and Maher F. Wissa, Vice-President and Girgis F. Wissa, Secretary-Treasurer.

This letter will be followed up with the appropriate information being furnished to FERC regarding new owners of Commercial Energy Management, Inc. If you have any questions or comments, please feel free to contact me.

Very truly yours,

WHITTIER & SOUZA, P.A.

MONTE R. WHITTIER

MRW/ls

Enclosure

APPROVED BY:

BOB L. NESTOR, President
Hydro Power Management, Inc.

APPLICATION FOR APPROVAL OF
TRANSFER OF LICENSE

(1) COMMERCIAL ENERGY MANAGEMENT, INC., licensee under the license for Project No. 7447-002 issued by the Commission on the 29th day of December, 1986; and

(2) HYDRO POWER MANAGEMENT, INC., hereinafter referred to as "Transferee," do hereby jointly and severally apply for the written approval by the Federal Power Commission of the transfer of the foresaid license from the Transferor to the transfeee and request that the instrument of such approval by the Commission be made effective as of the date of conveyance of the project properties; and in support thereof show the Commission as follows:

(3) That said Transferee is Hydro Power Management, Inc., a corporation and is organized under the laws of the State of Idaho and domesticated in the United States of America; certified copies of its certificate or incorporation, articles of incorporation and corporate by-laws with all amendments of each to date, being submitted herewith as Exhibits A, B and C, said exhibits being hereby incorporated herein and made a part hereof.

(4) The Transferee will submit certified copies of all instruments of conveyance whereby title to the project properties is conveyed to it, upon the completion of such con-

veyance, if and when the Commission shall have given its approval to the proposed transfer;

(5) If and when the Commission shall have given its approval to the proposed transfer, and upon completion of conveyance of the project properties to the Transferee, the Transferor will deliver to the Transferee will accept and permanently retain all license instruments and all mapsl, plans, specifications, contracts, reports of engineers, accounts, books, records and all other papers and documents relating to the original project and to all additions thereto and betterments thereof;

(6) The Transferor certifies that it has fully complied with the terms and conditions of its license, as amended, and that it has fully satisfied and discharged all of its liabilities and obligations thereunder to the date hereof, and obligates itself to pay all annual charges accrued under the license to the date of transfer;

(7) Contingent upon the final written approval by the Commission of the transfer of the license, the Transferee accepts all the terms and conditions fo the said license (as amended) and the act, and agrees to be bound thereby to the same extent as though it were the original licensee thereunder;

(8) The name, title, and post office address of the person or persons to whom correspondence in regard to this application shall be addressed are as follows:

Hydro Power Management, Inc.
Attention: Bob L. Nestor
4950 Valenty Road, Suite C
Chubbuck, ID 83202

IN WITNESS WHEREOF, the Transferor has caused its name to be hereunto signed by MARLON BIRD its Chief Executive Officer and Fifty Percent (50%) owner, and Robert Bird, Fifty Percent (50%) owner, and no corporate seal is affixed hereto since the same was operating as a defacto corporation, and the Transferee has caused its name to be hereunto signed by BOB L. NESTOR, President and its corporate seal to be hereunto affixed by CINDY NESTOR, Secretary-Treasurer, thereunto duly authorized this 1st day of ~~November~~ December, 1987.

COMMERCIAL ENERGY MANAGEMENT, INC.

By: MARLON BIRD

By: ROBERT BIRD

HYDRO POWER MANAGEMENT, INC.

By: BOB L. NESTOR
President

ATTEST:

By: CINDY NESTOR
Secretary-Treasurer

SECR[illegible]TATE
STATE CAPITAL
BOISE, IDAHO

Attachment- 2

State of Idaho

Department of State.

I, PETE T. CENARRUSA, Secretary of State of the State of Idaho, hereby certify that I am the custodian of the corporation and limited partnership records of this State.

I FURTHER CERTIFY That the annexed is a full, true and complete transcript of articles of incorporation of COMMERCIAL ENERGY MANAGEMENT, INCORPORATED, an Idaho corporation, received and filed in this office on the 7th day of March, 1988, as appears of record in this office as of this date.

Dated: March 7, 1988

GREAT SEAL OF THE STATE OF IDAHO
ESTO PERPETUA

Pete T. Cenarrusa
SECRETARY OF STATE

by: Diane Walker

MICROFILMED
SEP 20 1988

CCC 583

IV

The purpose for which this corporation is formed are as follows:

Any and all lawful operations as allowed by the laws and statutes of the State of Idaho.

V

The corporate powers, business and property of the corporation shall be exercised, conducted and controlled by a Board of Directors, who shall be elected by the stockholders in accordance with the By-Laws, and who shall have the power to repeal, amend and adopt new By-Laws of and for the corporation, and to hold their meetings pursuant to the provisions of the By-Laws, and at such places and at such times as the said Board of Directors may, by resolution, direct or by act of the Board fix, both within and outside the State of Idaho.

The Board of Directors shall consist of the following persons: Angus Stone, Maher F. Wissia and Girgis F. Wissa, and such other persons as from time to time might be designated not to exceed four in number, all with the addresses as set forth in Paragraph VIII of these Articles.

VI

The amount of the authorized capital stock of this corporation shall be 1,000,000 Shares of the par value of $1.00 per share.

VII

The amount of the said capital stock, i.e., 1,000,000 Shares, shall be non-assessable, all common, one class, voting shares.

VIII

The amount of said capital stock that has been actually subscribed is two (2) shares, and the names and

ARTICLES OF INCORPORATION

OF

COMMERCIAL ENERGY MANAGEMENT, INCORPORATED

KNOW ALL MEN BY THESE PRESENTS: That we, the undersigned, being all bona fide citizens and residents of the United States of America, and each being over the age of eighteen (18) years, do under and in pursuance of the general corporation laws of the State of Idaho, hereby organize, constitute and associate ourselves and such other persons as may hereafter become associated with us into a body politic and corporate, and to that end execute the following ARTICLES OF INCORPORATION, and we hereby set forth and declare as follows:

I

The name of this corporation is and shall be COMMERCIAL ENERGY MANAGMENT, INCORPORATED. The registered office shall be 515 East Benton Street, Pocatello, Idaho, and the registered agent shall be WISSA F. MAHER, located at 515 East Benton , Pocatello, Idaho.

II

The term of existence of this corporation shall be perpetual.

III

The principal place of business and office of this corporation shall be 515 East Benton Street, Pocatello, Idaho and that other offices for the transaction of business of corporation shall be established by the Board of Directors from time to time, both within and outside of the State of Idaho, and that the meetings of the Board of Directors may be had pursuant to the provisions of the By-Laws at the principal office or at such other places as the By-Laws shall provide.

addresses of the persons who have subscribed therefor and the numer of shares subscribed by each are as follows:

NAME	ADDRESS	NO. SHARES
MAHER F. WISSA	3508 Colony Crossing Charlotte, NC 28266	1 Share
ANGUS W. STONE	4301 Pete Brown Road Charlotte, NC 28213	1 Share

That the following named incorporators are all persons of full age and fully competent and that all of them are citizens of the United States of America.

NAME	ADDRESS
MAHER F. WISSA	3508 Colony Crossing Charlotte, NC 28266
ANGUS W. STONE	4301 Pete Brown Road Charlotte, NC 28213
GIRGIS F. WISSA	2211 Nandi Hills Swartz Creek, MI 48473

IN WITNESS WHEREOF, we have hereunto set our hands and seals this 15 day of February, 1988.

ANGUS W. STONE (SEAL)

MAHER F. WISSA (SEAL)

GIRGIS F. WISSA (SEAL)

STATE OF IDAHO)
: ss
COUNTY OF Bannock)

On this 15 day of February, 1988, before me, a Notary Public in and for the State of Idaho, personally appeared MAHER F. WISSA and ANGUS W. STONE, known to me to be the persons whose names are subscribed to the within instrument and acknowledged to me that they executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written.

(S E A L)

NOTARY PUBLIC of Idaho

Residing at Pocatello

STATE OF MICHIGAN)

: ss

COUNTY OF Genesee)

On this 19 day of February, 1988, before me, a Notary Public in and for the State of Idaho, personally appeared GIRGIS F. WISSA, known to me to be the persons whose name is subscribed to the within instrument and acknowledged to me that he executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written.

JEAN McCARTY
Notary Public, Genesee County, M
My Commission Expires Oct. 1 19[illegible]

(S E A L)

NOTARY PUBLIC of Michigan

Residing at Flint MIchigan County of Genesee

No. 86071

Articles of Incorporation

COMMERCIAL ENERGY MANAGEMENT, INCORPORATED

Perpetual
$1,000,000.00

STATE OF IDAHO
Department of State
Boise, Idaho
Approved, filed and admitted to the corporation records of the State of Idaho
Date March 7, 1988
Time 3:11 pm

FEES PAID $ 60.00

Pete T. Cenarrusa
SECRETARY OF STATE

By: Diane Walker

Invoice # 76838

CCR # 15948

Filing Party
Whittier & Souza
P.O. Box 4082
Pocatello, Idaho 83201

Registered Agent:
Missa F. Maher
515 East Benton
Pocatello, Idaho

COMMERCIAL ENERGY MGMT INC.

515 East Benton, Suite 201, P.O. Box 4518 • Pocatello, Idaho 83205 • Telephone (208) 233-0360 • TLX: 144111 OCOM UT

Attachment- 3

March 28, 1988

ref: CEM/0006

Ms. Lois D. Cashell
Acting Secretary
Federal Energy Regulatory Commission
825 North Capitol Street, N.E.
Washington, D.C. 20426

Subject: Portneuf River Hydroelectric Project
FERC Project No. 7447-002
Project New Owner - Commercial Energy Management, Inc.

Reference: Whittier/ FERC letter dated February 26, 1988

Dear Madam Secretary:

Further to the referenced letter, please be advised that, Hydro Power Management, Inc., who had acquired Commercial Energy Management, Inc., and all assets including the right to FERC Project No. 7447-002 of the Portneuf River Hydroelectric Power Plant No. 1, located in Bannock County Idaho, east of the city of Lava Hot Springs, has sold the interest in Commercial Energy Management, Inc., and the related FERC license to new investors.

Commercial Energy Management, Inc. new address, and telephone number are as follows:

515 East Benton, Suite 201
P.O. Box 4518
Pocatello, Idaho 83205
(208) 233-0360

Therefore, Hydro Power Management, Inc. will have no further interest in Commercial Energy Management, Inc., and FERC Project No. 7447-002.

Please make all inquiries to the above address and to the under signed.

Very truly yours,

Maher F. Wissa

Maher F. Wissa, P.E.
President

MW:wbm

cc: Monte R. Whittier, Whittier & Souza, P.A.

COMMERCIAL ENERGY MGMT INC. Attacment- 4

515 East Benton, Suite 201, P.O. Box 4518 • Pocatello, Idaho 83205 • Telephone (208) 233-0360 • TLX: 144111 OCOM UT

March 28, 1988

ref: CEM/0015

Mr. Stanley F. Hamilton, Director
State Land Board
Idaho Department of lands
Statehouse Mail
Boise, ID 83720

Subject: Portneuf River Hydroelectric Project
FERC Project No. 7447-002
Project New Owner - Commercial Energy Management, Inc.

Dear Mr. Hamilton:

Hydro Power Management, Inc., who had acquired Commercial Energy Management, Inc., and all assets including the right to FERC Project No. 7447-002 of the Portneuf River Hydroelectric Power Plant No. 1, located in Bannock County Idaho, east of the city of Lava Hot Springs, has sold the interest in Commercial Energy Management, Inc., and the related FERC license to new investors.

Commercial Energy Management, Inc. new address, and telephone number are as follows:

515 East Benton, Suite 201
P.O. Box 4518
Pocatello, Idaho 83205
(208) 233-0360

Therefore, Hydro Power Management, Inc. will have no further interest in Commercial Energy Management, Inc., and FERC Project No. 7447-002.

Please make all inquiries to the above address and to the under signed.

Very truly yours,

Maher F. Wissa, P.E.
President

MW:wbm

COMMERCIAL ENERGY MGMT INC. Attachment- 5

515 East Benton, Suite 201, P.O. Box 4518 • Pocatello, Idaho 83205 • Telephone (208) 233-0360 • TLX: 144111 OCOM UT

March 28, 1988

ref: CEM/0016

Ms. Karen Keller
Lava Hot Springs Foundation
Lava Hot Springs, ID 83246

Subject: Portneuf River Hydroelectric Project
FERC Project No. 7447-002
Project New Owner - Commercial Energy Management, Inc.

Dear Ms. Keller:

Hydro Power Management, Inc., who had acquired Commercial Energy Management, Inc., and all assets including the right to FERC Project No. 7447-002 of the Portneuf River Hydroelectric Power Plant No. 1, located in Bannock County Idaho, east of the city of Lava Hot Springs, has sold the interest in Commercial Energy Management, Inc., and the related FERC license to new investors.

Commercial Energy Management, Inc. new address, and telephone number are as follows:

515 East Benton, Suite 201
P.O. Box 4518
Pocatello, Idaho 83205
(208) 233-0360

Therefore, Hydro Power Management, Inc. will have no further interest in Commercial Energy Management, Inc., and FERC Project No. 7447-002.

Please make all inquiries to the above address and to the under signed.

Very truly yours,

Maher F. Wissa, P.E.
President

MW:wbm

COMMERCIAL ENERGY MGMT, INC.

515 East Benton, Suite 201, P.O. Box 4518 • Pocatello, Idaho 83205 • Telephone (208) 233-0360 • TLX: 144111 OCOM UT

RECEIVED
APR 27 1988
Department of Water Resources
Eastern District Office

April 26, 1988
Ref: CEM/0081

Mr. Ernest Carlsen
Water Rights Supervisor
Department of Water Resources
Eastern Region
150 Shoup, Suite 15
Idaho Falls, ID 83402

Subject: Portneuf River Hydroelectric Project
Lava Hot Springs, Idaho
FERC No. 7447-002
Water Permit Application No. 29-7699, submitted in 1985

Dear Mr. Carlsen:

Thank you for your telephone call on April 25, 1988. It is understood from our telephone conversation that you are in the process of developing a Draft Decission on the above-mentioned subject, which will take five days. Thereafter, the Draft Decission will be sent to the director for his review/approval.

As you know, the finalization of this subject is very important in order for us to proceed with the final design and construction within the period specified in the project FERC license. I, therefore, would appreciate it if you could expedite the process, and keep us informed as to its status and whether you will require any additional information that we can provide.

Very truly yours,

Maher F. Wissa, P.E.
President

MW/sg
PC: Director, Department of Water Resources, Boise, ID

JAMES B. GREEN
ARCHIE W. SERVICE
CLARK GASSER*
RON KERL
JIM D. PAPPAS
DUANE A. BYBEE**
FREDERICK L. RINGE
STEVEN V. RICHERT
GUY R. PRICE

RICK CARNAROLI
JAMES A. SPINNER
KAY E. MOORE

*Also Member D.C. Bar
**Also Member Utah Bar

GREEN, SERVICE, GASSER & KERL
ATTORNEYS AT LAW
2043 E. CENTER — P.O. BOX 4883
POCATELLO, IDAHO 83205-4883

TELEPHONE (208) 232-4471

BOISE OFFICE

SUITE 302 JEFFERSON PLACE
350 NINTH STREET
P.O. BOX 1887
BOISE, IDAHO 83701
TELEPHONE (208) 343-2222

April 26, 1988

RECEIVED
APR
Department of Water Resources
Eastern District Office

Ernest Carlson
Water Rights Supervisor
Dept. of Water Resources
150 Shoup Ave., Suite 15
Idaho Falls, ID 83402

Re: Application for Permit 29-7699
Financial Statement of Bob and Cindy Nestor

Dear Mr. Carlson:

Thank you for your letter of April 22, 1988 together with the enclosures. We assure you that those enclosures will be kept confidential.

We are somewhat confused with reference to the status of Bob and Cindy Nestor. We have been informed by Mr. Dale Pape that Mr. and Mrs. Nestor are no longer the principals involved in this application (see appended letter). Also, we are confused as to the corporate status of Commercial Energy Management, Inc.

FERC License Project No. 7447-002 was issued December 29, 1986 to Commercial Energy Management, Inc. Application was then made by Hydro Power Management, Inc. to have that permit transferred to Hydro Power Management, Inc. That application has been withdrawn. On December 3, 1984 Commercial Energy Management, Inc. forfeited its corporate charter for failure to file annual statement. On March 7, 1988 a new corporation was formed by the name of Commercial Energy Management, Incorporated. We believe this is the corporation of which Mr. Dale Pape is the representative. If this be the case, they do not hold the FERC License, nor are they the people for whom application for Permit No. 29-7699 has been made.

This brings us back to your letter of April 22, 1988 and if the above facts be pertinent the financial statement of Mr. and Mrs. Bob Nestor is no longer

germaine to the issue. Further, if this be the case, the new corporation should make the application for water permit and submit proof of their financial responsibility.

Your comments would be appreciated.

Very Truly Yours,

GREEN, SERVICE, GASSER & KERL

Archie W. Service

AWS/dt
cc: Karen Keller
Foundation Board Members
5/2/116/10

State of Idaho
DEPARTMENT OF WATER RESOURCES
Eastern Region

CECIL D. ANDRUS
Governor

R. KEITH HIGGINSON
Director

Mailing Address:
150 Shoup Ave., Suite 15
Idaho Falls, Idaho 83402
(208) 525-7161

22 April 1988

Archie Service
Green, Service, Gasser & kerl
P.O. Box 4883
Pocatello, ID 83201-0883

RE: Application for Permit 29-7699
Financial Statement of Bob and Cindy Nestor

Dear Mr. Service:

Enclosed for your review is the financial statement of Mr. and Mrs. Nestor. This information was requested by the hearing officer to be included with other evidence provided during the hearing held 23 February 1988 in Pocatello.

Please examine the statement and notify this office within 10 days from the date on this letter of any objections to making it a part of the record in this matter.

This information is to remain confidential and the documents should be returned to this office when you are finished with them.

Respectfully submitted,

Ernest Carlsen
Water Rights Supervisor

Enclosure:

42-205. Issuance of permit — Restrictions. — No permit shall be issued by the department of water resources of the state of Idaho, for the appropriation of water for power purposes, nor shall any such permit be assigned, transferred, mortgaged, sold or conveyed to any person, firm or corporation except in accordance with the provisions of this act. [1937, ch. 142, § 1, p. 233; am. 1947, ch. 66, § 1, p. 106.]

Compiler's notes. The words "this act" refer to S.L. 1937, ch. 142, as amended by S.L. 1947, ch. 66, which is compiled herein as §§ 42-205 — 42-210.

The name of the department of water administration (formerly the department of reclamation) has been changed to the department of water resources on the authority of S.L. 1974, ch. 286, § 1 and S.L. 1974, ch. 20, § 28 (§ 42-1801a).

42-206. Residence a requisite for issuance. — No permit to appropriate water for power purposes in the state of Idaho shall hereafter be granted to any person or association of persons not an actual bona fide resident or residents of the state of Idaho, nor to any corporation unless organized or qualified to do business in and under the laws of the state of Idaho. [1937, ch. 142, § 2, p. 233; am. 1947, ch. 66, § 2, p. 106.]

42-207. Sale, transfer, assignment or mortgage of permit. — Whenever the holder of a permit to appropriate water for power purposes within the state of Idaho, desires to sell, assign, transfer or mortgage such permit so held by him, he shall file with the director of the department of water resources a copy of the deed, bill of sale, assignment, mortgage or other document of transfer, together with such proof as the director of the department of water resources may require that the new owner, holder or assignee of such permit, or the mortgagee, or one or more of the trustees under any mortgage trust indenture, possesses the qualifications set forth in section 42-206, and that such transfer is made in good faith, and not for purposes of speculation or delay; and the sale, transfer, assignment or mortgaging of any such permit except as herein provided shall be void, it being the express intention of the legislature to prohibit the transfer of permits to appropriate water for power purposes by mortgaging the same or otherwise, except in accordance with the provisions of this act. [1937, ch. 142, § 3, p. 233; am. 1947, ch. 66, § 3, p. 106.]

Compiler's notes. For sections in which "this act" is compiled, see note to § 42-205.

The name of the director of the department of water administration (formerly the state reclamation engineer) has been changed to the director of the department of water resources on the authority of S.L. 1974, ch. 286, § 1 and S.L. 1974, ch. 20, § 31 (§ 42-1804).

Collateral References.

Assignability of an easement in gross or of a license in respect to water. 130 A.L.R. 1253.

42-208. Cancellation or revocation for noncompliance. — Every permit to appropriate water for power purposes hereafter issued by the director of the department of water resources shall have plainly printed thereon, that the same is issued subject to the provisions of this act and in the event of its sale, transfer, assignment or of its being mortgaged without a compliance with the provisions of this act, such permit shall be immediately canceled

42-205. Issuance of permit — Restrictions. — No permit shall be issued by the department of water resources of the state of Idaho, for the appropriation of water for power purposes, nor shall any such permit be assigned, transferred, mortgaged, sold or conveyed to any person, firm or corporation except in accordance with the provisions of this act. [1937, ch. 142, § 1, p. 233; am. 1947, ch. 66, § 1, p. 106.]

Compiler's notes. The words "this act" refer to S.L. 1937, ch. 142, as amended by S.L. 1947, ch. 66, which is compiled herein as §§ 42-205 — 42-210.

The name of the department of water administration (formerly the department of reclamation) has been changed to the department of water resources on the authority of S.L. 1974, ch. 286, § 1 and S.L. 1974, ch. 20, § 28 (§ 42-1801a).

42-206. Residence a requisite for issuance. — No permit to appropriate water for power purposes in the state of Idaho shall hereafter be granted to any person or association of persons not an actual bona fide resident or residents of the state of Idaho, nor to any corporation unless organized or qualified to do business in and under the laws of the state of Idaho. [1937, ch. 142, § 2, p. 233; am. 1947, ch. 66, § 2, p. 106.]

42-207. Sale, transfer, assignment or mortgage of permit. — Whenever the holder of a permit to appropriate water for power purposes within the state of Idaho, desires to sell, assign, transfer or mortgage such permit so held by him, he shall file with the director of the department of water resources a copy of the deed, bill of sale, assignment, mortgage or other document of transfer, together with such proof as the director of the department of water resources may require that the new owner, holder or assignee of such permit, or the mortgagee, or one or more of the trustees under any mortgage trust indenture, possesses the qualifications set forth in section 42-206, and that such transfer is made in good faith, and not for purposes of speculation or delay; and the sale, transfer, assignment or mortgaging of any such permit except as herein provided shall be void, it being the express intention of the legislature to prohibit the transfer of permits to appropriate water for power purposes by mortgaging the same or otherwise, except in accordance with the provisions of this act. [1937, ch. 142, § 3, p. 233; am. 1947, ch. 66, § 3, p. 106.]

Compiler's notes. For sections in which "this act" is compiled, see note to § 42-205.

The name of the director of the department of water administration (formerly the state reclamation engineer) has been changed to the director of the department of water resources on the authority of S.L. 1974, ch. 286, § 1 and S.L. 1974, ch. 20, § 31 (§ 42-1804).

Collateral References.

Assignability of an easement in gross or of a license in respect to water. 130 A.L.R. 1253.

42-208. Cancellation or revocation for noncompliance. — Every permit to appropriate water for power purposes hereafter issued by the director of the department of water resources shall have plainly printed thereon, that the same is issued subject to the provisions of this act and in the event of its sale, transfer, assignment or of its being mortgaged without a compliance with the provisions of this act, such permit shall be immediately canceled and revoked by the director of the department of water resources. [1937, ch. 142, § 4, p. 233; am. 1947, ch. 66, § 4, p. 106.]

Compiler's notes. For sections in which "this act" is compiled, see note to § 42-205.

The name of the director of the department of water administration (formerly the state reclamation engineer) has been changed to the director of the department of water resources on the authority of S.L. 1974, ch. 286, § 1 and S.L. 1974, ch. 20, § 28 (§ 42-1801a).

Cross ref. Petition for cancellation, § 42-302.

42-209. Effect of illegal transfer. — Every permit to appropriate water for power purposes that shall be sold, transferred, assigned or mortgaged in violation of the provisions of this act shall be immediately canceled, and the transfer thereof shall not be binding on the state of Idaho. [1937, ch. 142, § 5, p. 233; am. 1947, ch. 66, § 5, p. 106.]

Compiler's notes. For sections in which "this act" is compiled, see note to § 42-205.

42-210. Application of act. — The provisions of this act shall not apply to any municipal corporations within the state. [1937, ch. 142, § 6, p. 233.]

Compiler's notes. Section 7 of S.L. 1937, ch. 142 repealed S.L. 1935, ch. 75.

For sections in which "this act" is compiled, see note to § 42-205.

42-211. Amended application or permit — Appeals. — Whenever a permit has been issued pursuant to the provisions of this act, and the permit holder desires to change the place, period, or nature of the intended use, or make other substantial changes in the method of diversion or proposed use or uses of the water, he shall file an application for amendment upon forms to be furnished by the department of water resources, together with the statutory fee for filing and recording same, and upon receipt thereof it shall be the duty of the department of water resources to examine same and if approval thereof would not result in the diversion and use of more water than originally permitted and if the rights of others will not be adversely affected thereby, the director of the department of water resources shall approve said application and return an approved copy to the permit holder. The director of the department of water resources shall give such notice to other affected water users as he deems appropriate and may grant the amendment, in whole or in part or upon conditions, or may deny same. Notice of partial approval or conditions or denial of an amendment shall be forwarded to the applicant by certified mail and shall be subject to judicial review as hereafter provided. The priority of the right established pursuant to a permit which has been amended under these provisions shall date from the date of the original application for permit, provided the permit holder has complied with other provisions of this act.

In connection with any application on which permit has not been issued, amendments may be made by indorsement by the applicant or his agent on the original application, which indorsement shall be initialed and dated. If the amendment will result in the use of more water than originally asked, the priority of the right shall be changed to the date of said amendment. The applicant shall also be required to pay any additional filing fee as a

CONVERSATION MEMO

DATE: April 14, 1988

PARTY: Dale Poppy (representing Commercial Energy Mgmt.,Inc.)

EMPLOYEE: Eric Verner

RE: 29-7699

Mr. Poppy came in to leave some information, requested by Ernie, regarding permit 29-7699. The first document, exhibit"Q", is the articles of incorporation for Commercial Energy Management, Incorporated. The second document, exhibit "U", is the contract of sale of Hydro Power Management, Inc. to S and W Energy, Inc. which is now Commercial Energy Management Inc.

The final matter discussed was proof of financial ability of Commercial Energy to complete the project under 29-7699. Mr. Poppy showed me the financial statements of the major Corporate owners. These statements appeared to show reasonable evidence that there is financial ability in the Corporation to complete the project. The liquid assets of the major corporate owners totaled in excess of 5 million dollars.

CEM COMMERCIAL ENERGY MANAGEMENT, INC.

DALE K. PAPE
Construction Manager

515 East Benton, Suite 201
P.O. Box 4518
Pocatello, ID 83205

Tel: (208) 233-0360
Tlx: 154111 OCOM UT

SECRETARY OF STATE
STATE CAPITAL
BOISE, IDAHO

EXHIBIT "Q"

State of Idaho

Department of State

I, PETE T. CENARRUSA, Secretary of State of the State of Idaho, hereby certify that I am the custodian of the corporation and limited partnership records of this State.

I FURTHER CERTIFY That the annexed is a full, true and complete transcript of articles of incorporation of COMMERCIAL ENERGY MANAGEMENT, INCORPORATED, an Idaho corporation, received and filed in this office on the 7th day of March, 1988, as appears of record in this office as of this date.

Dated: March 7, 1988

Pete T. Cenarrusa

SECRETARY OF STATE

by: Diane Walker

ARTICLES OF INCORPORATION

OF

COMMERCIAL ENERGY MANAGEMENT, INCORPORATED

KNOW ALL MEN BY THESE PRESENTS: That we, the undersigned, being all bona fide citizens and residents of the United States of America, and each being over the age of eighteen (18) years, do under and in pursuance of the general corporation laws of the State of Idaho, hereby organize, constitute and associate ourselves and such other persons as may hereafter become associated with us into a body politic and corporate, and to that end execute the following ARTICLES OF INCORPORATION, and we hereby set forth and declare as follows:

I

The name of this corporation is and shall be COMMERCIAL ENERGY MANAGMENT, INCORPORATED. The registered office shall be 515 East Benton Street, Pocatello, Idaho, and the registered agent shall be WISSA F. MAHER, located at 515 East Benton , Pocatello, Idaho.

II

The term of existence of this corporation shall be perpetual.

III

The principal place of business and office of this corporation shall be 515 East Benton Street, Pocatello, Idaho and that other offices for the transaction of business of corporation shall be established by the Board of Directors from time to time, both within and outside of the State of Idaho, and that the meetings of the Board of Directors may be had pursuant to the provisions of the By-Laws at the principal office or at such other places as the By-Laws shall provide.

IV

The purpose for which this corporation is formed are as follows:

Any and all lawful operations as allowed by the laws and statutes of the State of Idaho.

V

The corporate powers, business and property of the corporation shall be exercised, conducted and controlled by a Board of Directors, who shall be elected by the stockholders in accordance with the By-Laws, and who shall have the power to repeal, amend and adopt new By-Laws of and for the corporation, and to hold their meetings pursuant to the provisions of the By-Laws, and at such places and at such times as the said Board of Directors may, by resolution, direct or by act of the Board fix, both within and outside the State of Idaho.

The Board of Directors shall consist of the following persons: Angus Stone, Maher F. Wissia and Girgis F. Wissa, and such other persons as from time to time might be designated not to exceed four in number, all with the addresses as set forth in Paragraph VIII of these Articles.

VI

The amount of the authorized capital stock of this corporation shall be 1,000,000 Shares of the par value of $1.00 per share.

VII

The amount of the said capital stock, i.e., 1,000,000 Shares, shall be non-assessable, all common, one class, voting shares.

VIII

The amount of said capital stock that has been actually subscribed is two (2) shares, and the names and

addresses of the persons who have subscribed therefor and the numer of shares subscribed by each are as follows:

NAME	ADDRESS	NO. SHARES
MAHER F. WISSA	3508 Colony Crossing Charlotte, NC 28266	1 Share
ANGUS W. STONE	4301 Pete Brown Road Charlotte, NC 28213	1 Share

That the following named incorporators are all persons of full age and fully competent and that all of them are citizens of the United States of America.

NAME	ADDRESS
MAHER F. WISSA	3508 Colony Crossing Charlotte, NC 28266
ANGUS W. STONE	4301 Pete Brown Road Charlotte, NC 28213
GIRGIS F. WISSA	2211 Nandi Hills Swartz Creek, MI 48473

IN WITNESS WHEREOF, we have hereunto set our hands and seals this 15th day of February, 1988.

ANGUS W. STONE (SEAL)

MAHER F. WISSA (SEAL)

GIRGIS F. WISSA (SEAL)

STATE OF IDAHO)
: ss
COUNTY OF Bannock)

On this 15th day of February, 1988, before me, a Notary Public in and for the State of Idaho, personally appeared MAHER F. WISSA and ANGUS W. STONE, known to me to be the persons whose names are subscribed to the within instrument and acknowledged to me that they executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written.

(S E A L)

NOTARY PUBLIC of Idaho
Residing at Pocatello

STATE OF MICHIGAN)
: ss
COUNTY OF Genesee)

On this 19 day of February, 1988, before me, a Notary Public in and for the State of Idaho, personally appeared GIRGIS F. WISSA, known to me to be the persons whose name is subscribed to the within instrument and acknowledged to me that he executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written.

JEAN McCARTY
Notary Public, Genesee County, M
My Commission Expires Oct. 1 19

(S E A L)

NOTARY PUBLIC of Michigan
Residing at Flint MIchigan County of Genesee

No. 86071

Articles of Incorporation

COMMERCIAL ENERGY MANAGEMENT, INCORPORATED

Perpetual
$1,000,000.00

STATE OF IDAHO
Department of State
Boise, Idaho
Approved, filed and admitted to the corporation records of the State of Idaho
Date March 7, 1988
Time 3:11 pm

FEES PAID $ 60.00

Pete T. Cenarrusa
SECRETARY OF STATE

By: Diane Walker

Invoice # 76838

CCR # 15948

Filing Party
Whittier & Souza
P.O. Box 4082
Pocatello, Idaho 83201

Registered Agent:
Missa F. Maher
515 East Benton
Pocatello, Idaho

EXHIBIT "U"

CONTRACT FOR SALE
AND ASSIGNMENT

This Agreement made and entered into on this 15th day of February, 1988, by and between HYDRO POWER MANAGEMENT, INC., an Idaho Corporation, hereinafter referred to as "Sellers", and S and W ENERGY, INC., hereinafter referred to as "Buyers".

WHEREAS, HYDRO POWER MANAGEMENT, INC., is an Idaho Corporation doing business in the State of Idaho; and

WHEREAS, HYDRO POWER MANAGEMENT, INC., has, pending, a Federal Energy Regulation Commission License for development of hydro power on the Portneuf River, which is identified as Project No. 7447-002, the same being in the process of being transferred from Commercial Energy Management, Inc. to Sellers; and

WHEREAS, HYDRO POWER MANAGEMENT, INC., also holds rights to certain water right permits applied for and pending through the State Water Resources Board and the State of Idaho in relation to Federal Energy Regulation Commission License No. 7447-002, said permits being up for final hearing on February 23, 1988 and at this time, remain unissued; and

WHEREAS, HYDRO POWER MANAGEMENT, INC., has obtained certain engineering work and drawings done through J-U-B Engineers, Inc., and having developed its own energy work and drawings; and

WHEREAS, HYDRO POWER MANAGEMENT, INC., desires to sell and assign all their rights, titles and interest to Federal Energy Regulation Commission License No. 7447-002, and any and all water rights and permits entitled to under said License No. 7447-002, and any and all engineering work, projects and drawings done by Seller and/or J-U-B Engineers, Inc., for and on behalf of Federal Energy Regulation Commission License No. 7447-002; and

WHEREAS, S and W ENERGY, INC., is desirous of buying any and all interests in Federal Energy Regulation Commission License No. 7447-002 and related water rights through the State of Idaho and engineering drawings completed by Seller and/or J-U-B Engineers, Inc.

THEREFORE, it is mutually agreed as follows:

I.

For and in consideration of the mutual covenants and agreements herein contained to be kept and performed by the parties hereto, it is mutually agreed as follows:

II.

Seller hereby agrees to sell and assign to Buyer and Buyer covenants and agrees to purchase from Seller, the following described, to-wit:

1. License issued December 29, 1986, by the United States of America, Federal Energy Regulation Commission, to Commercial Energy Management, Inc., and subsequently purchased by Hydro Power Management, Inc., Project No. 7447-002 and currently pending transfer before FERC, for the rights to develop a hydro power project on the Portneuf River, east of Lava Hot Springs, Idaho.

2. Any and all water rights, permits or licenses Sellers are entitled to or have applied for, through the State of Idaho, Department of Water Resources, in relation to and regarding the license obtained from the Federal Energy Regulation Commission and identified as Project No. 7447-002.

3. Any and all drawings, schematics, notes or other works performed by Sellers and/or J-U-B Engineers, Inc., for and on behalf of Sellers in developing, submitted to, and obtaining Federal Energy Regulation Commission License, identified as Project No. 7447-002.

4. Any and all other permits, easements, land purchases, or other assets or licenses or permits obtained and/or pending in the preparation, submitting and obtaining of Federal Energy Regulation Commission, Project No. 7447-002.

5. It is further agreed by and between the parties that upon the completion of this sale, Sellers will hold no assets, land holdings, permits, licenses, or other rights and privileges that in anyway could block or prevent the Buyer from completing the development of the hydro electric project that has been licensed by the Federal Energy Regulation Commission

III.

In consideration hereof, the Sellers agree to sign any and all other documents necessary which are unknown to the Sellers and Buyer, at the present time, to effectuate the transfer of those assets, permits and licenses as set forth in Paragraph I.

IV.

Buyer shall have all the rights to the possession of said properties as set forth in Paragraph I hereinabove, on the date of the signing of this Agreement. The Buyer shall have the right to immediately begin transferring said property rights, licenses and permits to the Buyer immediately thereafter.

V.

For and in consideration of the above, the Buyer agrees to pay to the Sellers the sum of TWO HUNDRED FIFTY THOUSAND DOLLARS ($250,000.00), said amount to be as follows: The sum of $125,000.00 on or before Friday, February 19, 1988 at the hour of 5:00 o'clock p.m., the balance on or before Friday, February 26, 1988 at the hour of 5:00 o'clock p.m. Said funds to be transferred to the Whittier and Souza Trust

Account located at Idaho Bank and Trust, Pocatello, Idaho, account no. 000038232.

VI.

For and in consideration of the above, the Sellers represent to the Buyer that they are unaware of, nor have they been informed of any impediments that would prevent the completion of the hydro power electric project that is allowed under the Federal Energy Regulation Commission License, Project No. 7447-002, and that to the best of the knowledge of the Selelrs, those requirements as set forth by Federal Energy Regulation Commission License, Project No. 7447-002, can be complied with. However, this is not a guarantee on behalf of the Sellers that the project is feasible and that it can be completed, but rather the Sellers are unaware of any outstanding denials of licenses, permits or land transfers which would prevent the completion of the project. Buyer further understands tht the FERC license no. 7447-002 has not been placed in the name of Sellers, but is pending approval before FERC at the present time, and Sellers make no representations that said transfer will be completed. Further, Buyer understands that final negotiations on all easements must still be undertaken and that water rights must still be finalized with the State of Idaho. That Sellers only represent that they know of no reason why said license, permits or easements will not be finalized and issued and that Sellers will cooperate in obtaining the transfer and issuance of the license, permits and easements into Buyer's name.

VII.

In the event that it becomes necessary for either of the parties hereto to place this Agreement in the hands of an attorney for the enforcement of their rights hereunder, the

defaulting party agrees to in such case, to pay a reasonable attorneys fee incurred by the prevailing party.

VIII.

This Agreement shall supercede any and all other agreements, written or oral between the parties concerning the matter hereof, and no modification hereof shall be valid, unless in writing, executed by all parties hereto. This contract shall be binding upon the parties hereto, their heirs, assigns and personal representatives.

DATED this 15th day of February, 1988.

HYDRO POWER MANAGEMENT, INC.:

BOB NESTOR, President

CINDY NESTOR, Secretary

S AND W ENERGY, INC.:

MAHER F. WISSA, as Officer of the Corporation and Individually

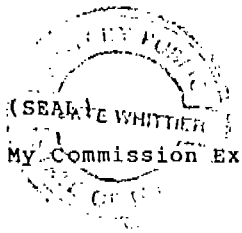
ANGUS W. STONE, As Officer of the Corporation and Individually

STATE OF IDAHO)
: ss
County of Bannock)

On this 15th day of February, 1988, before me, a Notary Public in and for the State of Idaho, personally appeared BOB NESTOR as President of Hydro Power Management, Inc. and CINDY NESTOR as Secretary of Hydro Power Management, Inc., known to me to be the persons whose names are subscribed

to the within instrument and acknowledged to me that they executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written.



(SEAL) E WHITTIER

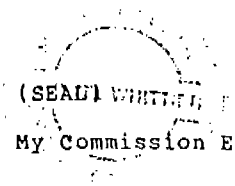
NOTARY PUBLIC for Idaho
Residing at Pocatello

My Commission Expires On: 3/15/93

STATE OF IDAHO)
: ss
County of Bannock)

On this ____ day of February, 1988, before me, a Notary Public in and for the State of Idaho, personally appeared MAHER F. WISSA and ANGUS W. STONE as officers and agents of the S and W Energy, Inc., known to me to be the persons whose names are subscribed to the within instrument and acknowledged to me that they executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written.



(SEAL) WHITTIER

NOTARY PUBLIC for Idaho
Residing at Pocatello

My Commission Expires On:
3/15/93

COMMERCIAL ENERGY MGMT, INC.

515 East Benton, Suite 201, P.O. Box 4518 • Pocatello, Idaho 83205 • Telephone (208) 233-0360 • TLX: 144111 OCOM UT

March 28, 1988

ref: CEM/0009

Mr. Ernest Carlsen
Water Rights Supervisor
Department of Water Resources
Eastern Region
150 Shoup, Suite 15
Idaho Falls, ID 83402

Subject: Portneuf River Hydroelectric Project
FERC Project No. 7447-002
Project New Owner - Commercial Energy Management, Inc.

Dear Mr. Carlsen:

Hydro Power Management, Inc., who had acquired Commercial Energy Management, Inc., and all assets including the right to FERC Project No. 7447-002 of the Portneuf River Hydroelectric Power Plant No. 1, located in Bannock County Idaho, east of the city of Lava Hot Springs, has sold the interest in Commercial Energy Management, Inc., and the related FERC license to new investors.

Commercial Energy Management, Inc. new address, and telephone number are as follows:

515 East Benton, Suite 201
P.O. Box 4518
Pocatello, Idaho 83205
(208) 233-0360

Therefore, Hydro Power Management, Inc. will have no further interest in Commercial Energy Management, Inc., and FERC Project No. 7447-002.

Please make all inquiries to the above address and to the under signed.

RECEIVED
MAR 30 1988
Department of Water Resources
Eastern District Office

Very truly yours,

Maher F. Wissa, P.E.
President

MW:wbm

WHITTIER & SOUZA, P.A.
ATTORNEYS AT LAW
653 EAST CENTER
POCATELLO, IDAHO 83205

R.M. WHITTIER
JOHN C. SOUZA
MONTE R. WHITTIER

P.O. BOX 4082
PHONE 233-6444

Encl —

BDF

February 24, 1988

RECEIVED
FEB 26 1988
Department of Water Resources

Department of Water Resources
Statehouse Mail
Boise, Idaho 83720

Attn: Hearing Officer Fleenor

Re: Financial Statements of Bob and Cindy Nestor

Dear Mr. Fleenor:

Please find enclosed a copy of the Financial Statements of Mr. and Mrs. Nestor, as requested pursuant to the Hearing held on February 23, 1988.

It is my understanding that this is the only information that you requested. Therefore, if there is any further information you might require at this time, please do not hesitate to contact my office, and we will assist you in everyway possible.

Very truly yours,

WHITTIER & SOUZA, P.A.

MONTE R. WHITTIER

MRW/mah

Enclosure

RECEIVED
MAR 3 1988
Department of Water Resources
Eastern District Office

Mr. & Mrs. Bob L. Nestor
Balance Sheet
December 31, 1987

ASSETS

Checking	3,628.87
Loan to Hydro Power Management	35,000.00
Receivable-NBS office rent	1,000.00
McNabb dry farm rent	5,871.18
I.R.A. Accounts-E.F. Hutton(HIS Growth & Putnam)	32,557.31
Idaho Central Credit Union	9,176.22
Travelers	4,270.20
Shares-Inkom Cement Credit Union	420.31
Profit Sharing-B & C Construction	3,000.00
Securities- APCP 707 Shares	6,540.00
Equipment-	
1971 Beechcraft "Duke"	70,000.00
1980 Pitts S-2A	35,000.00
1980 280 Enstrom Helicoptor	65,000.00
Dry Farm - 140 Acres	100,000.00
Commercial Building & 2 rental homes-Chubbuck	478,000.00
Personal residence	102,000.00
Owned equity- Hydro Power Management	107,075.98
Owned equity-B & C and NBS Construction	651,413.89
Investment in Apache Oil-Key Well	1,926.00
Investment Eberstadt Energy	3,622.00
Personal Property(Auto & Misc.)	74,800.00
TOTAL ASSETS	$1,790,301.96

LIABILITIES

Mortgage-Chubbuck Building-Moore Financial	81,876.80
Note Payable to NBS	38,000.00
TOTAL LIABILITIES	$ 119,876.80
NET WORTH	$1,670,425.16
	$1,790,301.96

SEE ACCOMPANYING NOTES AND ACCOUNTANT'S REPORT

Mr. & Mrs. Bob L. Nestor
NOTES TO BALANCE SHEET
DECEMBER 31, 1987

The accompanying financial statement includes the assets and liabilities of Bob L. and Cindy Nestor. Assets are stated at their estimated current values, and liabilities at their estimated current amounts.

A. Notes Payable

Bob and Cindy Nestor have a note payable to NBS Construction, Inc. a corporation in which they are officers and shareholders. The note is payable at $502.18 per month including 10% interest over 10 years.

A mortgage on the Chubbuck Office Building is currently with Moore Financial at 10-3/4% interest. The payment is $1515 per month but the Nestors are currently paying $2015.00 per month to bring the principal down. Without the extra payment the note would mature September 1994.

B. Interest in Net Assets of Corporations.

The value presented represents 100% interest in the net assets of B & C Construction, Inc. and NBS Construction Inc. based on compiled financial statements as of December 31, 1987. Also 100% interest in Hydro Power Mgmt.

B & C Const. Net Equity	564,212.50
NBS Const. Net Equity	87,201.39
Hydro Power Management	107,075.98

C. Commercial Rentals

The building in Chubbuck is leased at $3,200 per month of which $2,000 per month comes from B & C Const. and NBS Const.

The dry farm is leased at $2,500 per year. No payment was received in 1986 and partial payment was received for 1987.

HYDRO POWER MANANGEMENT, INC.
BALANCE SHEET
JANUARY 31, 1988

ASSETS

LAVA HYDRO ELECTRIC PROJECT (F.E.R.C. License, Engineering, Surveying etc.)	$135,000.00
Guaranty on Previous Associate's Lawsuit	105,000.00
Promissory note from Previous Associate	20,773.50
TOTAL ASSETS	$ 260,773.50

LIABILITES

Loan from Bob & Cindy Nestor	35,000.00
Loan from NBS Construction	45,000.00
B & C Job Cost Billing as of 1-31-88	73,697.52
TOTAL LIABILITES	$ 153,697.52
NET WORTH	107,075.98
	$ 260,773.50

L I A B I L I T I E S

CURRENT LIABILITIES

2220	ACCRUED FUTA	16.26	
2310	ACCRUED UNION VACATION	.01	
	TOTAL CURRENT LIABILITIES		16.27
	LONG TERM LIABILITIES		
	TOTAL LONG TERM LIABILITIES	( )	
	TOTAL L I A B I L I T I E S		16.27
	E Q U I T Y		
3100	CAPITAL STOCK	1,000.00	
3200	RETAINED EARNINGS	87,735.55	
3300	CURRENT YEAR EARNINGS	(1,534.16)	
	TOTAL E Q U I T Y		87,201.39
	TOTAL LIABILITIES & EQUITY		87,217.66

A S S E T S

	CURRENT ASSETS		
1010	CASH IN BANK	1,479.55	
1110	A/R RETAINAGE	.01	
1145	LOAN-HYDRO POWER MANAGEMENT INC.	45,000.00	
1150	ADVANCES TO OFFICERS	38,000.00	
1160	ACCRUED INTEREST RECEIVABLE	2,738.00	
	TOTAL CURRENT ASSETS		87,217.66
	PROPERTY		
	TOTAL COST		
	NET PROPERTY		
	DEFERRED COSTS UNCOMPLETED JOBS		
	TOTAL DEFERRED COSTS		
	OTHER ASSETS		
	TOTAL OTHER ASSETS		
	TOTAL A S S E T S		87,217.66

GL ACCOUNT #		CURRENT	%	YEAR-TO-DATE	%
	I N C O M E				
	TOTAL INCOME				
	D I R E C T C O S T S				
5050	DIRECT MATERIALS			397.20	
5060	DIRECT COSTS - SUBS			620.84	
	TOTAL CONSTRUCTION COSTS			1,018.04	
	OTHER DIRECT				
	TOTAL OTHER DIRECT				
	E X P E N S E S				
7000	RENT			1,500.00	
	TOTAL EXPENSES			1,500.00	
	OTHER INCOME/EXPENSES				
8100	INTEREST INCOME			983.99	
	NET OTHER INCOME/EXPENSES			(983.99)	
	NET PROFIT (LOSS)			(1,534.16)	

L I A B I L I T I E S

	CURRENT LIABILITIES		
2102	A/P RETAINAGE	5,499.67	
2200	ACCRUED FED WH	926.15	
2210	ACCRUED FICA WH	1,110.06	
2220	ACCRUED FUTA	46.80	
2230	ACCRUED STATE WH	313.25	
2240	ACCRUED SUTA	369.72	
2250	ACCRUED WORKER'S COMP	1,493.89	
2460	DEFERRED INCOME TAX-CURRENT	2,998.00	
	TOTAL CURRENT LIABILITIES		12,695.55
	LONG TERM LIABILITIES		
2501	CONTRACT PAYABLE - JOHN DEERE ID	10,554.76	
2502	CONTRACT-1ST NAT'L BANK	14,060.99	
2650	DEFERRED INCOME TAX LONG TERM	19,440.00	
	TOTAL LONG TERM LIABILITIES		44,055.75
	TOTAL L I A B I L I T I E S		56,752.30

E Q U I T Y

3100	CAPITAL STOCK	24,357.53	
3200	RETAINED EARNINGS	432,400.63	
3300	CURRENT YEAR EARNINGS	107,454.34	
	TOTAL E Q U I T Y		564,212.50
	TOTAL LIABILITIES & EQUITY		620,964.80

A S S E T S

	CURRENT ASSETS			
1010	CASH IN BANK	173,203.99		
1040	FIELD ACCOUNT	1,500.00		
1100	ACCOUNTS RECEIVABLE	69,854.23		
1101	A/R HYDRO POWER MANAGEMENT	73,697.52		
1110	A/R RETAINAGE	34,332.65		
1150	ADVANCES TO OFFICERS	2,000.00		
1191	PREPAID W.C. INSURANCE	2,054.00		
1192	PREPAID INSURANCE	6,485.00		
	TOTAL CURRENT ASSETS		363,127.29	
	NET INVENTORY		23,530.00	
	PROPERTY			
1301	OFFICE FURNITURE & FIXTURES	79,598.49		
1302	MACHINERY & EQUIPMENT	324,286.00		
1303	AUTOS & TRUCKS	138,234.00		
	TOTAL COST	542,098.49		
1400	LESS ACCUMULATED DEPRECIATION	294,507.00		
	NET PROPERTY		227,591.49	
	DEFERRED COSTS UNCOMPLETED JOBS			
	TOTAL DEFERRED COSTS			
	OTHER ASSETS			
1540	INVESTMENT IN NBS	1,000.00		
1852	PREPAID TAXES	5,715.00		
	TOTAL OTHER ASSETS		6,715.00	
	TOTAL A S S E T S			620,964.77

GL ACCOUNT #		CURRENT	%	YEAR-TO-DATE	%
	I N C O M E				
4100	CONTRACTING INCOME			797,731.[illegible]	91.9
4400	INC. ADJ. DUE TO OVER-UNDER BILL	(3,856.00)	5.5	(3,855.00)	.4
4500	INCOME DUE FROM HYDRO POWER	73,697.52	105.5	73,697.52	8.4
	TOTAL INCOME	69,841.52	100.0	867,623.23	100.0
	D I R E C T C O S T S				
5020	DIRECT COSTS - LABOR			77,594.35	8.9
5040	DIRECT RENTAL EQUIPMENT			420.00	.0
5050	DIRECT MATERIALS			179,411.14	20.6
5060	DIRECT COSTS - SUBS			331,562.83	33.2
5070	DIRECT COSTS - OTHER			74,604.40	8.5
	TOTAL CONSTRUCTION COSTS			663,682.72	76.4
	OTHER DIRECT				
	TOTAL OTHER DIRECT				
	E X P E N S E S				
6011	ACCOUNTING FEES			1,769.00	.2
6100	DEPRECIATION EXPENSES	(31,344.00)	44.8	31,344.00	3.6
6200	DUES & PERMITS			740.61	.0
6300	EMPLOYEE BENEFITS			3,956.88	.4
	EQUIPMENT REPAIR - LABOR			1,459.90	.1
	EQUIPMENT REPAIR - MATERIAL			3,998.09	.4
6350	EQUIPMENT - FUEL			4,112.84	.4
6351	FUEL FOR 1977 BISON			1,053.57	.1
6352	FUEL FOR 1973 INTERNATIONAL			558.53	.0
6353	FUEL FOR 1969 WHITE			132.20	.0
6355	FUEL FOR PICKUPS			2,743.05	.3
6400	ENTERTAINMENT & PROMOTION			1,683.36	.1
6500	INSURANCE			12,731.99	1.4
6510	GROUP INSURANCE			1,488.60	.1
6600	LEGAL FEES			6.50	.0
6650	LICENSE			778.44	.0
6700	MISCELLANEOUS EXPENSES			344.44	.0
6750	POSTAGE			263.03	.0
6800	OFFICE SUPPLIES			3,549.41	.4
6900	OUTSIDE SERVICES			1,011.04	.1
7000	RENT			10,500.00	1.2
7050	RENT-EQUIPMENT			2,142.40	.2
7100	REPAIRS & MAINT - MATERIAL			275.69	.0
7200	SALARIES & WAGES-OFFICE			1,792.45	.2
7310	SERVICE CHARGES			30.00	.0
7350	SMALL TOOLS & SUPPLIES			8,771.26	1.0
7400	TAXES			5,262.92	.6
7500	TAXES-PAYROLL			428.04	.0
7600	TELEPHONE			2,435.88	.2
7800	TRAVEL			554.03	.0
7920	UTILITIES			2,080.24	.2
	TOTAL EXPENSES	(31,344.00)	44.8	108,038.49	12.4
	OTHER INCOME/EXPENSES				
8100	INTEREST INCOME			10,255.34	1.1
8200	INTEREST EXPENSE			[illegible]	.2
8400	DISCOUNTS TAKEN			[illegible]	[illegible]

29-7699 23 Feb 88

Counsel

Applicant - Bob Nestor — Monte Whittier.
Cindy Nestor.

~~Protestant~~

Intervenor Lava Hot Springs Foundation. — Archie Service.

Applicant - max 18" diameter penstock.
agreed FERC license conditioned to require 40 c/s
bypass at p.d.
Ownership of land at p.d. yet to be determined
by survey.
- Applied to Corps for permit to construct 4' high
concrete wall across river.
- Present estimates ~~are~~ a minimum capacity is 60 to 80 c/s.

Protestant - In August, 1985 L.H.S.F. rejected requests for easement.
- Foundation's position is highest & best use of water
is for therapeutic & recreational use.
- Burial of penstock may effect flow of hot springs.
- Opposition to project by numerous individuals of the area.
Issues - Conflict with the local public interest.
- Sufficient financial resources to complete
project. What provision have been made
should developer go broke.
- What protection is there for the rights of
of the lessee who operates the camp grounds.

- Bob reviewed issued -
  - Interference with existing hights from hot water spring. -
  - Financial capability.
  - Local public interest - How will project impact the public that is not in the public interest.

- Q - Are we ready to proceed with hearing? Applicant is ready - Service is or is not prepared to present case on local public interest. - He is not certain of time required to prepare.

Hearing

Tape 1.
2:35.

Motion - moves that invention be removed for non-compliance with 42-203 A sub section 4.
- takes motion under consideration.

Direct - Bob Nestor - President of H.P.M. Inc.
Environmental Assessment completed as part FERC review and documented in FERC license

Exhibit #1 - Order issuing License #7447-002
Exhibit #2 - General area maps & engineering profile of project.

- Condition on FERC License requires 40 c/s. by pass.

#2
2:50.

- No existing water right right diversions between p.d. & p.o.u.
- Applicant is private contractor experienced in road construction and sewer lines. AAA license
- Available data ~~for soil~~ on geologic make up. does not anticipate.

method of excavation

- Cost. 1.2 million.
- Submitted with 1.7 million financial assets.
  bond for ~~construction~~ contractors license.
- Presently negotiating with Dept. of Lands for easement to construct project
- B. & C. Construction will build project.
  - will have a preformance bond.
    removal bond $35,000 to $40,000 - secured for term of FERC license.

Bonds ~~secured~~ will be secured through United Pacific Surity Co.

top of
- Diversion wall will set at same elevation as normal flows of 210 c/s. + 40 c/s bypass.
- Approach velocities to intake screens should not exceed ½ ft / sec.
- Current design proposes 1 turbine. - expected to required ~~of~~ 80 c/s minimum 210 c/s max.
- Condition on FERC license requires flushing flow of 350 c/s for a 10 day period.
- High water on Portney River averages 600 c/s.

- Utah Power & Light has contracted to purchase power.
  - 1989 - 40.9 mill

#3
3:10

- Will be selling power for less than current generation costs for Utah Power & Light.

X-exam -

- Bottom of pipe will be 10 ft. below ground surface ~~the~~ where it ~~lays~~ passes throught campground. Top of pipe will be 4 ft below ground surface.
- Borings done by State at Fish Creek Bridge site show g.w. intercepted at 70 ft.
- ~~Does~~ Is not aware of any information that would show or suggest that ~~co~~ installation of penstock will adversely impact flow of hot springs used in pool.
- ~~Ha~~ Has not obtained any letters of financial commitment. Lending institutions will not issue such letters ~~until~~ without cash flow analysis ~~has been~~.
- Will submit financial statement.
- Spent $155,000 on project to date.
- B & C Construction is responsible for hydropower management Inc. financial obligations.
- There will be one employee required to operate & maintain plant once on line.
- At current time HPM Inc. does not have a contract w/ Utah Power & Light.
- Would like to start construction in 30 days
- Have not made arrangements with lease of camp ground.

Tape #2
23 Feb '88

- Currently negotiatings with Land Board to determine compensation to the state.

Fal's publicity & involving project has digressed into a political game. Between Democrats & republicans. Land board voted on party lines.

Applicant Exhibit 4 Findings of Fact from Dept of Lands.
Applicant Exh. 5 State of Alaska Easement #5253

Protestants Exh. A - Letter from Foundation dated 5 Aug. 1985.
" B -

Mail financial statement - to Mr. Service

Mr. Service makes a motion that hearing be continued
- Protestant object

29-7699

Hydro Power Management, Inc.

Monte Whittier – attorney –

Bob & Cindy Nestor

Protestant =

F & G. – withdrawn

Intervenor –

Lava Hot Springs Foundation —

Archie Service –

– Conference →

78" Steel Penstock –

40 cfs – Bypass to satisfy Dept F & G –

Run of River Plant –

Diversion Dam – Have requested approval by Corps

Concern of Foundations

- Aug 5, 1985
- Feels the land and the water should be devoted to therapeutic use
- Work could disrupt flow of the hot springs —

– Interfer

➢ 1. Interference with existing water right – by construction –

➢ 2. Not in the public interest –

➢ 3. Financial Ability –

The land is subject to long term lease to several individuals

– KOA etc. –

Object to continuation
Hearing — Requested in Nov. — Asked —

Public interest could be offered at a later date — No!

→

Hearing —

Move — Motion to strike protest → Und

→

Bob Nestor - President —
- Environmental Assessment completed —
- Exhibit #2 — engineering drawing — Admitted —
- Exhibit #1 admitted
- No water consumed —
- Diversion
- Steel pipe penstock 72" to 78"
- 40 cfs bypass flow required —
- 1300 to 1400 ft of stream channel bypassed — no diversions in this area —
- Mr. Nestor is a general contractor "AAA license"
- Invert would be about 10 ft below ground —
- Ground is calicum solidifate
- No affect of the springs —
- Financing by conventional loan —
- Cost 1.2 million
- Assets 1.7 million net —

- Negotions for easements on State land -
- Financial gurantee by Land Board for Performance Bond and operation bond and removal bond between $25 $35,000 -
- Bonds would be obtained from United Pacific -
- Weir diversion about 4' high -
- Intake velocity 1/2 fps or less must be screened -
- One Turbine - instead of 3 as shown in FERC license -
- Flushing flow is required during the Spring of the year
- Oxygen may be decrease -
- Silting of River will be reduced by diverting the water -
- Power will be sold
- Rate 40.4 mils
- UP&L charges about 80 mils
" cost ~~is~~ for coal power is about 50 mils

Sale of Power

-

X-exam -

The 40 cfs could be directed to go over the falls -
about 5 cfs goes over the falls at the present time -
Penstock buried across the campground -
Penstock could prevent campground pipes from being lowered below four feet.
Groundwater found at 65 feet when fish ck. bridge was built -
Hot Springs flow about 30 cfs -
Commitment has not been obtained - no letters at present -
- Take notice of Troutco analysis of financial arguement -
- Spend about $200,000 so far
- Applicant → underwritten by B&C Construction -
Applicants Ex #3 land Board order -
Removal Bond for life of FERC ~~project~~ license - United Pacific Surety Corp.

Financial Statement

Fish screen will be self-cleaning –
Project will employee 1 operator –
No present contract with UP&L –
Wants to begin construction in 6 to 8 weeks –
No arrangements have been made with KOA campground –

Tape #2

Have talked to Bannock County – name –
Fees for r/w – being negotiated –
2 mils/Kw or 5% of gross revenue –
Seven residents of Lava have supported the project –

Financial Statement >

Exhibit ≡ 4 Findings of Fact ≡ Admitted –
5 State of Idaho Easement ≡ Admitted
≡

– Archie Service –
Present documents –
Protest Exh "A" August 5-1985 letter from Foundation rejecting the project –
Exhibit "B" – 9 letters of objection

Scheduling –
Motion to ≡ A taken under consideration

29-7699 - HYDRO POWER MANAGEMENT, INC,

Banquet Room, Pocatello Municipal Airport
Pocatello, Idaho
Tuesday, February 23, 1988 - 1:~~0~~30 p.m.

ROSTER OF ATTENDANCE

Hearing Officer: Bob Fleenor & Ernest Carlsen

Name	Representing	Address
Monte Whittier	H.P.M.	653 E. Center Poc.
Bob L NESTOR	H.P.M	4950 VALENTY Chubbuck
Archie W. Serrue	Lava H.S. Foundation	Box 4883, Poc 83201
CINDY NESTOR	HPM	4950 VALENTY, CHUBBUCK
Keith Bennett	P.M.D Canal	3590E Richard Rd, Downey
Thomas Bloxham	Watermaster Portneuf River	Downey Idaho

February 9, 1988

Pocatello Municipal Airport
ATTN: Mark
P.O. Box 1021
Pocatello, ID 83201

Dear Mark:

This is to confirm the use of the Banquet Room in the Pocatello Municipal Airport, Pocatello, Idaho, for water right conferences and/or hearings to be held by this Department on Tuesday, February 23, 1987, beginning at 10:00 a.m.

Thank you for your cooperation in this matter.

Very truly yours,

COLLEEN WRAY
Adm. Secretary

PS Form 3811, July 1983 447-845

DOMESTIC RETURN RECEIPT

SENDER: Complete items 1, 2, 3 and 4.

Put your address in the "RETURN TO" space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for service(s) requested.

1 ☐ Show to whom, date and address of delivery.

2 ☐ Restricted Delivery.

3. Article Addressed to:

Monte Whittier
Atty. at Law
P.O. Box 4082
Pocatello, Id 83205

4. Type of Service:

☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail

Article Number

0131

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature — Addressee

X

6. Signature — Agent

X

7 Date of Delivery

8. Addressee's Address *(ONLY if requested and fee paid)*

UNITED STATES POSTAL SERVICE

OFFICIAL BUSINESS

SENDER INSTRUCTIONS

Print your name, address, and ZIP Code in the space below.

- **Complete items 1, 2, 3, and 4 on the reverse.**
- **Attach to front of article if space permits, otherwise affix to back of article.**
- **Endorse article "Return Receipt Requested" adjacent to number.**

RETURN TO

RECEIVED
FEB 11 1988
Department of Water Resources
Eastern District Office

PENALTY FOR PRIVATE USE, $300

DEPARTMENT OF WATER RESOURCES
EASTERN DISTRICT OFFICE
150 SHOUP AVE. #15
IDAHO FALLS, IDAHO 83401

(Name of Sender)

(No. and Street, Apt., Suite, P.O. Box or R.D. No.)

(City, State, and ZIP Code)

PS Form 3811, July 1983 447-845

DOMESTIC RETURN RECEIPT

SENDER: Complete items 1, 2, 3 and 4.

Put your address in the "RETURN TO" space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for service(s) requested.

1. ☐ Show to whom, date and address of delivery.
2. ☐ Restricted Delivery.

3. Article Addressed to:

Bob L Nestor
Hydro Power Mgmt Inc.
4950 Valenty Rd, Suite C
Chuckbuck, Id 83202

4. Type of Service:

☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail

Article Number

0130

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature – Addressee

X

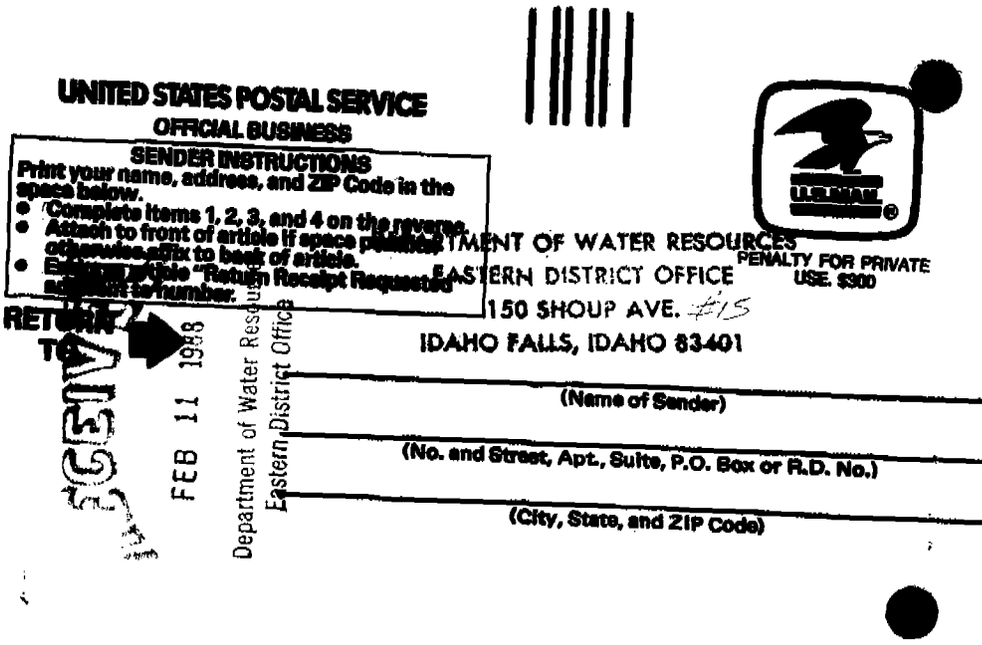
6. Signature – Agent

X B A Ellis

7. Date of Delivery

2-10-88

8. Addressee's Address *(ONLY if requested and fee paid)*



UNITED STATES POSTAL SERVICE

OFFICIAL BUSINESS

SENDER INSTRUCTIONS

Print your name, address, and ZIP Code in the space below.

- Complete items 1, 2, 3, and 4 on the reverse.
- Attach to front of article if space permits, otherwise affix to back of article.
- Endorse article "Return Receipt Requested" adjacent to number.

RETURN TO

DEPARTMENT OF WATER RESOURCES
EASTERN DISTRICT OFFICE
150 SHOUP AVE. #15
IDAHO FALLS, IDAHO 83401

PENALTY FOR PRIVATE USE, $300

(Name of Sender)

(No. and Street, Apt., Suite, P.O. Box or R.D. No.)

(City, State, and ZIP Code)

FEB 11 1988

Department of Water Resources
Eastern District Office

PS Form 3811, July 1983 447-845

DOMESTIC RETURN RECEIPT

SENDER: Complete items 1, 2, 3 and 4.

Put your address in the "RETURN TO" space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for service(s) requested.

1. ☐ Show to whom, date and address of delivery
2. ☐ Restricted Delivery

3. Article Addressed to:

Archie W. Service
Atty at Law
P.O. Box 4883
Pocatello, Id. 83205

4. Type of Service:

☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail

Article Number

0132

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature – Addressee

X

6. Signature – Agent

X Laurie Sells

7. Date of Delivery

8. Addressee's Address *(ONLY if requested and fee paid)*

UNITED STATES POSTAL SERVICE

OFFICIAL BUSINESS

SENDER INSTRUCTIONS

Print your name, address, and ZIP Code in the space below.

- **Complete items 1, 2, 3, and 4 on the reverse.**
- **Attach to front of article if space permits, otherwise affix to back of article.**
- **Endorse article "Return Receipt Requested" adjacent to number.**

RETURN TO

RECEIVED

FEB 10 1998

Department of Water Resources
Eastern District Office

PENALTY FOR PRIVATE USE, $300

DEPARTMENT OF WATER RESOURCES
EASTERN DISTRICT OFFICE
150 SHOUP AVE. #15
IDAHO FALLS, IDAHO 83401

(Name of Sender)

(No. and Street, Apt., Suite, P.O. Box or R.D. No.)

(City, State, and ZIP Code)

NAME AND ADDRESS OF SENDER

DEPARTMENT OF WATER RESOURCES
EASTERN DISTRICT OFFICE
150 SHOUP AVE.
IDAHO FALLS, IDAHO 83401

Indicate type of mail
☐ Registered
☐ Insured
☐ COD
☑ Certified ☐ Express Mail

Check appropriate block for Registered Mail:
☐ With Postal Insurance
☐ Without Postal Insurance

Affix stamp here if issued as certificate of mailing or for additional copies of this bill.

POSTMARK AND DATE OF RECEIPT

Line	Number of Article	Name of Addressee, Street, and Post-Office Address	Postage	Fee	Handling Charge	Act. Value (If Regis.)	Insured Value	Due Sender If C.O.D.	R. R. Fee	S. D. Fee	S. H. Fee	Rest. Del. Fee / Remarks
1	0128	Lynnor Jeanne Gilgen 310 Chicken Falls Rd Downey	22	25					70			29-7839
2	0129	Glade H. Davis 21128 So Marsh Ck Rd Downey										"
3	0130	Bob L. Nestor Hydro Power Mgmt Inc 4950 Valenty Rd Chubbuck										29-7699
4	0131	Monte Whittier P.O. Box 4082 Pocatello										"
5	0132	Archie Service P.O. Box 4883 Pocatello										29-7699
6												
7					5@	$1.67						
8				$	8.35							
9												
10												
11												
12		Sent WM Thomas Blotham										29-7699
13		Copy										
14												
15												

IDAHO FALLS, ID EAGLE ROCK ANNEX FEB 8 1988 USPS

Total Number of Pieces Listed by Sender	Total Number of Pieces Received at Post Office	POSTMASTER, PER (Name of receiving employee)
5	five	Jones

The full declaration of value is required on all domestic and international registered mail. The maximum indemnity payable for nonnegotiable documents under Express Mail document reconstruction insurance is $50,000 per piece subject to a limit of $500,000 per occurrence. The maximum indemnity payable on Express Mail merchandise insurance is $500. The maximum indemnity payable is $25,000 for Registered Mail, $400 for COD and $400 for Insured Mail. Special handling charges apply only to Third- and Fourth-Class parcels. Special delivery service also includes special handling service.

FORM MUST BE COMPLETED BY TYPEWRITER, INK OR BALL POINT PEN

☆ U.S. G.P.O. 1985-478-804

BEFORE THE DEPARTMENT OF WATER RESOURCES

OF THE

STATE OF IDAHO

IN THE MATTER OF APPLICATION FOR PERMIT NO. 29-7699 IN THE NAME OF HYDRO POWER MANAGEMENT INC.	NOTICE OF HEARING &/OR CONFERENCE

On April 14, 1983, Commercial Energy Management, Inc., filed with the Department of Water Resources application No. 29-7839, now assigned to Hydro Power Management Inc., to appropriate the public waters of the State of Idaho. On July 25, 1983, Lava Hot Springs Foundation, represented by Archie W. Service, Attorney at Law, was granted petition to intervene in said matter.

The Department has set the matter of intervention for conference and/or hearing for 1:30 p.m., Tuesday, February 23, 1988, in the Pocatello Municipal Airport banquet room, Pocatello, Idaho. The conference will be held in accordance with provisions of Chapter 2, Title 42, of the Idaho Code and adopted Rules of Practice and Procedure of the Department of Water Resources. Opportunity shall be afforded all parties to respond and present evidence and argument on all issues involved.

Dated this 5th day of February, 1988.

RONALD D. CARLSON
Eastern Regional Manager

Memo to File: 29-7699

From : RKH

Date : October 29, 1987

Subject : Phone call from Governor's office

Received phone call this morning from Clareen Wherry of the Governor's office who indicated that they had received an angry phone call from a Dale Pape (Poppy) (237-7074) who had received a letter from the Lava Hot Springs Foundation denying them access to Foundation property to conduct surveys. She asked that I find out what is happening on the matter.

I checked water rights with Roberta and found application 29-7699 in the name of Commercial Energy Management, Inc. for a power project at Lava Hot Springs. Our files indicate that a license has been issued for the project by FERC and that the water right has not yet been approved.

I called the number above and talked to a Bob Nestor who indicated that he and his wife are the owners of the project and that they have been trying to meet with the Foundation to discuss an easement but have been turned down. They have now arranged a meeting with the Foundation on Nov 4. I suggested that he should attempt to negotiate with the Foundation first and that only after such efforts fail should he expect to get help from the Governor's office. I also advised him that they would need to get an approved water right permit for the project before they could use the water.

I advised Clareen of my discussion and she indicated that she would advise the Governor.

We can expect that this issue will have to be heard. Our file does not indicate that the water right is protested by the Foundation.

RIGHT NUMBER	NAME AND ADDRESS	PRIORITY DATE	WATER USE	USE PERIOD FROM	USE PERIOD TO	MAXIMUM DIVERSION	STAGE
29-7699	COMMERCIAL ENERGY MANAGEMENT, INC. 175 LABELLE DRIVE RIGBY, ID 83442	04-14-1983	POWER	01-01	12-31	250.00 CFS	APPLICATION

SOURCE: PORINEUF RIVER TRIBUTARY: SNAKE RIVER

REMARKS: PENDING FERC ACTION. FERC #7447.
IDAHO DEPARTMENT OF FISH & GAME WITHDREW PROTEST.
FERC ISSUED [redacted] IN DECEMBER, 1986. 26 LICENSE
10 MARCH 1987 - APPLICANT IS PURSUING NEGOTIATIONS WITH LAVA HOT SPRINGS FOUNDATION FOR EASEMENT. THE APLICANT IS ALSO NEGOTIATING WITH UP&L TO ESTABLISH TERMS FOR POWER SALES AGREEMENT.
2 APRIL 1987 - FORWARDED TO BOISE FOR FURTHER ADMINISTRATIVE ACTION.

LAVA FOUNDATION PREFERS TO MEET 11/4 - NOW SET UP Bob Nestor - Price Page By Price 40 cfs Karen Keller - Head of Foundation

POINT OF DIVERSION: STREAM INDEX:
T09S R38E S22 SWSW NO INDEX CODE

PLACE OF USE: POWER
T09S R38E S22 SWSW

29-7772	MARSH VALLEY HYDRO ELECTRIC CO. MC CAMMON, ID 83250	06-05-1984	POWER	01-01	12-31	75.00 CFS	APPLICATION

SOURCE: PORINEUF RIVER TRIBUTARY: SNAKE RIVER
OTHER RIGHTS: 29-7578/175 CFS

REMARKS: C/O LYNDON GREEN, PRESIDENT
PENDING FERC ACTION.

POINT OF DIVERSION: STREAM INDEX:
T09S R37E S22 SENW NO INDEX CODE

PLACE OF USE: POWER
T09S R37E S21 NWNW

WHITTIER & SOUZA, P.A.
ATTORNEYS AT LAW
940 EAST CLARK
POCATELLO, IDAHO 83205

R.M. WHITTIER
JOHN C. SOUZA
MONTE R. WHITTIER

P. O. BOX 4082
PHONE 233-6444

RECEIVED
OCT 30 1987
Department of Water Resources

NOV
Department of Water Resources

October 28, 1987

Department of Water Resources
Statehouse Mail
Boise, ID 83720

Re: Water Right No. 29-7699

Dear Sirs:

Enclosed herein please find the original signed Affidavit for Water Rights to be Used for Power Purposes and Assignment of Permit filed in reference to the above Permit No.

Please review said documents and if there is anything in addition that you need, please feel free to contact me.

Very truly yours,

WHITTIER & SOUZA, P.A.

MONTE R. WHITTIER

MRW/ls

Enclosure

GREEN, SERVICE, GASSER & KERL
ATTORNEYS AT LAW
CENTER PLAZA — P.O. BOX 4883
POCATELLO, IDAHO 83205-4883

TELEPHONE (208) 232-4471

BOISE OFFICE
SUITE 302 JEFFERSON PLACE
350 NINTH STREET
P.O. BOX 1687
BOISE, IDAHO 83701
TELEPHONE (208) 343-2222

JAMES B. GREEN
ARCHIE W. SERVICE
CLARK GASSER*
RON KERL
JIM D. PAPPAS
DUANE A. BYBEE**
FREDERICK L. RINGE
STEVEN V. RICHERT

GUY R. PRICE
RICK CARNAROLI
JAMES A. SPINNER
KAY E. MOORE

*Also Member D.C. Bar
**Also Member Utah Bar

October 23, 1987

Mr. Keith Higginson, Director
Department of Water Resources
450 West State Street
Boise, ID 83720

Re: Water Appropriations Hearing
Portneuf River Appropriation/Hydro Electric Project

Dear Director Higginson:

Could you please send to this office your latest procedural rules which would govern hearing in the above entitled matter, which hearing is scheduled in November of 1987.

Also, could you please advise this office which chapters of your rules and regulations would be pertinent to the above entitled hearing and how they could be made available to this office.

May we thank you in advance.

Very Truly Yours,

GREEN, SERVICE, GASSER & KERL

Archie W. Service

AWS/dt
cc: Ernest Carlson
5/2/296/2

RECEIVED
OCT 26 1987
Department of Water Resources
Eastern District Office

October 23, 1987

RE: Application for Permit No. 29-7699
COMMERCIAL MANAGEMENT, INC.

Mr. Bob L. Nestor, President
Hydro Power Management, Inc.
4950 Valenty Road, Suite C
Chubbuck, ID 83202

Dear Mr. Nestor:

Thank you for your letter of 16 October 1987, advising that Hydropower Management Inc. is now the developer for the hydro project identified by FERC No. 7447-002. To convey the water right application, identified above, it will be necessary for Commercial Energy Inc. to submit a completed assignment form accompanied by an affidavit of residency verifying that Hydropower Management Inc. is qualified to do business in Idaho. I understand Monte Whittier, Attorney, has requested the necessary forms from our state office. He should receive them in the near future.

There is an intervention, by Lava Hot Springs Foundation, on file with the Department objecting to the issuance of the permit to divert and beneficially use water for hydropower purposes. Prior to issuing the Department's recommendation on application No. 29-7699, either the intervention must be withdrawn or an administrative conference and/or hearing will have to be conducted by the Department. For your convenience, enclosed is a copy of application for permit No. 29-7699 and a copy of the intervention submitted by the Lava Hot Springs Foundation.

Please feel free to contact me if you have any questions concerning the application or the Department's administrative procedures.

Respectfully submitted,

ERNEST CARLSEN
Water Rights Supervisor

EC:cw

Enclosures

cc: Bobby Fleenor
Monte Whittier

HPM

HYDRO POWER MANAGEMENT, INC.

RECEIVED
OCT 19 1987
Department of Water Resources

October 16, 1987

Gary
BHP 29-7699

Idaho Department of Water Resources
450 West State Street
Boise, Idaho 83720

Bert, 29-7699
WR # please.
Gary

ATTENTION: Dave Tuthill

RE: FERC # 7447-002

Dear Dave:

Commercial Energy Management, Inc., has sold all rights of FERC # 7447-002 Project being the Portneuf River Hydroelectric Station #1, located in Bannock County, Idaho, to Hydro Power Management, Inc., located at 4950 Valenty Road, Suite C, Chubbbuck, Idaho, 83202, telephone number (208) 237-7074.

Company officers are Bob Nestor, President; Cindy Nestor, Vice-President; and Dale Pape, Managing Director. Please make inquiry to the above names.

Sincerely,

Bob L. Nestor,
President
HPM, Inc.

bje

GARY- 11/2/7
I'VE MADE A TEMPORARY FILE FOR THIS — UNTIL THE ORIGINAL COMES IN —
CHERYL

4950 VALENTY ROAD SUITE C, • CHUBBUCK, IDAHO 83202 • (208) 237-7074

HPM

HYDRO POWER MANAGEMENT, INC.

October 16, 1987

RECEIVED
OCT 19 1987
Department of Water Resources
Eastern District Office

Idaho Department of Water Resources
Eastern Region
150 Shoup Avenue Suite 15
Idaho Falls, Idaho 83401

RE: FERC #7447-002

Gentlemen:

Commercial Energy Management, Inc., has sold all rights of FERC #7447-002 Project being the Portneuf River Hydroelectric Station #1, located in Bannock County, Idaho, to Hydro Power Management, Inc., located at 4950 Valenty Road, Suite C, Chubbuck, Idaho, 83202, telephone number (208) 237-7074.

Company officers are Bob Nestor, President; Cindy Nestor, Vice-President; and Dale Pape, Managing Director. Please make inquiry to the above names.

Sincerely,

Bob L. Nestor,
President
HPM, Inc.

bje

te of Idaho
DEPARTMENT OF WATER RESOURCES
STATE OFFICE, 450 W. State Street, Boise, Idaho

CECIL D. ANDRUS
Governor

R. KEITH HIGGINSON
Director

Mailing address:
Statehouse
Boise, Idaho 83720
(208) 334-4440

October 16, 1987

RECEIVED
OCT 20 1987
Department of Water Resources
Eastern District Office

Monte Whittier
Attorney at Law
P.O. Box 4082
Pocatello, ID 83205

Re: Application for Permit to Appropriate Water No. 29-7699

Dear Monte:

Enclosed is an assignment form and the affidavit of residency/registered-to-do-business form I promised to send. I'm sorry for the delay.

Our records show that the application is owned by Commercial Energy Management, Inc. Commercial Energy Management, Inc. must assign the application to Hydropower Management, Inc. Hydropower Management, Inc. must file the registered-to-do-business affidavit.

If I can be of further assistance, please feel free to give me a call.

Sincerely,

Gary Spackman

GARY SPACKMAN, Supervisor
Water Allocation Section

GS:jf

Enclosure

INTER-DEPARTMENT MEMO — 1

FROM Gary Spackman

DATE May 6, 1987

TO Bob Fellenor

SUBJECT In reviewing this file for application approval, I noticed that the protest of F & G was withdrawn, but an intervenor, Lava Hot Springs Foundation, is still a party. What is your position on the status of an intervenor once all protests are withdrawn?

Gary
SIGNATURE

Gary, I feel the intervenors must be considered as protesting until withdrawn or a decision is issued following a hearing. Bob

STATE OF IDAHO

Department of Water Resources

No 35527

Boise, Idaho, Jan 8, 1985

RECEIVED FROM Larry Burdett of Leigby $ 20 00

Twenty & no DOLLARS

FOR		
Am. App.	$ 20	00
29-7699	$	
Commercial Eng.	$	
Mgmt.	$	
TOTAL - - -	$ 20	00

Allen Wray

INTER-DEPARTMENT MEMO — 1

FROM E. Carlsen.

DATE 2 April 1987.

TO File.

SUBJECT : Prior to final action the applicant must provide verification that financing has been secured.

MICROFILMED
SEP 20 1988

SIGNATURE

Form No. 202a
3/79

State of Idaho
Department of Water Resources

APPLICATION FOR PERMIT ANALYSIS SHEET

INITIAL REVIEW BY: KCWilson APPLICATION NUMBER: 29 7699

CHECK:

- ☑ Source.
- ☑ Point of diversion.
- ☑ County.
- ☑ Quantity of water and period of use.
- ☑ Description of diverting works.
- ☑ Time required for beneficial use of water.
- ☑ Place of use or acres irrigated.
- ☑ Map.
- ☑ Signature.
- ☑ Fee.

Field check by: _____
Date: _____
Comments: _____

- ☐ Yes ☑ No Field check required.
- ☐ Yes ☑ No Critical groundwater area.
- ☐ Yes ☑ No Request dam safety information. Sent by: _____ Date: _____
- ☑ Yes ☐ No* In form to receipt.

*REQUEST THE FOLLOWING ADDITIONAL INFORMATION FROM THE APPLICANT:

Telecon to applicant to obtain form 205/206 - 4-18-83 S.M.

SEND COPIES TO:

	Copies sent by:	Date:
☐ Idaho State Health Department.		
☑ Idaho Fish and Game Department.	CW	4-27-83
☑ Idaho Department of Lands.	CW	4-27-83
☐ U.S. Bureau of Land Management.		
☐ U.S. Forest Service.		
☑ Other ~~[illegible]~~ WD#29	CW	4-27-83

PROCESSING:

- ☐ Yes ☑ No Platted by: _____ Map No. _____
- ☐ Yes ☑ No Other rights on same place of use. _____
- ☑ Yes ☐ No* In form for advertising. Final date for protests: May 16, 1983
- ☑ Yes ☐ No Protests received. If yes, record information on 4th page of application.

FINAL REGIONAL PROCESSING REVIEW:

- statewide ☑ Affidavit of publication received. Date: 5-9-83
- ☑ Application published correctly. If not, record action taken: _____
- ☑ Fee amount, receipt date & number, recorded on application.
- ☑ Publication dates and paper, recorded on application.
- withdrawn ☑ Protests, dates, withdrawal, etc., recorded on application.
- ☐ Recommendation & initial, recorded on application.
- 01F ☑ Yes ☐ No Measuring device required.
- ☐ Yes ☑ No Access port required.
- ☑ Yes ☐ No Will water be delivered by watermaster? If yes, what district? 29
- 5/9/83. Date of priority recommended.

Special conditions of approval or cover letter.

01F, 05, 08A, 17G, 17K, 25, 26A, 27, 30

See Proposed Memo. Decision for Condition of Approval.

file copy destroyed - 4-6-87 KW

By: Ernest Carlsen Date: 23 May '88 2 April, 1987

STATE OFFICE REVIEW:

L19, L14, L17 30 25 04 ~~[illegible]~~ 05 (29, Portneuf River)
45 27 ~~[illegible]~~ 08A 09E 17G 17K

☐ See attached sheet for more information.
By: _____ Date: _____

RECEIVED
MAY 25 1988
APR 03 1987
Department of Water Resources
Department of Water Resources

POINT OF DIVERSION AND STREAM INDEX INFORMATION

TRACT	SEC	TWP	RGE	gov't lot	rediv. (R)	REACH

IDAHO STREAM CODE INDEX

TRACT	SEC	TWP	RGE	gov't lot	rediv. (R)	REACH

IDAHO STREAM CODE INDEX

TRACT	SEC	TWP	RGE	gov't lot	rediv. (R)	REACH

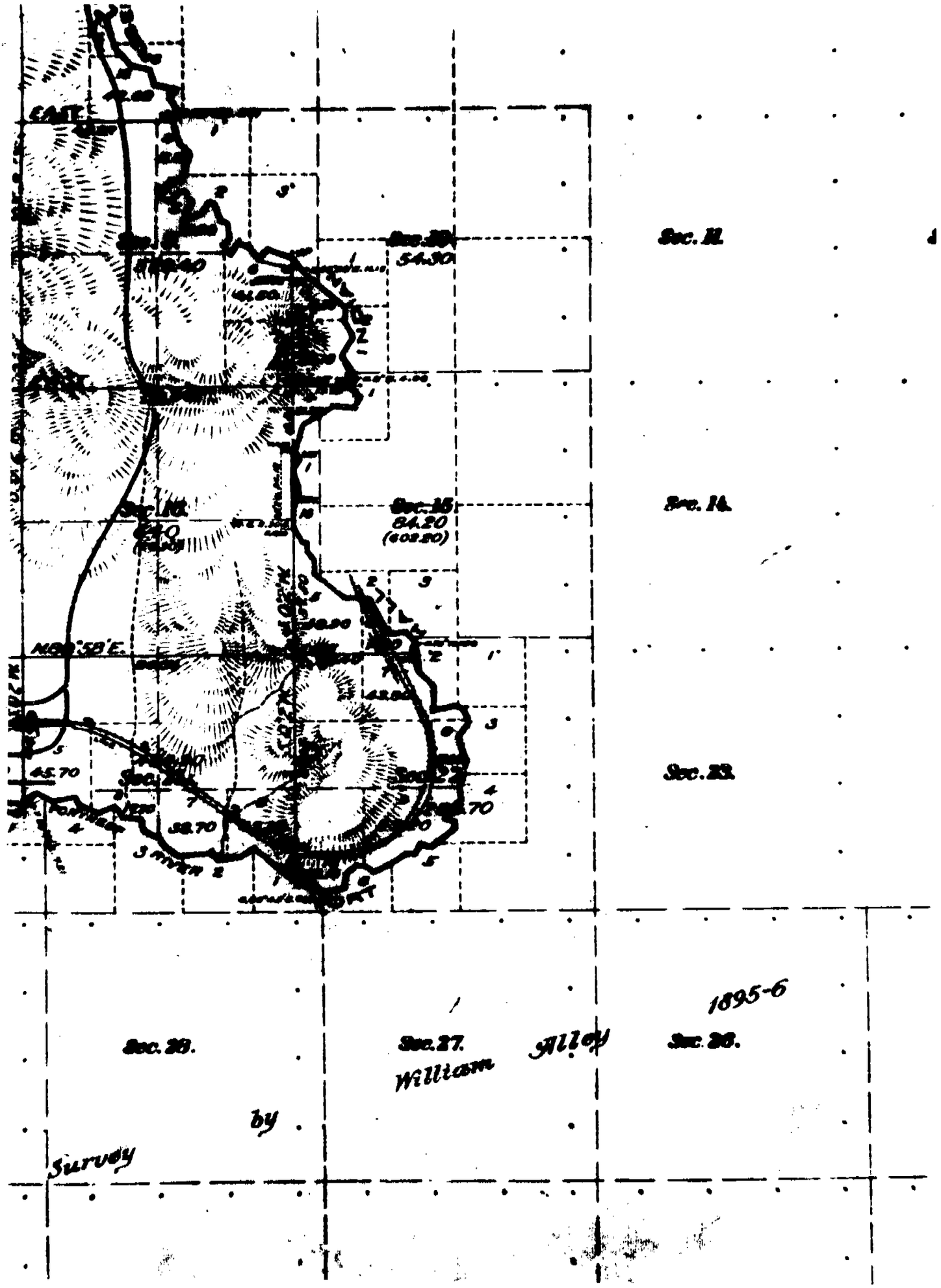
IDAHO STREAM CODE INDEX

TRACT	SEC	TWP	RGE	gov't lot	rediv. (R)	REACH

IDAHO STREAM CODE INDEX

TRACT	SEC	TWP	RGE	gov't lot	rediv. (R)	REACH

IDAHO STREAM CODE INDEX



Sec. 11.
Sec. 14.
Sec. 23.
Sec. 28.
Sec. 27.
Sec. 26.
54.30
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1895-6
William Alley
by
Survey

Land Board approves hydro project

By QUANE KENYON
Associated Press writer

BOISE (AP) — Despite strong local opposition, the Idaho Land Board will allow a hydroelectric generating project through part of the Lava Hot Springs Foundation resort in southeastern Idaho.

The board voted 3-2, with Gov. Cecil Andrus and state Auditor Joe Williams opposing, to grant an easement to Hydro Power Management, Inc., Chubbuck. The company plans to run a penstock of more than 1,300 feet from the Portneuf River to a generating plant adjacent to a camping park.

"I hope we do not wind up with a monument to bad judgment," said attorney Archie Service, who battled unsuccessfully for the foundation to stop the project. "We feel like we have been ridden roughshod over," he said.

It was believed to be the first time the Land Board has ignored strong opposition from an administering agency to grant an easement over state land.

Hydro Power, whose president and co-owner is Robert Nestor, wants to build a small hydro plant of about 5 megawatt capacity. It would cost about $800,000 and employ about 45 persons during construction but would require only one employee once it starts up.

The penstock must cross land administered by the foundation. It was purchased from Indian tribes around the turn of the century and in 1902 ceded to the state. The state eventually turned control of the property over to the Lava Hot Springs Foundation, to manage it for recreation and therapeutic purposes.

Williams argued that the Land Board shouldn't be considering the request. Once the local board disapproved, that should be the end of it.

"Why have a Lava Hot Springs Foundation otherwise?" the auditor asked. Andrus said he felt the same way.

But Jerry Evans, schools superintendent, said a hearing officer found no basis for the foundation's claims that the project would be noisy, unsafe, aesthetically unpleasing and unnecessary.

"If we make a decision, does it not have to rest on some foundation? We have nothing to base it (a vote against the project) on," said Evans.

Attorney General Jim Jones voiced similar arguments, but said, "I can't think of anything in the last 5 years I've felt more uncomfortable about."

Secretary of State Pete Cenarrusa said he approved the project because of the economic benefits it would bring to a depressed area, including the construction jobs and property taxes.

The Land Board did not allow more testimony. In a written statement submitted to the board, Service said allowing the project through the middle of a recreation area would go against the original land grant.

"The best long-range plan and public policy is to maintain the environmental integrity of the lands of the Lava Hot Springs Foundation and waters which surround it," he said.

Service said 125 of Lava's 467 residents signed petitions against the project; area legislators were against it and so was the board which has administered the resort for 68 years.

But after the session, he said there was little that could be done now to stop it. The company has a license from the Federal Energy Regulatory Commission.

"We got out-lobbied," he said.

STAFF SHEET FOR POWER GENERATION

INITIAL REVIEW BY Keith C Wilson APPLICATION NO. 29 7699

DATE REQUESTED	IN FILE	
_____	_____	Form 205/206
_____	_____	Financial statement if operating capacity is more than 500 HP 0.37 MW 373 KW
_____	_____	Statement declaring what the applicant proposes to do with the generated power. (NOT MANDATORY)
_____	✓	Efficiency is between 85% and 60%

P = kilowatts .74 x hp

Q = c.f.s.

H = feet

e = efficiency

$$e = \frac{P\ (11.8)}{QH} = \frac{(694)\ (11.8)}{(41)\ (250)} = \frac{8189.2}{10250} = \frac{0.80}{80\%}$$

March 12, 1987

RE: Application for Permit No. 29-7699

Mr. Marlon Bird
Secretary-Treasurer
Commercial Energy Management, Inc.
175 LaBelle Drive
Rigby, ID 83442

Dear Mr. Bird:

This letter is to inform you that Idaho Fish and Game Department has withdrawn their protest against the above referenced application. We have now resumed processing of your application.

If you have any questions, please feel free to contact this office.

Very truly yours,

ERNEST CARLSEN
Water Rights Supervisor

EC:cw

March 12, 1987

RE: Application for Permit No. 29-7699
COMMERCIAL ENERGY MANAGEMENT INC., Marlon Bird

Mr. David Neider
Regional Supervisor
Idaho Fish & Game Department
5205 South 5th Avenue
Pocatello, ID 83204

Dear Mr. Neider:

This letter is to acknowledge receipt of your withdrawal of protest against the above referenced application. This Department has now resumed processing of the application

If you have any questions, please feel free to contact this office.

Very truly yours,

ERNEST CARLSEN
Water Rights Supervisor

EC:CW

RECEIVED
MAR 4 1987
Department of Water Resources
Eastern District Office

Region 5
5205 S. 5th Avenue
Pocatello, Idaho 83204-4229
Telephone: (208) 232-4703

March 3, 1987

Ernest Carlson
Assistant Regional Supervisor
Department of Water Resources
150 Shoup Ave.
Idaho Falls, Id 83401

Re: Application for Permit #29-7699 by Marlon Bird for the Portneuf River.

Dear Mr. Carlson:

In a letter dated May 2, 1983 we objected to the above referenced permit. Since that time we have received the necessary information, have resolved the issue and hereby withdraw our protest.

Sincerely,

Bill Davidson

per David Neider
Regional Supervisor

DN/JTH/vt

MEMO

FROM: Ernie Carlsen

TO: Application No. 29-7699

DATE: 4 March 1987

On 23 February 1987, I spoke with Robert Bird concerning the status of the hydropower project referenced in the above application. He indicated FERC had granted a license for the project on 29 December 1986. But construction will require obtaining a right-of-way from the Lava Hot Springs Foundation, which has proven to be a difficult task. Furthermore, he stated negotiations were progressing with Utah Power and Light over a power sales agreement. Both the right-of-way and power sales agreement must be secured before financing for construction of the project can be pursued. Under the FERC license, they have a maximum period of two years to accomplish these tasks and commence with construction.

P-7447-002

UNITED STATES OF AMERICA

FEDERAL ENERGY REGULATORY COMMISSION

Notice of Application Filed with the Commission

(March 25, 1986)

Take notice that the following hydroelectric application has been filed with the Federal Energy Regulatory Commission and is available for public inspection:

RECEIVED
APR 1 1986
Department of Water Resources

a. Type of Application: Minor License

b. Project No.: 7447-002

c. Date Filed: August 30, 1985, supplemented January 16, 1986

d. Applicant: Commercial Energy Management, Inc.

e. Name of Project: Portneuf River Hydroelectric

f. Location: On the Portneuf River in Bannock County, Idaho, in Section 22, Township 9 South, Range 38 East of the Boise Meridian.

g. Filed Pursuant to: Federal Power Act, 16 U.S.C. §791(a) - 825(r)

h. Contact Person: Mr. Robert Bird
Commercial Energy Management, Inc.
175 La Belle Drive
Rigby, ID 83442
(208) 745-7625

i. Comment Date: [illegible] 1986

j. Description of Project: The proposed run-of-river project would consist of: (1) a 40-foot-long, 4-foot-high reinforced concrete diversion dam with a crest elevation of 5089.4 feet and a gated penstock intake; (2) a 1,350-foot-long, 72-inch-diameter steel penstock; (3) a 25-foot by 57-foot reinforced concrete powerhouse containing three generating units rated at 107 kW, 214 kW, and 423 kW at an average head of 49.2 feet and a total hydraulic capacity of 210 cfs, and discharging into the Portneuf River at a normal tailwater elevation of 5035 feet; and (4) a 0.5-mile-long, 12.5-kV transmission line connecting to a Utah Power and Light Company distribution line.

k. Purpose of Project: Project energy would be sold to Utah Power and Light Company. Applicant estimates that the average annual energy generation would be 4.1 GWh and that the total project cost would be $1,080,000.

l. This notice also consists of the following standard paragraphs: A3, A9, B, C, and D1.

A3. Development Application -- Any qualified development applicant desiring to file a competing application must submit to the Commission, on or before the specified comment date for the particular application, a competing development application, or a notice of intent to file such an application. Submission of a timely notice of intent allows an interested person to file the competing development application no later than 120 days after the specified comment date for the particular application. Applications for preliminary permit will not be accepted in response to this notice.

A9. Notice of intent -- A notice of intent must specify the exact name, business address, and telephone number of the prospective applicant, include an unequivocal statement of intent to submit, if such an application may be filed, either (1) a preliminary permit application or (2) a development application (specify which type of application), and be served on the applicant(s) named in this public notice.

B. Comments, Protests, or Motions to Intervene - Anyone may submit comments, a protest, or a motion to intervene in accordance with the requirements of the Rules of Practice and Procedure, 18 C.F.R. §§385.210, .211, .214. In determining the appropriate action to take, the Commission will consider all protests or other comments filed, but only those who file a motion to intervene in accordance with the Commission's Rules may become a party to the proceeding. Any comments, protests, or motions to intervene must be received on or before the specified comment date for the particular application.

C. Filing and Service of Responsive Documents - Any filings must bear in all capital letters the title "COMMENTS", "NOTICE OF INTENT TO FILE COMPETING APPLICATION", "COMPETING APPLICATION", "PROTEST" or "MOTION TO INTERVENE", as applicable, and the Project Number of the particular application to which the filing is in response. Any of the above named documents must be filed by providing the original and the number of copies required by the Commission's regulations to: Kenneth F. Plumb, Secretary, Federal Energy Regulatory Commission, 825 North Capitol Street, N.E., Washington, D.C. 20426. An additional copy must be sent to: Mr. Fred E. Springer, Director, Division of Project Management, Federal Energy Regulatory Commission, Room 203-RB, at the above address. A copy of any notice of intent, competing application or motion to intervene must also be served upon each representative of the Applicant specified in the particular application.

D1. Agency Comments - Federal State, and local agencies that receive this notice through direct mailing from the Commission are requested to provide comments pursuant to the Federal Power Act, the Fish and Wildlife Coordination Act, the Endangered Species Act, the National Historic Preservation Act, the Historical and Archeological Preservation Act, the National Environmental Policy Act, Pub. L No. 88-29, and other applicable statutes. No other formal requests for comments will be made.

Comments should be confined to substantive issues relevant to the issuance of a license. A copy of the application may be obtained directly from the Applicant. If an agency does not file comments with the Commission within the time set for filing comments, it will be presumed to have no comments. One copy of an agency's comments must also be set to the Applicants representatives.

Lois D. Cashell
Acting Secretary

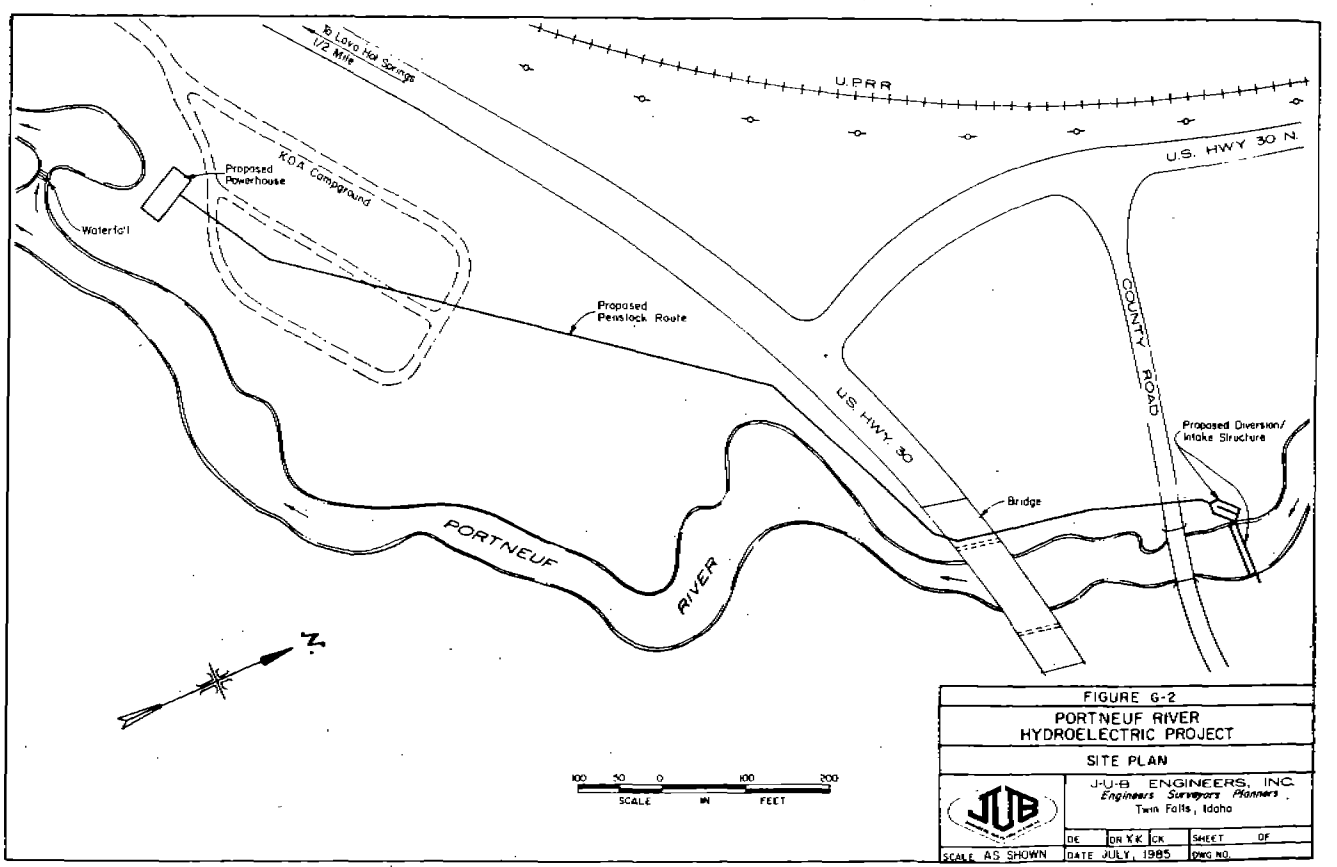

FIGURE G-2

PORTNEUF RIVER
HYDROELECTRIC PROJECT

SITE PLAN

J-U-B ENGINEERS, INC.
Engineers Surveyors Planners
Twin Falls, Idaho

DE	DR Y.K.	CK	SHEET	OF
SCALE AS SHOWN	DATE JULY, 1985		DWG NO.	

J-U-B ENGINEERS, INC.

250 South Beechwood Avenue, Suite I • Boise, Idaho 83709 • Telephone (208) 376-7330

29-7699

January 10, 1986

RECEIVED
JAN 15 1986
Department of Water Resources

Kenneth Dunn, Director
Idaho Dept. of Water Resources
450 West State Street
Boise, ID 83720

Dear Mr. Dunn:

Re: Deficiencies and Additional Information for
Portneuf River Hydroelectric Project
(FERC No. 7447-002)

Enclosed is a copy of the information prepared in response to Deficiency and Additional Information items identified by the Federal Energy Regulatory Commission (FERC). This information was previously reviewed by relevant agencies, and the comments that we received are also included. This information is being simultaneously submitted to FERC.

If you have questions or need additional information, please give me a call.

Sincerely,

J-U-B ENGINEERS, Inc.

H. Wayne Gibbs
Project Coordinator

HWG:ss
Enclosures
cc: Marlon Bird
Randy Kolar
George Harrington

See Book #3

J-U-B ENGINEERS, INC.

250 South Beechwood Avenue, Suite I • Boise, Idaho 83709 • Telephone (208) 376-7330

RECEIVED
APR 03 1987
Department of Water Resources

January 10, 1986

RECEIVED
JAN 16 1986
Department of Water Resources
Eastern District Office

Idaho Department of Water Resources
Eastern Region
150 Shoup - Suite 15
Idaho Falls, ID 83402

Gentlemen:

Re: Deficiencies and Additional Information for
Portneuf River Hydroelectric Project
(FERC No. 7447-002)

Enclosed is a copy of the information prepared in response to Deficiency and Additional Information items identified by the Federal Energy Regulatory Commission (FERC). This information was previously reviewed by relevant agencies, and the comments that we received are also included. This information is being simultaneously submitted to FERC.

If you have questions or need additional information, please give me a call.

Sincerely,

J-U-B ENGINEERS, Inc.

H. Wayne Gibbs
Project Coordinator

HWG:ss
Enclosures
cc: Marlon Bird
Randy Kolar
George Harrington

January 14, 1986

RE: Application for Permit No. 29-7699
Hydropower on Portneuf River

Mr. Marlon Bird
Secretary-Treasurer
Commercial Energy Management, Inc.
175 LaBelle Drive
Rigby, ID 83442

Dear Mr. Bird:

The Department of Fish and Game has furnished a letter stating their reasons for protesting the above captioned application. A copy of this letter is enclosed for your records.

It is apparent from the letter that their protest is primarily based on the issue of local public interest. We understand many of the factors considered by this Department regarding local public interest are also evaluated by the Federal Energy Regulatory Commission. Rather than having the applicant present his case on this issue to both agencies, it has been this Department's position to delay conducting an administrative hearing until after a license has been issued by FERC. Normally, with granting of the FERC license, there is a resolution of the issues concerning local public interest eliminating the need for a hearing before the Department. We intend to follow this procedure unless instructed by you to proceed with an administrative hearing.

When FERC has ruled on your application for a hydropower license, please advise this office so that administrative action on application 29-7669 can be expedited.

Respectfully submitted,

ERNEST CARLSEN
Assistant Regional Supervisor

EC:cw

Enclosure

cc: David Neider, F & G

IDAHO FISH & GAME

Region 5
5205 S. 5th Avenue
Pocatello, Idaho 83201
Telephone: (208) 232-4703

December 19, 1985

DEC 20 1985

Earnest Carlsen
Assistant Regional Supervisor
Department of Water Resources
150 Shoup, Suite 15
Idaho Falls, ID 83402

REGARDING: Permit No. 29-7699 Commercial Energy Management, Inc., Portneuf River, Lava Hot Springs

Dear Mr. Carlsen:

We objected to the above referenced permit as at this time we question whether it is in the local public interest. The stream in this area is adjacent to the KOA campground and because of its location and trout population has the potential to provide a considerable amount of fishing. In addition, the proposed diversion point is located at a popular fishing site near a bridge crossing.

The stream in this section is considered Class I by our department. This is a stream having multi-state value. Consequently any changes in it has the potential to effect its game fish population. Specifically at this location we are concerned about mortalities of small game fish due to their entrainment on the intake screens. This may result in lower trout numbers downstream as these trout undoubtedly seed lower nursery areas.

If this permit is granted, we will ask for a number of stipulations (through the Federal Energy Regulatory Commission) to be included in the hydropower permit. If possible, we would also like these stipulations included in the water rights permit. Please advise if this would be possible and we will provide you with a list of them.

Sincerely,

Dave Neider
Regional Supervisor

DN:lad

EQUAL OPPORTUNITY EMPLOYER

J-U-B ENGINEERS, INC.

250 South Beechwood Avenue, Suite I • Boise, Idaho 83709 • Telephone (208) 376-7330

29-7699

December 6, 1985

RECEIVED
DEC 10 1985
Department of Water Resources

Kenneth Dunn, Director
Idaho Dept. of Water Resources
450 West State Street
Boise, ID 83720

Dear Mr. Dunn:

Re: Deficiencies and Additional Information for
Portneuf River Hydroelectric Project
(FERC No. 7447-002)

Enclosed is a copy of a letter from the Federal Energy Regulatory Commission (FERC) dated October 30, 1985, which describes application deficiencies and additional information required from the Applicant. In accordance with the FERC letter, your agency is being asked to provide comments on the Applicant's response to Deficiency No. 1 and the Additional Information Item No. 1. The information developed by the Applicant is enclosed for your review and comment.

As stated in the FERC letter, your agency has 30 days in which to provide comments. Since the FERC submittal deadline is immediately following the agency comment deadline, please provide your comments within the allocated time. Please give me a call if you have questions or need additional information.

Sincerely,

J-U-B ENGINEERS, Inc.

H. Wayne Gibbs
Project Coordinator

HWG:ss
Enclosure
cc: Marlon Bird
Randy Kolar
George Harrington

see attachments on Eastern's letter-same date-below

J-U-B ENGINEERS, INC.

250 South Beechwood Avenue, Suite I • Boise, Idaho 83709 • Telephone (208) 376-7330

December 6, 1985

RECEIVED
DEC 9 1985
Department of Water Resources
Eastern District Office

Idaho Department of Water Resources
Eastern Region
150 Shoup - Suite 15
Idaho Falls, ID 83402

Gentlemen:

Re: Deficiencies and Additional Information for
Portneuf River Hydroelectric Project
(FERC No. 7447-002)

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Sincerely,

J-U-B ENGINEERS, Inc.

H. Wayne Gibbs
Project Coordinator

HWG:ss
Enclosure
cc: Marlon Bird
Randy Kolar
George Harrington

FEDERAL ENERGY REGULATORY COMMISSION
WASHINGTON, D.C. 20426

RECEIVED
DEC 9 1985
Department of Water Resources
Eastern District Office

OCT 30 1985

Project No. 7447-002 - Idaho
Portneuf River Hydroelectric
Commercial Energy Management, Inc.

J-U-B Engineers
RECEIVED
NOV 07 1985
BOISE, IDAHO

Mr. Robert Bird
Commercial Energy Management,
Incorporated
175 La Belle Drive
Rigby, ID 83442

Dear Mr. Bird:

Your application filed on August 30, 1985, fails to conform to the requirements of the Commission's regulations. A list of deficiencies is enclosed as Schedule A.

Under Section 4.32(d) of the regulations, you have 90 days from the date of this letter to correct the deficiencies in your application. Further, under Section 4.32(f), you have 90 days from the date of this letter to provide additional information needed by the staff to analyze your application. See Schedule B. If the correction of any deficiency or the submission of additional information causes any other part of the application to be inaccurate, that part must also be revised and refiled by the due date.

If an original and 14 copies of the information requested are not timely filed with the Secretary of the Commission, your application will be rejected. A copy of the information requested must also be provided to each agency consulted under Section 4.38 of the regulations. You are advised to contact Mr. James Hunter on (202) 376-9814 if you have any questions concerning what information must be provided.

Authority to act on this matter is delegated to the Director, Office of Hydropower Licensing, under 18 C.F.R. §375.314 (1985).

Sincerely,

Kenneth M. Pusateri
Acting Director, Office
of Hydropower Licensing

Enclosures:
Schedule A
Schedule B

Schedule A
Project No. 7447-002

DEFICIENCIES

(1) The application does not conform to the requirements in 18 CFR Section 4.61(d)(2)(ii). Specifically, the Environmental Report (Exhibit E) must be revised to include a detailed analysis of the impact the proposed project diversion structure would have on water quality in the impoundment and in the bypassed reach, as suggested on June 28, 1984, by the U.S. Environmental Protection Agency, a plan to mitigate impacts to water quality, and agency comments on the adequacy of the study and plan.

(2) Pursuant to 18 CFR Section 4.61(e)(2), Exhibit F must be revised to include a section view of the diversion weir and an elevation view of the powerhouse.

Schedule B

ADDITIONAL INFORMATION

Under the requirements in 18 CFR at section 4.32(f), the application may be dismissed unless the following additional information is provided within 90 days from the date of this letter. When the Applicant files this additional information with the Commission, the Applicant should at the same time serve exact copies of the filings on the agencies that the Applicant consulted during the preparation of the Exhibit E.

In some of the items listed below, the Applicant is asked to provide agency comments. The Applicant should make written requests for comments; if the agencies do not reply, the Applicant should provide the Commission with copies of the letters of request. The letters of request should be dated no later than 45 days from the date of this letter, and must allow a minimum of 30 days for agency response.

(1) Furnish a detailed description of the riparian and wetland vegetation in the project area, including the acreage of each vegetation type and an estimate of the acreage that would be disturbed during construction. A plan to mitigate the loss of riparian vegetation should be included in the description along with agency comments on the adequacy of the plan.

(2) Provide detailed design drawings clearly indicating that the proposed transmission lines would be constructed to prevent the electrocution of perching raptors, as indicated on page 17 of the application. The Applicant should consult with the U. S. Fish and Wildlife Service and the Idaho Department of Fish and Game during the design process.

(3) On pages 5 and 8 of the application the primary transmission line (or Intertie) voltage is described as 12.5 kV, the same as the operating voltage of the Utah Power and Light Company (UP&L) line to which it will connect. However, on Exhibit 4 of Appendix H, the existing UP&L line is indicated as 46 kV. Please provide clarification.

(4) Provide an electrical one-line schematic diagram (not a map) covering the main power circuits from the generators out to the tap to the utility line, and from this point to the point(s) of transformation to higher voltage levels on the utility system. Show all voltage levels and give kW or KVA and power factor ratings and other pertinent data on major apparatus, as appropriate. Indicate any upgradings on utility circuits which may be necessary to accomodate the project. Show all ownership boundaries. Show the estimated weekly peak demands on the utility circuits before and after the project becomes operational.

(5) Provide the area in square miles of the drainage area upstream of the project site.

(6) Indicate where the proposed generation is to be sold and the contract price, if any.

(7) Furnish the PURPA value of power in the State of Idaho.

DEFICIENCIES AND ADDITIONAL INFORMATION
PORTNEUF RIVER HYDROELECTRIC PROJECT
(FERC NO. 7447-002)

A. DEFICIENCIES

1. Impacts on Water Quality and Mitigation of Impacts. Additional water quality information was collected by the Idaho Department of Health & Welfare, Division of Water Quality. The collection sites were downstream of Lava Hot Springs, below Fish Creek. Comparison of the data shows no striking differences. Two samples (above and below) were originally taken to compare with existing data. Should the data show a large variation, then additional samples should be taken. Since this was not the case (gross parametric differences in component levels), the assumption is made that the sample size adequately meets the objectives. The additional water quality data is provided on the following pages.

The areas of water storage created by the diversion will be less than 1/2 acre and will have a turnover rate of 5 hours during average discharge and 8 hours during low flow discharge. Rapid water movement (it would be slower than natural conditions) results from the small size of the stream and the channel configuration (U-shaped) above the diversion. The river in this area flows in a "smooth run" without upstream features such as trees, boulders, etc. Sedimentation above the diversion may increase, although it is unlikely to become severe enough to require dredging.

Water areas below the project are unique. A large basin receives the river flow from the left bank, mostly being blocked by a rock bank on the right side. The pool lies beneath the right bank and receives water backed up from the cascading falls along the left bank. The upstream end of the pool is the site of the proposed power plant. Because of the low head involved and the project design, nitrogen supersaturation problems are not anticipated. Stream temperatures below the powerhouse may be cooler in the summer months because of the diversion. Since the pool presently has high sediment and turbidity levels, it is unlikely that these conditions would change significantly after project installation. All turbine discharge velocities would be dissipated below the powerhouse to minimize disturbances.

2080043
42 37 15.0 112 02 45.0 4
PURINEUF R BL LAVA RD1 SP H30 BR
16005 IDAHO BANNOCK
PACIFIC NORTHWEST 130600
UPPER SNAKE RIVER
213DSURV
78001B DEPTH 0
/TYPA/AMBNT/STREAM
INDEX 1310001 002740 09220
MILES 0324.30 0371.20 052.30

INITIAL DATE				01/01/01	75/10/29	75/12/11	76/01/26	76/02/10	76/02/11	76/02/12	76/03/17	
INITIAL TIME-DEPTH-BOTTOM					0001	0001	0001	1100 0001	0950 0001	1300 0001	0001	
00010 WATER	TEMP	CENT			9.5	7.0	4.2	4.0	4.0	5.0	9.0	
00011 WATER	TEMP	FAHN			49.1	44.6	39.6	39.2	39.2	41.0	48.2	
00042 ALTITUDE	FEET	AB MSL		5004								
00061 STREAM	FLOW,	INST-CFS			216	198	154	157			198	
00070 TURB	JKSN	JTU			2.1	4.6	14.0	18.0	25.0	16.0	29.0	
00095 CNDUCTVY	AT 25C	MICROMHO			532	640	850	888			698	
00116 INTNSVE	SURVEY	IDENT			761601	761601	761601	761601	761603	761603	761601	
00300 DO		MG/L			12.0	12.6	9.1	10.9	12.7	13.3	13.1	
00301 DO	SATUR	PERCENT			127.6	124.1	83.5	100.0	116.5	124.8	135.7	
00310 BOD	5 DAY	MG/L			1.6	1.7	1.2	0.5	1.8	0.6	1.6	
00335 COD	LOWLEVEL	MG/L			9.9	6.2	7.6	5.3			14.1	
00410 T ALK.	CACO3	MG/L			232	288	372	388	400	392	264	
00500 RESIDUE	TOTAL	MG/L			497	562	567	551			541	
00530 RESIDUE	TOT NFLT	MG/L			41	50	81	94			133	
00625 TOT KJEL	N	MG/L			1.800	2.500	0.900	1.700			2.500	
00660 ORTHOPO4	PO4	MG/L			0.02	0.08	0.10	0.16			0.03	
00665 PHOS-TOT		MG/L P			0.050	0.080	0.120	0.160	0.170	0.130	0.090	
00900 TOT HARD	CACO3	MG/L			256	308	396	412			300	
00927 MGNSIUM	MG,TOT	MG/L				40.8	43.4	40.0			38.2	
00929 SODIUM	NA,TOT	MG/L			28.70							
00937 PTSSIUM	K,TOT	MG/L			8.10							
00940 CHLORIDE	TOTAL	MG/L			2 K							
00945 SULFATE	SO4-TOT	MG/L			45	45	42	43			47	
01045 IRON	FE,TOT	UG/L			220							
01055 MANGNESE	MN	UG/L			330.0							
31501 TOT COLI	MFTRMPO	/100ML			200 K	110	230	220			40	
31616 FEC COLI	MFM-FCAL	/100ML			16	34	4	38			18	
31679 FECSTREP	MF M-ENT	/100ML			24	18	12	560				
71845 AMMONIA	TOT-NH4	MG/L			0.4	0.2	0.1	0.1	0.1	0.1	0.1	
71850 NITRATE	TOT-NO3	MG/L			4.2	4.7	5.5	5.9	5.8	5.6	4.5	
INITIAL DATE				76/05/04	76/05/05	76/05/06	76/05/26	76/06/30	76/07/28	76/09/07	76/09/07	
INITIAL TIME-DEPTH-BOTTOM				1020 0001	1325 0001	0750 0001	1030 0001	0810 0001	0001	0600	0800 0001	
00010 WATER	TEMP	CENT		11.0	13.0	10.0	13.0	18.0	21.8	14.0	12.0	
00011 WATER	TEMP	FAHN		51.8	55.4	50.0	55.4	64.4	71.2	57.2	53.6	
00061 STREAM	FLOW,	INST-CFS		559			272		212	200		
00070 TURB	JKSN	JTU		85.0	57.0	86.0	24.0	4.0	20.0		2.0	
00095 CNDUCTVY	AT 25C	MICROMHO		525			404	668	694		812	
00116 INTNSVE	SURVEY	IDENT		761601	761603	761603	761601	761601	761601	761603	761603	
00300 DO		MG/L		9.0	9.6	9.2	10.8	7.7	10.3	8.5	8.9	
00301 DO	SATUR	PERCENT		97.4	108.6	97.8	122.4	97.4	140.6	97.0	99.0	
00310 BOD	5 DAY	MG/L		3.0			2.6	0.1	0.9	1.5		
00335 COD	LOWLEVEL	MG/L		35.2				14.5	16.2			
00400 PH		SU								8.20		
00410 T ALK.	CACO3	MG/L		226	218	212	202	296	284		350	
00500 RESIDUE	TOTAL	MG/L		551			527	414	426		500	

(SAMPLE CONTINUED ON NEXT PAGE)

2080043
42 37 15.0 112 07 45.0 4
PURINEUF R BL LAVA nOI SP H30 0R
16005 IDAHO BANNOCK
PACIFIC NORTHWEST 130600
UPPER SNAKE RIVER
2110SURW
780818 DEPTH 0
/TYPA/AMBNT/STREAM
INDEX 1310001 002740 09220
MILES 0324.30 0371.20 052.30

(SAMPLE CONTINUED FROM PREVIOUS PAGE)

INITIAL DATE				76/05/04	76/05/05	76/05/06	76/05/26	76/06/30	76/07/28	76/09/07	76/09/07		
INITIAL TIME-DEPTH-BOTTOM				1020 0001	1525 0001	0750 0001	1030 0001	0810 0001	0001	0600	0800 0001		
00530	RESIDUE	TOT NFLT	MG/L	316			113	38	101		42		
00625	TOT KJEL	N	MG/L	1.800			1.000	0.990	1.000		0.500		
00660	ORTHOPO4	PO4	MG/L	0.12			0.10	0.02	0.17		0.05		
00665	PHOS-TOT		MG/L P	0.250	0.450	0.220	0.230	0.090	0.080		0.060		
00900	TOT HARD	CACO3	MG/L	238			216	316	308		422		
00927	MGNSIUM	MG,TOT	MG/L	20.8			19.3	29.5	29.1		36.0		
00945	SULFATE	SO4-TOT	MG/L	30			26	27	46		46		
01045	IRON	FE,TOT	UG/L				1080						
01055	MANGNESE	MN	UG/L				130.0						
31501	TOT COLI	MFIMENDO	/100ML	150			480	2200	4900				
31616	FEC COLI	MFM-FCAK	/100ML	190			54	120 L	450				
71845	AMMONIA	TOT-NH4	MG/L	0.0	0.0	0.0	0.1	0.0	0.1		0.0		
71850	NITRATE	TOT-NO3	MG/L	2.1	1.4	1.7	1.6	1.2	1.8		2.5		
INITIAL DATE				76/09/07	76/09/07	76/09/07	76/09/07	76/09/07	76/09/08	76/09/08	76/09/08		
INITIAL TIME-DEPTH-BOTTOM				0915	1215	1505	1815	2120	0050	0430	0807		
00010	WATER	TEMP	CENT	13.0	15.0	17.0	17.0	14.0	14.0	12.0	11.5		
00011	WATER	TEMP	FAHN	55.4	59.0	62.6	62.6	57.2	57.2	53.6	52.7		
00061	STREAM	FLOW,	INST-CFS	200	200	200	200	200	200	200	200		
00116	ININSVE	SURVEY	IDENT	761603	761603	761603	761603	761603	761603	761603	761603		
00300	DO		MG/L	9.6	12.4	12.2	11.0	9.2	8.1	8.5	8.7		
00301	DO	SATUR	PERCENT	109.0	144.0	149.0	134.0	105.0	93.0	93.0	94.0		
00310	BOD	5 DAY	MG/L			1.4			2.4				
00400	PH		SU	8.40	8.40	8.30	8.10	8.00	8.20	8.00	8.20		
INITIAL DATE				76/09/08	76/09/08	76/09/08	76/09/09	76/09/21					
INITIAL TIME-DEPTH-BOTTOM				0940 0001	1135	1550		1020					
00010	WATER	TEMP	CENT	12.0	14.0	17.5	14.0	12.0					
00011	WATER	TEMP	FAHN	53.6	57.2	63.5	57.2	53.6					
00061	STREAM	FLOW,	INST-CFS		200	200	160	163					
00070	TURB	JKSN	JIU	4.1			1.6	4.1					
00095	CNDUCTVY	AT 25C	MICROMHO	870			807	870					
00116	ININSVE	SURVEY	IDENT	761603	761603	761603	761601	761601					
00300	DO		MG/L	6.7	11.6	11.0	11.6	9.1					
00301	DO	SATUR	PERCENT	96.8	133.0	135.0	134.0	101.2					
00310	BOD	5 DAY	MG/L			1.4		1.6					
00335	COD	LOWLEVEL	MG/L					7.4					
00400	PH		SU		8.15	8.30							
00410	T ALK	CACO3	MG/L	340			352	340					
00500	RESIDUE	TOTAL	MG/L	504			513	504					
00530	RESIDUE	TOT NFLT	MG/L	49			32	42					
00625	TOT KJEL	N	MG/L	1.240			0.400	1.240					
00660	ORTHOPO4	PO4	MG/L				0.05	0.01					
00665	PHOS-TOT		MG/L P	0.080			0.050	0.080					
00900	TOT HARD	CACO3	MG/L				418	374					
00927	MGNSIUM	MG,TOT	MG/L				37.0	35.6					

(SAMPLE CONTINUED ON NEXT PAGE)

2080043
42 37 15.0 112 07 45.0 4
PURINEUF R BL LAVA nOI SP H30 0R
16005 IDAHO BANNOCK

2080043
42 37 15.0 112 02 45.0 4
PURINEUF R BL LAVA HOT SP H30 RK
16005 IDAHO BANNOCK
PACIFIC NORTHWEST 130600
UPPER SNAKE RIVER
21IDSUR
780818 DEPTH 0
/TYPA/AMBNT/STREAM
INDEX 1310001 002740 09220
MILES 0324.30 0371.20 052.30

(SAMPLE CONTINUED FROM PREVIOUS PAGE)

	INITIAL DATE			76/09/08	76/09/08	76/09/08	76/09/09	76/09/21	
	INITIAL TIME-DEPTH-BOTTOM			0940 0001 1135		1550		1020	
00945	SULFATE	SO4-TOT	MG/L				45	52	
71845	AMMONIA	TOT-NH4	MG/L	0.0			0.0	0.0	
71850	NITRATE	TOT-NO3	MG/L	3.0			3.0	3.0	

2080042
42 37 10.0 112 00 00.0 4
PORTNEUF R BL LAVA HOT SPRINGS BL FISH CREEK
16005 IDAHO BANNOCK
PACIFIC NORTHWEST 130600
UPPER SNAKE RIVER
21IDSURV
780818 DEPTH 0
/TYPA/AMBNT/STREAM
INDEX 1310001 002740 09220
MILES 0324.30 0731.20 054.00

	INITIAL DATE			01/01/01	75/10/29	75/12/11	76/01/26	76/02/10	76/03/17	76/05/04	76/05/26
	INITIAL TIME-DEPTH-BOTTOM				0001	0001	1030 0001	1030 0001	1105 0001	1020 0001	1015 0001
00010	WATER	TEMP	CENT		7.0	5.5	3.0	2.0	6.0	11.0	12.0
00011	WATER	TEMP	FAHN		44.6	41.9	37.4	35.6	42.8	51.8	53.6
00042	ALTITUDE	FEET	AB MSL	5102							
00070	TURB	JKSN	JTU		2.8	3.7	22.0	27.0	44.0	65.0	25.0
00095	CNDUCTVY	AT 25C	MICROMHO		530	620	850	838	625	518	630
00116	INTNSVE	SURVEY	IDENT		761601	761601	761601	761601	761601	761601	761601
00300	DO		MG/L		10.6	12.8	7.9	11.3	13.0	9.0	11.9
00301	DO	SATUR	PERCENT		104.8	123.5	70.6	98.7	125.4	97.8	132.9
00310	BOD	5 DAY	MG/L		2.6	2.1	1.2	0.8	1.8	3.1	2.7
00335	COD	LOWLEVEL	MG/L		10.7	8.7	11.6	14.3	14.1	18.0	
00410	T ALK	CACO3	MG/L		228	282	372	384	260	222	202
00500	RESIDUE	TOTAL	MG/L		503	572	590	568	540	392	388
00530	RESIDUE	TOT NFLT	MG/L		43	47	107	124	183	249	117
00625	TOT KJEL	N	MG/L		1.700	2.100	1.100	1.900	1.400	1.500	1.000
00660	ORTHOPO4	PO4	MG/L		0.02	0.07	0.02	0.18	0.02	0.14	0.07
00665	PHOS-TOT		MG/L P		0.070	0.080	0.200	0.220	0.070	0.240	0.590
00900	TOT HARD	CACO3	MG/L		256	308	428	416	300	242	212
00927	MGNSIUM	MG,TOT	MG/L			42.0	43.9	42.8	41.6	24.0	19.3
00929	SODIUM	NA,TOT	MG/L		22.40						
00937	PTSSIUM	K,TOT	MG/L		7.00						
00940	CHLORIDE	TOTAL	MG/L		2 L						
00945	SULFATE	SO4-TOT	MG/L		45	48	47	45	50	28	24
01045	IRON	FE,TOT	UG/L		200						990
01055	MANGNESE	MN	UG/L		460.0						130.0
31501	TOT COLI	MFIMENDO	/100ML		200 K	30	62	8600	8	210	44
31616	FEC COLI	MFM-FCBR	/100ML		6	2	12	24	2	100	54
31679	FECSTREP	MF M-ENT	/100ML		44	8	12	60			
71845	AMMONIA	TOT-NH4	MG/L		0.5	0.2	0.1	0.1	0.1	0.0	0.0
71850	NITRATE	TOT-NO3	MG/L		4.7	4.9	6.2	6.1	3.4	2.2	1.5
	INITIAL DATE			76/06/30	76/07/28	76/09/09	76/09/21				
	INITIAL TIME-DEPTH-BOTTOM			0945			0955				
00010	WATER	TEMP	CENT	18.0	19.8	14.0	11.0				
00011	WATER	TEMP	FAHN	64.4	67.6	57.2	51.8				
00070	TURB	JKSN	JTU	2.7	21.0	1.9	1.7				
00095	CNDUCTVY	AT 25C	MICROMHO	630	636	754	729				
00116	INTNSVE	SURVEY	IDENT	761601	761601	761601	761601				
00300	DO		MG/L	8.4	10.8	11.2	8.6				
00301	DO	SATUR	PERCENT	106.6	141.5	129.8	93.4				
00310	BOD	5 DAY	MG/L	0.6	2.3	3.1	1.9				
00335	COD	LOWLEVEL	MG/L		12.3	10.5	8.4				
00410	T ALK	CACO3	MG/L	278	274	330	328				
00500	RESIDUE	TOTAL	MG/L	401	456	463	455				
00530	RESIDUE	TOT NFLT	MG/L	26	104	35	20				
00625	TOT KJEL	N	MG/L	0.890	0.900	0.600	1.550				
00660	ORTHOPO4	PO4	MG/L	0.01	0.09	0.02	0.02				

(SAMPLE CONTINUED ON NEXT PAGE)

2080042
42 37 10.0 112 00 00.0 4
PORTNEUF R BL LAVA HOT SPRINGS BL FISH CREEK
16005 IDAHO BANNOCK
PACIFIC NORTHWEST 130600
UPPER SNAKE RIVER
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780818 DEPTH 0
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INDEX 1310001 002740 09220
MILES 0324.30 0731.20 054.00

(SAMPLE CONTINUED FROM PREVIOUS PAGE)

INITIAL DATE				76/06/30	76/07/28	76/09/09	76/09/21
INITIAL TIME-DEPTH-BOTTOM				0945			0955
00665	PHOS-TOT		MG/L P	0.090	0.110	0.070	0.040
00900	TOT HARD	CACO3	MG/L	304	300	362	378
00927	MGNSIUM	MG,TOT	MG/L	30.2	32.5	40.2	38.7
00945	SULFATE	SO4-TOT	MG/L	29	41	50	49
31501	TOT COLI	MFIMENDO	/100ML	100	800 L		
31616	FEC COLI	MFM-FCBK	/100ML	78	110		
71845	AMMONIA	TOT-NH4	MG/L	0.0	0.1	0.1	0.1
71850	NITRATE	TOT-NO3	MG/L	1.2	1.8	2.9	3.4

Construction and operation of the project would not create a violation of any applicable water quality standards.

Mitigation for potential adverse effects to water quality will involve preventive design features that minimize the disruption of present conditions. All areas within the high water mark of the stream will receive berms or other protective devices to shield disturbed areas and materials. All spoil from construction will be removed to high ground or integrated into the site to reduce the potential for erosion.

The streambed will be disturbed during installation of the diversion structure. A cofferdam will be used to divert the stream from one side, then to the other side to allow construction to proceed with minimum impact. The diversion will be anchored to bedrock with wing walls, or other stabilizing features as necessary to prevent soil disturbance. All areas disturbed for the construction of conveyance and penstock facilities will be filled, stabilized and revegetated. The open canal areas will be riprapped along the bank slopes.

The powerhouse will be set directly in bedrock in the bank adjacent to the pool. A footing and main wall will be built on the stream side first to reduce erosion potential during powerhouse construction.

The only hazardous materials that will be at the site during construction will be fuels and lubricants required to operate equipment. Any such material not inside of equipment will be stored in leakproof containers on high ground well removed from the river. The ongoing operation of the project will require the use of cleaning and lubricating fluids. These materials will be kept in sealed containers in the powerhouse. Operation of the project will not cause significant oxygen depletion in the river due to numerous falls and irregular instream features. Existing levels of dissolved oxygen in the subject reach appear to be near optimum, and the project will not seriously affect these levels. Discharges through the powerhouse may have slightly lower dissolved oxygen levels than the river, but receiving waters are slack and sediment-laden, which results in poor habitat conditions for coldwater fish. At low flows, the potential for oxygen depletion may require monitoring.

B. ADDITIONAL INFORMATION

1. Riparian and Wetland Vegetation: Description, Acreage to be Disturbed and Mitigation Plan. Riparian and wetland vegetation in the project area is dominated by willow. The only other tree specie present is river birch. Various sedges and cattails are included in the riparian vegetation. Forbes present along the river include water hemlock, nettle, catnip, nightshade, bull thistle, wild rhubarb, wild lettuce and mullein.

As a result of previous construction activity, much of the natural vegetation in the project area has been replaced. Construction of the U. S. Highway 30 bridge and the development of the KOA Campground have resulted in areas of planted grasses which extend to the river in some locations.

The proposed diversion/intake will be located north of the County Road and will obviously impact some riparian vegetation because of construction within and adjacent to the river. From the intake structure, the penstock will pass beneath the County Road and U. S. Highway 30 before angling across the KOA Campground to the powerhouse. The initial 600 feet of the penstock will parallel the river closely (20 to 30 feet), but the last 750 feet will be well removed from the river. Since most of the riparian and wetland vegetation is within a few feet of the river, penstock construction will have little impact on this vegetation. Construction of the diversion/intake structure and the powerhouse will directly impact riparian/wetland vegetation.

As a result of the variety of plant species included in the riparian habitat, it is difficult to calculate the area (acreage) occupied by each specie. Therefore, vegetation acreage that will be disturbed by the project was calculated only for the habitat categories of riparian and wetland. The riparian plant community is dominated by several species of willow. The only pronounced area of wetland vegetation is on the bend of the river just southeast of the intersection of U. S. Highway 30 with the old highway. Cattails are the dominant specie in the wetland area.

The table presented below shows the estimated acreage of riparian and wetland vegetation in the project area and the acreage of each that will be disrupted by project construction.

Vegetation Type	Acres Within Project Area	Acres to be Disturbed by Project
Riparian Vegetation	9	.5
Wetland Vegetation	1	0

The proposed penstock route was planned to minimize the impact on riparian/wetland vegetation. In fact, the project will likely help stabilize eroding stream banks in the project area. As shown by the photographs in the license application, some river banks are being severely eroded during high flows and significant amounts of soil are being dropped into the water. The diversion structure will reduce flows, which should help stabilize upstream erosion.

Construction of the diversion/intake structure and the powerhouse will cause virtually all of the anticipated loss of riparian vegetation. In order to construct these facilities, a permit to alter stream channel will be required from the Idaho Department of Water Resources. If the permit is issued, conditions will likely include construction procedures and restoration and stabilization requirements. Areas in which vegetation is disrupted will have to be revegetated and cut banks and other exposed areas will have to be protected with riprap or other approved material.

Based upon previous conditions attached to the Water Resources Permit and the recommendations of other agencies, the Applicant commits to the following restoration and stabilization activities:

a. Hydroseed all areas where vegetation has been disturbed with a grass seed to be recommended by the agencies. The density of application and fertilization requirements should also be determined by the agencies.

b. Willow cuttings will be planted in any riparian areas disturbed by the project as well as grass or other vegetation recommended by the agencies.

c. Exposed slopes created by construction which are too steep for vegetation will be stabilized with riprap in accordance with the Water Resources Permit requirements.

d. Hay or straw mulch will be applied to revegetated areas to provide erosion control until vegetation becomes established.

e. A site specific restoration and stabilization plan, including maps, shall be prepared and submitted to the agencies prior to construction. This plan should be prepared with agency cooperation, possibly including an on-site meeting of relevant parties.

December 5. 1985

David Neider
Regional Supervisor
Idaho Fish and Game
5205 S. 5th Ave.
Pocatello, Idaho 83204-4229

Re: Application for Permit No. 29-7699 Commercial Energy Management, Inc.

Dear Mr. Neider:

To assist your department in its evaluation of amended application for permit 29-7699 the following is an explanation of actions taken on the application since originally filed with the Department of Water Resources:

4-14-1983 Application filed by Marlon Bird to divert 250 cfs for hydro power on Portneuf River.

5-2-1983 Application protested by the Department of Fish and Game.

6-20-1984 Received notification that preliminary permit No. 7447 was issued by FERC.

8-29-1985 Received a copy of the "Final Application for Minor Water Power Project for Portneuf River Hydro Electric Project FERC No. 7447."

9-5-1985 Marlon Bird assigned application No. 29-7699 to Commercial Energy Management Inc.

11-8-1985 Application amended to reflect description of project as contained in FERC No. 7447.

11-25-1985 Received notification of continuation of protest by the Department of Fish and Game.

To consider the protest against this application an administrative hearing will be conducted by this Department. Prior to the hearing, however, your department needs to furnish a detailed explanation of its objections to the application. This clarification is required under Section 42-203A, Idaho Code. This information should be furnished in the near future.

Respectfully submitted

Ernest Carlsen
Assistant Regional Supervisor

EC/md

Region 5
5205 S. 5th Avenue
Pocatello, Idaho 83204-4229
Telephone: (208) 232-4703

November 25, 1985

Ernest Carlson
Assistant Regional Supervisor
Department Water Resources
150 Shoup, Suite 15
Idaho Falls, Id 83402

Re: Amended Application for Permit No. 29-7699
Commercial Energy Management, Inc.

Dear Mr. Carlson:

As is customary with water right applications regarding hydro-electric projects, we oppose this application until furnished with additional project details.

Sincerely,

David Neider
Regional Supervisor

DN/vt

RECEIVED
NOV 29 1985
Department of Water Resources
Eastern District Office

November 19, 1985

RE: Amended Application for Permit No. 29-7699
COMMERCIAL ENERGY MANAGEMENT, INC.

Idaho Department of Fish & Game
5205 So. 5th
Pocatello, ID 83205

Gentlemen;

We are enclosing a copy of an application that may be of interest to your agency. Please review the application and submit any comments you may have to our Department as soon as possible. The last date of protest is December 9, 1985, and we are required to take final action shortly thereafter.

If we may be of further assistance, please feel free to contact us.

Respectfully submitted,

ERNEST CARLSEN
Assistant Regional Supervisor

EC:cw

Enclosure

November 19, 1985

RE: Amended Application for Permit No. 29-7699
COMMERCIAL ENERGY MANAGEMENT, INC.

State of Idaho
Department of Lands
Statehouse
Boise, ID 83720

Gentlemen:

We are enclosing a copy of an application that may be of interest to your agency. Please review the application and submit any comments you may have to our Department as soon as possible. The last date of protest is December 9, 1985, and we are required to take final action shortly thereafter.

If we may be of further assistance, please feel free to contact us.

Respectfully submitted,

ERNEST CARLSEN
Assistant Regional Supervisor

EC:cw

Enclosure

November 19, 1985

RE: Amended Application for Permit No. 29-7699
COMMERCIAL ENERGY MANAGEMENT, INC.

Mr. Thomas Bloxham, Watermaster
Water District No. 29
Downey, ID 83423

Dear Mr. Bloxham:

We are enclosing a copy of an application that may be of interest to your water district. Please review the application and submit any comments you may have to our Department as soon as possible. The last date of protest is December 9, 1985, and we are required to take final action shortly thereafter.

If we may be of further assistance, please feel free to contact us.

Respectfully submitted,

ERNEST CARLSEN
Assistant Regional Supervisor

EC:cw

Enclosure

STATE OF IDAHO

DEPARTMENT OF WATER RESOURCES
Eastern Region

---

150 Shoup Ave., Suite 15
Idaho Falls, Idaho 83402
(208) 525-7161

NOVEMBER 13, 1985

The Idaho Statesman
Box 40
Boise, Idaho 83707

Gentlemen:

Enclosed you will find a legal notice which we wish to have published on the dates indicated (once a week for two consecutive weekly issues) in your newspaper. We have allowed ample time for you to submit a galley proof to this office for review before the first publication date. If you cannot publish the notice on the proposed dates, please contact us immediately.

An affidavit of publication must be submitted to the Department along with the publication bill. Your cooperation is appreciated.

Please send the affidavit of publication and publication billing to this office before DECEMBER 9, 1985.

Yours truly,

RONALD D. CARLSON
Supervisor
Eastern Region

Encl.

STATE OF IDAHO

DEPARTMENT OF WATER RESOURCES
Eastern Region

150 Shoup Ave., Suite 15
Idaho Falls, Idaho 83402
(208) 525-7161

NOVEMBER 13, 1985

Lewiston Morning Tribune
505 "C" Street
Lewiston, Idaho 83501

Gentlemen:

Enclosed you will find a legal notice which we wish to have published on the dates indicated (once a week for two consecutive weekly issues) in your newspaper. We have allowed ample time for you to submit a galley proof to this office for review before the first publication date. If you cannot publish the notice on the proposed dates, please contact us immediately.

An affidavit of publication must be submitted to the Department along with the publication bill. Your cooperation is appreciated.

Please send the affidavit of publication and publication billing to this office before DECEMBER 9, 1985.

Yours truly,

RONALD D. CARLSON
Supervisor
Eastern Region

Encl.

legal for dept water, IF.

NOTICE OF AMENDED APPLICATION FOR WATER RIGHT

The following application has been filed to appropriate the public waters of the State of Idaho:

29-7699
COMMERCIAL ENERGY MANAGEMENT, INC.
175 LABELLE DRIVE
RIGBY, IDAHO 83442
Source: PORTNEUF RIVER trib SNAKE RIVER
Diversion Pt: LOT 9 Sec 22 T 09S R 38E
Use: POWER (210.0 cfs)
In: LOT 9 Sec 22 T 09S R 38E

The permits will be subject to all prior water rights. Protests may be submitted based on the criteria of Sec. 42-203A, **Idaho Code** and/or the new public interest criteria of Sec. 42-203C, **Idaho Code.** Protests must be filed with the Director, Dept. of Water Resources, 150 Shoup Ave., Suite 15, Idaho Falls, Idaho, 83402 on or before December 9, 1985.

KEN DUNN
Director

PUBLISH: **Thursday,** November 21, and 28, 1985.

STATE OF IDAHO

DEPARTMENT OF WATER RESOURCES
Eastern Region

150 Shoup Ave., Suite 15
Idaho Falls, Idaho 83402
(208) 525-7161

NOVEMBER 13, 1985

Times News
P. O. Box 548
Twin Falls, Idaho 83301

Gentlemen:

Enclosed you will find a legal notice which we wish to have published on the dates indicated (once a week for two consecutive weekly issues) in your newspaper. We have allowed ample time for you to submit a galley proof to this office for review before the first publication date. If you cannot publish the notice on the proposed dates, please contact us immediately.

An affidavit of publication must be submitted to the Department along with the publication bill. Your cooperation is appreciated.

Please send the affidavit of publication and publication billing to this office before DECEMBER 9, 1985.

Yours truly,

RONALD D. CARLSON
Supervisor
Eastern Region

Encl.

NOTICE OF AMENDED APPLICATION

FOR WATER RIGHT

The following application has been filed to appropriate the public waters of the State of Idaho:

29-7699

COMMERCIAL ENERGY MANAGEMENT, INC.

175 LABELLE DRIVE, RIGBY, ID 83442

Source: PORTNEUF RIVER trib SNAKE RIVER

Diversion Pt: LOT 9 Sec 22 T 09S R 38E

Use: POWER (210.0 cfs)

In: LOT 9 Sec 22 T 09S R 38E

The permits will be subject to all prior water rights. Protests may be submitted based on the criteria of Sec. 42-203A, Idaho Code and/or the new public interest criteria of Sec. 42-203C, Idaho Code. Protests must be filed with the Director, Dept. of Water Resources, 150 Shoup Ave., Suite 15, Idaho Falls, Idaho, 83402 on or before December 9, 1985.

KEN DUNN

Director

Published Times News, Lewiston Tribune, Idaho Statesman on 11/21 and 11/28/85.

STATE OF IDAHO

DEPARTMENT OF WATER RESOURCES
Eastern Region

150 Shoup Ave., Suite 15
Idaho Falls, Idaho 83402
(208) 525-7161

NOVEMBER 13, 1985

Idaho State Journal
P. O. Box 431
Pocatello, Idaho 83201

Gentlemen:

Enclosed you will find a legal notice which we wish to have published on the dates indicated (once a week for two consecutive weekly issues) in your newspaper. We have allowed ample time for you to submit a galley proof to this office for review before the first publication date. If you cannot publish the notice on the proposed dates, please contact us immediately.

An affidavit of publication must be submitted to the Department along with the publication bill. Your cooperation is appreciated.

Please send the affidavit of publication and publication billing to this office before DECEMBER 9, 1985.

Yours truly,

RONALD D. CARLSON
Supervisor
Eastern Region

Encl.

NOTICE OF AMENDED APPLICATION FOR WATER PERMIT

Notice is hereby given that Application for permit No. 29-7699 in the name of Marlon Bird, Rigby, Idaho was filed for the diversion of 250 cfs of water from the Portneuf River tributary of Snake River, the point of diversion is within the SWSW Sec 22 T 09S R 38E BM, Bannock County. The water is used from January 1 to December 31 for power generating purposes within the SWSW Sec 22 T 09S R 38E BM.

The applicant now proposes to amend Application No. 29-7699 amending the name to Commercial Energy Management, Inc., Rigby, Idaho, and requesting 210.0 cfs of water. The point of diversion and place of use is within Lot 9 Sec 22 T 09S R 38E BM

Any protest to the proposed amending of the application must be filed with the Idaho Department of Water Resources, 150 Shoup Avenue, Suite 15, Idaho Falls, Idaho, 83402, on or before December 9, 1985.

A. Kenneth Dunn

Director

Published in the Idaho State Journal November 21 and 28, 1985.

September 13, 1985

RE: Application for Permit No. 29-7699

Mr. Marlin Bird
175 LaBelle Drive
Rigby, ID 83442

Dear Mr. Bird:

Relying on information from the application for license recently submitted to FERC by Commercial Energy Management Inc. we have prepared an amended application to appropriate water from the Portneuf River.

The amended application identifies the new legal description for both the point of diversion and place of use. It also lists a maximum rate of diversion of 210 cfs which is consistent with the FERC application.

Please review, the amended application to insure its accuracy. When you are certain it correctly reflects the project, sign the application and return it to this office along with $20.00 as payment of the amendment fee.

Upon receipting the amended application, this office will proceed with its readvertisement. Due to changes in the Idaho Code, which became effective July 1, 1985, it will be necessary to readvertise the application on a statewide basis.

Respectfully submitted,

ERNEST CARLSEN
Assistant Regional Supervisor

EC:cw

Enclosure

J-U-B ENGINEERS, INC.

250 South Beechwood Avenue, Suite I • Boise, Idaho 83709 • Telephone (208) 376-7330

RECEIVED
AUG 30 1985
Department of Water Resources

August 29, 1985

Kenneth Dunn, Director
Idaho Dept. of Water Resources
450 West State Street
Boise, ID 83720

Dear Mr. Dunn:

Re: Final Application for Minor Water Power Project
for Portneuf River Hydroelectric Project
FERC #7447

Enclosed is a copy of the Application for License for the Portneuf River Hydroelectric Project. The original and 14 copies of this application have also been submitted to the Federal Energy Regulatory Commission.

If you have questions or need additional information, please give me a call.

Sincerely,

J-U-B ENGINEERS, Inc.

H. Wayne Gibbs
Project Coordinator

HWG:ss
Enclosure

See Book #2

J-U-B ENGINEERS, INC.

250 South Beechwood Avenue, Suite I • Boise, Idaho 83709 • Telephone (208) 376-7330

AUG 30 1985

Department of Water Resources
Eastern District Office

August 29, 1985

Idaho Department of Water Resources
Eastern Region
150 Shoup - Suite 15
Idaho Falls, ID 83402

Gentlemen:

Re: Final Application for Minor Water Power Project
for Portneuf River Hydroelectric Project
FERC #7447

Enclosed is a copy of the Application for License for the Portneuf River Hydroelectric Project. The original and 14 copies of this application have also been submitted to the Federal Energy Regulatory Commission.

If you have questions or need additional information, please give me a call.

Sincerely,

J-U-B ENGINEERS, Inc.

H. Wayne Gibbs
Project Coordinator

HWG:ss
Enclosure

State of Idaho
DEPARTMENT OF WATER RESOURCES
STATE OFFICE, 450 W. State Street, Boise, Idaho

JOHN V. EVANS
Governor

A. KENNETH DUNN
Director

Mailing address:
Statehouse
Boise, Idaho 83720
(208) 334-4440

August 15, 1985

H. Wayne Gibbs, Project Coordinator
J-U-B Engineers, Inc.
250 South Beechwood Ave., Suite 1
Boise, ID 83709

RE: FERC Project No. 7447/Application for Permit No. 29-7699
Portneuf River Hydroelectric Project

Dear Mr. Gibbs:

The Department has received the draft Application for License in connection with the above referenced project.

Department files show that Application for Permit No. 29-7699 was submitted in the name of Marlon Bird and that the application is protested. The Application for License to the Federal Energy Regulatory Commission (FERC) appears to be in the name of Commercial Energy Management, Inc. Since an application for a water right or a permit for a water right is personal property, it appears to Marlon Bird should assign the Application for Permit to Commercial Energy Management, Inc. in order to provide some consistancy between the applications.

A protested application will require an administrative conference &/or hearing before the Department. Upon completion of the hearing, the Department will issue a decision relative to approval or denial of the water right application.

If the application is approved and a water right permit is issued, conditions of approval would include subordination of the use of water under the permit to future uses and would provide a term (number of years) through which the permit or subsequent license would be valid.

Sincerely,

A. KENNETH DUNN
Director

AKD:LGS:sc

cc: Eastern Region

Glen 29-7699

J-U-B ENGINEERS, INC.

250 South Beechwood Avenue, Suite I • Boise, Idaho 83709 • Telephone (208) 376-7330

July 24, 1985

RECEIVED
JUL 26 1985
Department of Water Resources

Kenneth Dunn, Director
Idaho Dept. of Water Resources
450 West State Street
Boise, ID 83720

Dear Mr. Dunn:

Re: Draft Application for License
Portneuf River Hydroelectric Project

Enclosed is a draft copy of a License Application for a proposed minor hydroelectric project on the Portneuf River near the Lava Hot Springs community in Southeastern Idaho. Please review the draft application and provide us with written comments. If you have no comments or concerns, please so indicate in writing.

Federal Regulations 18CFR, Part 4, Section 4.38, Paragraph (iv) requires the Applicant to allow each agency thirty (30) days to review and comment on draft applications for minor water power projects (1.5 megawatts or less). Therefore, please return your comments within 30 days from the date of receiving this transmittal.

If you have questions or need additional information, please give me a call.

Sincerely,

J-U-B ENGINEERS, Inc.

H. Wayne Gibbs

H. Wayne Gibbs
Project Coordinator

HWG:ss
Enclosure

see Book #1

Commercial Energy Management, Inc.
P. O. BOX 62 · RIGBY, IDAHO 83442 · (208) 745-7625

RECEIVED
JAN 18 1985
Department of Water Resources
Eastern District Office

January 16, 1985

Mr. Ernest Carlsen
Asst. Regional Supervisor
State of Idaho
Dept. of Water Resources
150 Shoup, Suite 15
Idaho Falls, ID 83402

Dear Mr. Carlsen:

Re: IDWR Water Permit Application No. 29-7699
Portneuf River Hydroelectric Project

Per your request concerning our financial capability to develop the Portneuf River hydroelectric project, please be advised that principals within CEM are fully capable of providing equity funding for the project such that debt financing can be arranged. Enclosed is a recent letter from Valley Bank which substantiates solvency of the corporation's principals.

I am sure you will appreciate how, at such a preliminary stage, total funding for the project has not yet been arranged. Please be advised, however, that at the appropriate time when license has been issued by the Federal Energy Regulatory Commission we would intend to provide capital up to the amount necessary where through further structuring (e.g. limited partnerships, syndication or other third-party financing) all monies to build the project will be available.

Given the progress of the project to date, we hope this information will suffice in order to demonstrate our competence and financial wherewithal to bring the project to a further point where financing can be more concretely established.

Commercial Energy Management, Inc.
P. O. BOX 62 - RIGBY, IDAHO 83442 - (208) 745-7625

RECEIVED
JAN 1- 1985
Department of Water Resources
Eastern District Office

If you have any questions concerning this matter, please do not hesitate to contact me.

Sincerely,

COMMERCIAL ENERGY MANAGEMENT, INC.

Marlon Bird, Secretary-Treasurer

VALLEY BANK
110 EAST MAIN STREET • REXBURG, IDAHO 83440 • TELEPHONE (208) 356-5454

RECEIVED
JAN 18 1985
Department of Water Resources
Eastern District Office

October 22, 1984

To Whom it May Concern:

Please be advised that Valley Bank has committed a $250,000 revolving line of credit to Early Bird Contractors, Inc., which will expire March 1, 1985. The company is in very good standing with Valley Bank, and at this point, I see no reason that this line of credit will not be renewed for another year. Past performance on its credit line has been excellent. The company's checking accounts have had medium five figure average balances with no return items. We consider Early Bird Contractors, Inc., an excellent customer of Valley Bank.

If you have any questions or need further information regarding this account, please contact me personally.

Yours truly,

M. Brent Tighe

M. Brent Tighe
Loan Officer

MBT:lk

The principals of Early Bird Contractors are the same as the principals of Commercial Energy Management.

October 30, 1984

Marlon Bird
175 Labelle Drive
Rigby, ID 83442

Re: Application for Permit No. 29-7699, Hydropower on Portneuf River

Dear Mr. Bird:

From your letter of October 23, 1984 I understand you have received a preliminary permit from FERC which allows you to proceed with determining feasibility of the proposed hydropower project on the Portneuf River. Though the Department can accomodate a reasonable delay in obtaining the design of your project while you conduct the feasibility studies we do not have the same latitude with the requirement for verifing financial capability. A Fourth Judicial District court decision from Ada County (Case No. 79512) decreed that the applicant must be able to show the financial ability to construct a project when the application for permit is filed with the Department.

This can be demonstrated by either providing a financial statement showing that you are financially capable of building the project with your own resources or by furnishing a letter of commitment from a financial institution stating they have dedicated the necessary finances for construction of the project.

To update the file on your application we would appreciate a copy of FERC's ruling concerning your hydropower project and pursuant to § 42-204 of the Idaho Code we will allow another thirty days for you to comply with the provisions concerning financial ability.

If you have any question please contact this office.

Respectfully submitted,

ERNEST CARLSEN
Assistant Regional Supervisor

EMC/cz

MARLON BIRD
175 Labelle Drive
Rigby, Idaho 83442
October 23, 1984

RECEIVED
OCT 25 1984
Department of Water Resources
Eastern District Office

State of Idaho
Department of Water Resourses
150 Shoupe
Idaho Falls, Idaho 83401

RE: Application for Permit #29-7699

Dear Mr. Carlsen:

We are in the process of determining the feasibility of generating power from the Portneuf River. We have been given a prelimenary permit to do feasibility studies from the Federal Energy Regulatory Commission. At this point in time we have not progressed to the point where we can furnished you with a preliminary design, etc. As soon as we are able to determine the feasibility of the project we will furnish you with the requested information. The Federal Energy Regulatory Commission has given us eighteen months to determine the feasibility of the project.

If we can be of further assistance please feel free to contact us.

sincerely,

Marlon Bird

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
EASTERN REGION

John V. Evans
Governor

A. Kenneth Dunn
Director

150 Shoup
Idaho Falls, Idaho 83401
(208) 525-7161

August 29, 1984

RE: Application for Permit #29-7699

Marlon Bird
175 Labelle Drive
Rigby, ID 83442

Dear Mr. Bird:

In April 1983, you filed an application for permit to use water from the Portneuf River for the production of electricity. Since the application indicates a commercially marketable amount of power may be generated certain information must be submitted in accordance with Section 42-202 of the Idaho Code. This information includes:

A preliminary engineering design of the facility identifying approximate locations, dimensions, elevations of the diversion structure, penstock and generating facility. This should include a scale drawing showing the proposed layout of these structures so the impact of the stream can be determined.

An itemized estimate of the construction costs.

A financial statement showing that either you have the necessary financial resources for constructing the project or verification that financing has been obtained from an institution with sufficient financial resources for development of the project.

To keep your application in good standing with the department you need to provide this information within the next sixty (60) days. Failure to comply within this time period could jeopardize the standing of your application.

Respectfully submitted,

Ernest Carlsen.

ERNEST CARLSEN
Assistant Regional Supervisor

EC:jk

August 29, 1984

RE: Application for Permit #29-7699

Marlon Bird
175 Labelle Drive
Rigby, ID 83442

Dear Mr. Bird:

In April 1983, you filed an application for permit to use water from the Portneuf River for the production of electricity. Since the application indicates a commercially marketable amount of power may be generated certain information must be submitted in accordance with Section 42-202 of the Idaho Code. This information includes:

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An itemized estimate of the construction costs.

A financial statement showing that either you have the necessary financial resources for constructing the project or verification that financing has been obtained from an institution with sufficient financial resources for development of the project.

To keep your application in good standing with the department you need to provide this information within the next sixty (60) days. Failure to comply within this time period could jeopardize the standing of your application.

Respectfully submitted,

ERNEST CARLSEN
Assistant Regional Supervisor

EC:jk

Harrington
Enterprises

RECEIVED
JUN 22 1984
Department of Water Resources

29-7699

P.O. Box 7 • 2000 Homer Road
Eagle, ID 83616 Ph. (208) 939-6181

Idaho Department of Water Resources
Eastern Region
150 Shoup Avenue Suite 15
Idaho Falls, Idaho 83401

20 June 1984

Gentlepersons:

We have been engaged as the environmental consultants for the proposed Portneuf River Hydro Project, FERC Preliminary Permit Number 7447 by J-U-B Engineers. The project is located just south of Lava Hot Springs, Idaho. Since complete consultation and environmental reporting is required, I am requesting your agency to submit its views early so they can be accommodated. It is hoped the application will be completed by next spring.

Various studies will be conducted during this season. The following tentative schedule will be used, should there be no objections.

1. Instream Flow Studies (IFG-4). The transects have been set. High flow measurements will be taken in the next few weeks. A medium and low flow measurement will also be taken. The computer programming run should be accomplished by September. The Idaho Department of Fish and Game is requested to instruct us which fish models and life stages we should use.

2. Fisheries Investigations. We intend to conduct some sampling after the water recedes.

3. Water Quality. Two samples will be taken, one at high water and one at low water. Century Lab will do the analysis.

4. Creel Census. Fishing use will be surveyed during the summer and fall, one visit per week, staggered days.

5. Historical and Archeological Investigation. I am presently negotiating with a sub-contractor to do the study, probably late this summer or in the fall.

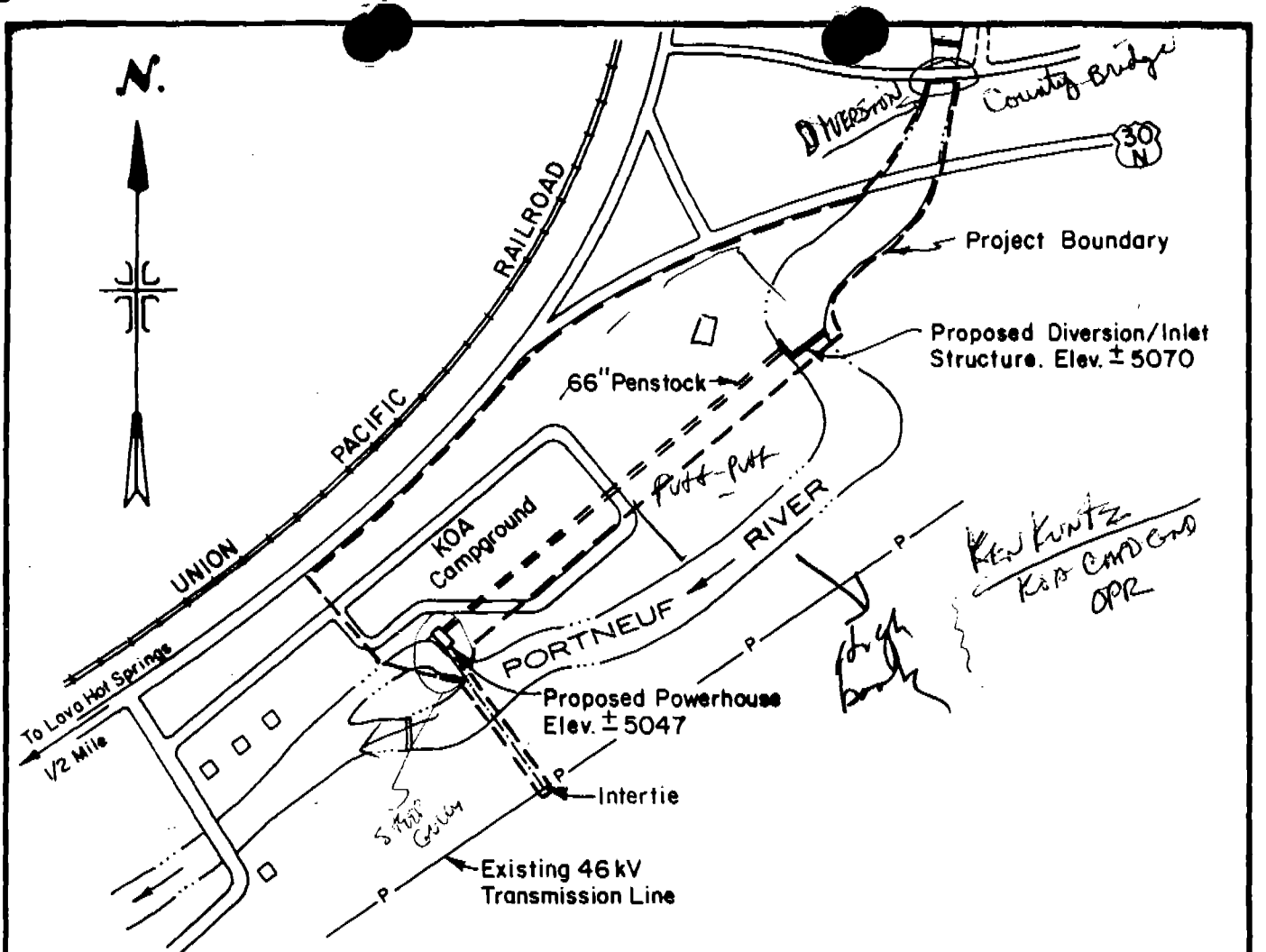
6. Wildlife Investigations. General habitat data and species information will be collected during other site visits. There are wetlands involved and they will be treated separately.

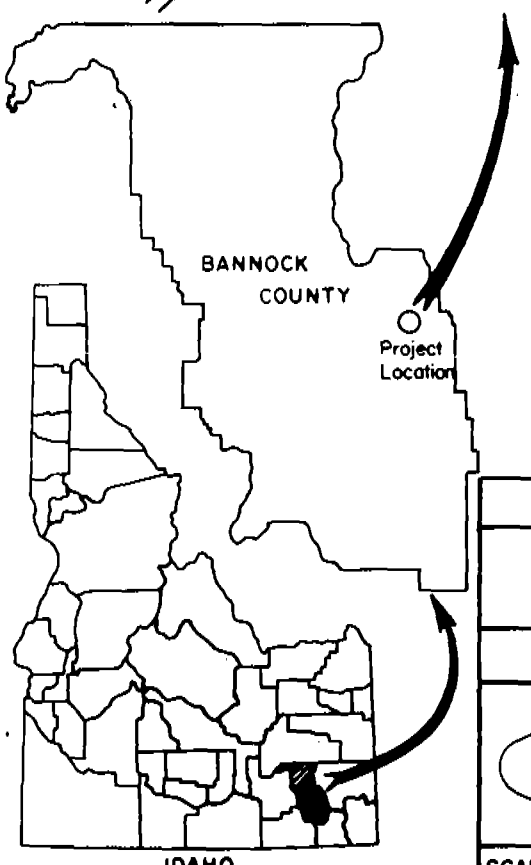
Should your agency have any general needs or specific study concerns please let me know.

Sincerely

Geo. G. Harrington
Environmental Consultant

Enclosure





PROJECT LOCATION: Lot 9, Section 22, T. 9S., R. 38 E., B.M.

Revised 8-31-83 Added Project Boundary

200 100 0 100 200 300 400 500 600 700 800

SCALE IN FEET

EXHIBIT 4

PORTNEUF RIVER HYDROELECTRIC PROJECT

LOCATION MAP

J-U-B ENGINEERS, INC.
Engineers Surveyors Planners
Boise, Idaho

DE.	DR.	CK.	SHEET OF
SCALE AS SHOWN	DATE JUNE, 1983		DWG. NO. B830621

FERC # 7447-000

BEFORE THE DEPARTMENT OF WATER RESOURCES

OF THE

STATE OF IDAHO

IN THE MATTER OF PROTEST AGAINST APPROVAL OF APPLICATION FOR PERMIT NO. 29-7699 IN THE NAME OF MARLON BIRD

CERTIFICATE OF MAILING

I HEREBY CERTIFY That on this 27th day of July, 1983, a true and correct copy of the foregoing ORDER GRANTING INTERVENTION, was mailed, postage prepaid to:

Marlon Bird
175 Labelle Drive
Rigby, ID 83442

Id. Dept. of Fish & Game
Statehouse Mail
Boise, ID 83720

Archie W. Service
Green, Service, Gasser & Kerl
P.O. Box 4883
Pocatello, ID 83201

Dept. of Fish & Game
Region 5
P.O. Box 4229
Pocatello, ID 83201

Sharla R. Curtis

SHARLA R. CURTIS
Gen. Typist
Idaho Department of Water Resources

State of Idaho
DEPARTMENT OF WATER RESOURCES
STATE OFFICE, 450 W. State Street, Boise, Idaho

JOHN V. EVANS
Governor

A. KENNETH DUNN
Director

Mailing address:
Statehouse
Boise, Idaho 83720
(208) 334-4440

July 27, 1983

RE: Application for Permit No. 29-7699

Marlon Bird
175 Labelle Drive
Rigby, ID 83442

Dear Mr. Bird:

Enclosed is a copy of an order granting intervention to the Lava Hot Springs Foundation in the matter of application No. 29-7699.

Full participation rights will be provided to the intervenor in any hearing conducted by the Department.

Sincerely,

L. Glen Saxton

L. GLEN SAXTON
Chief, Operations Bureau

LGS:sc

Enclosure

cc: Archie W. Service
Idaho Dept. of Fish and Game
Dept. of Fish and Game, Region 5
Eastern Region

BEFORE THE DIRECTOR OF THE DEPARTMENT OF WATER RESOURCES

OF THE

STATE OF IDAHO

IN THE MATTER OF PROTEST AGAINST APPROVAL OF APPLICATION FOR PERMIT NO. 29-7699 IN THE NAME OF MARLON BIRD	ORDER GRANTING INTERVENTION

WHEREAS, on April 14, 1983, Marlon Bird filed Application for Permit No. 29-7699 with the Department of Water Resources to appropriate 250 cubic feet per second of water from the Portneuf River for the generation of hydroelectric power; and,

WHEREAS, on April 24 and May 5, 1983, notice of the application was advertised in the Idaho State Journal; and,

WHEREAS, on May 3, 1983, a protest was received from the Idaho Department of Fish and Game; and,

WHEREAS, May 16, 1983, was the last day to protest against the approval of the application; and,

WHEREAS, on June 2, 1983, Lava Hot Springs Foundation petitioned to intervene against the approval of the application; and,

WHEREAS, all parties were, on June 2, 1983, sent a copy of the petition; and,

WHEREAS, no objections to the granting of the petition have been received; and,

WHEREAS, the petitioner has information essential to a determination being reached on the application;

IT IS, THEREFORE, HEREBY ORDERED that the Petition To Intervene from Lava Hot Springs Foundation be GRANTED.

Dated this 25th day of July, 1983.

A. KENNETH DUNN, Director

INTER-DEPARTMENT MEMO — 1

FROM Dave T

DATE 7/22/83

TO Bob F

SUBJECT

Archie Service of Pocatello called. He requested notification as to whether (Lava Hot Spgs Foundation) has been accepted as an intervenor in the protest to 29-7699.

(His no. is 232-4471, but a letter would be O.K.)

Dave

SIGNATURE

GREEN, SERVICE, GASSER & KERL
ATTORNEYS AT LAW
CENTER PLAZA — P.O. BOX 4883
POCATELLO, IDAHO 83201-0883

TELEPHONE (208) 232-4471

JAMES B. GREEN
ARCHIE W. SERVICE
CLARK GASSER
RON KERL
JIM D. PAPPAS
DUANE A. BYBEE
FREDERICK L. RINGE

ALBERTA M. PHILLIPS
STEVEN V. RICHERT
~~STEVEN X. THOMSEN~~

ROBERT M. TERRELL
1883 - 1971

RECEIVED
JUL 15 1983

July 12, 1983

Mr. Bob Fleenor
Dept. of Water Resources
450 West State Street
Boise, ID 83724

Re: Application for Permit No. 29-7699
Marlon Bird for Portneuf River

Dear Mr. Fleenor:

We trust you got the Affidavit of Mailing in the above entitled matter and if your record is correct could you please acknowledge that the Lava Hot Springs Foundation through this office will have the status of an intervenor in the above entitled matter and will be given notice of its proceedings.

May we thank you in advance.

Very truly yours,

GREEN, SERVICE, GASSER & KERL

Archie W. Service

AWS:mdc

Harrington
Enterprises

P.O. Box 7 • 2000 Homer Road
Hagerman, ID 83316 Ph. (208) 939-6181

RECEIVED
JUN 26 1984
Department of Water Resources
Eastern District Office

20 June 1984

Idaho Department of Water Resources
Attn: Dave Tuthill
450 West State Street
Boise, Idaho 83720

Gentlepersons:

We have been engaged as the environmental consultants for the proposed Portneuf River Hydro Project, FERC Preliminary Permit Number 7447 by J-U-B Engineers. The project is located just south of Lava Hot Springs, Idaho. Since complete consultation and environmental reporting is required, I am requesting your agency to submit its views early so they can be accommodated. It is hoped the application will be completed by next spring.

Various studies will be conducted during this season. The following tentative schedule will be used, should there be no objections.

1. Instream Flow Studies (IFG-4). The transects have been set. High flow measurements will be taken in the next few weeks. A medium and low flow measurement will also be taken. The computer programming run should be accomplished by September. The Idaho Department of Fish and Game is requested to instruct us which fish models and life stages we should use.

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5. Historical and Archeological Investigation. I am presently negotiating with a sub-contractor to do the study, probably late this summer or in the fall.

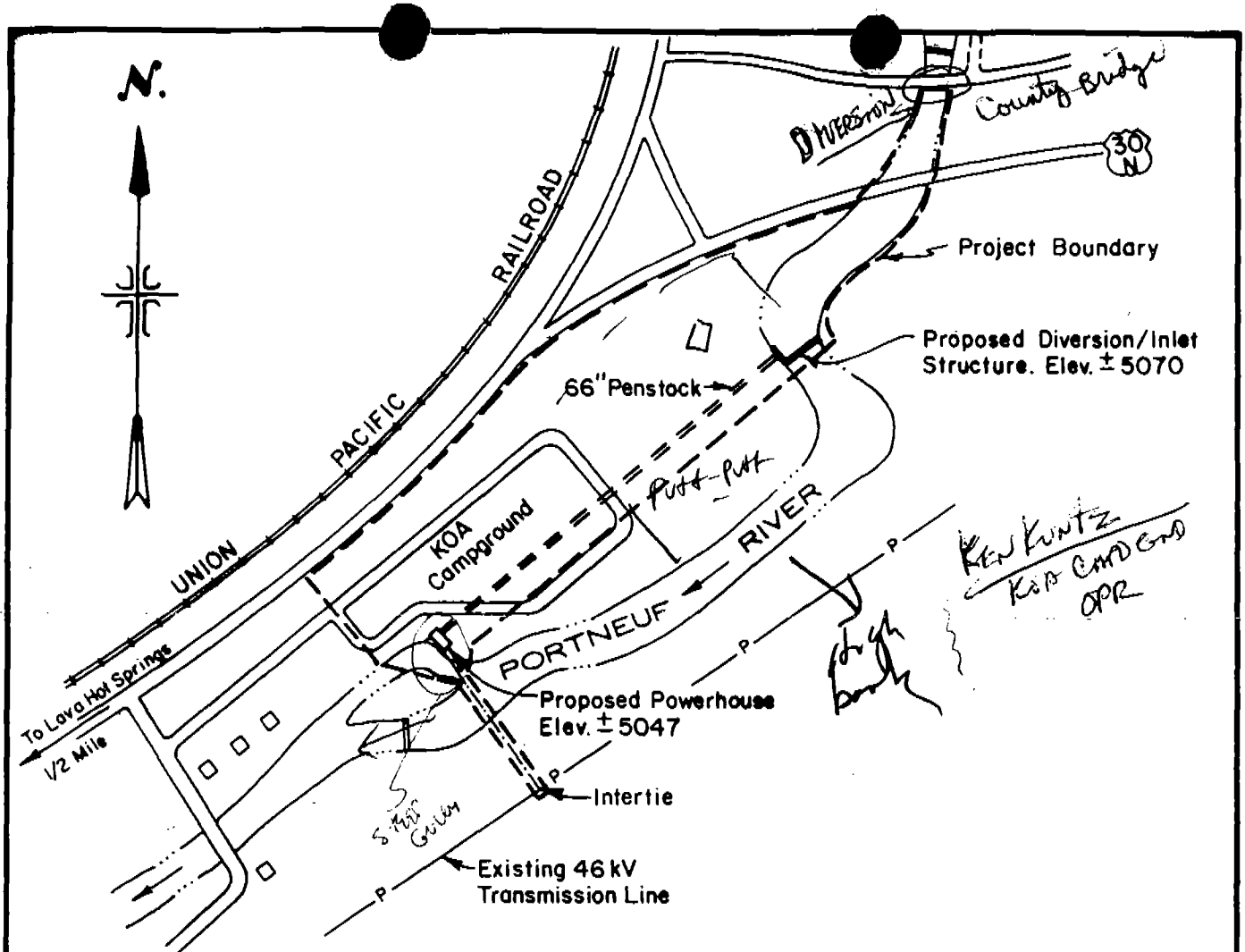
6. Wildlife Investigations. General habitat data and species information will be collected during other site visits. There are wetlands involved and they will be treated separately.

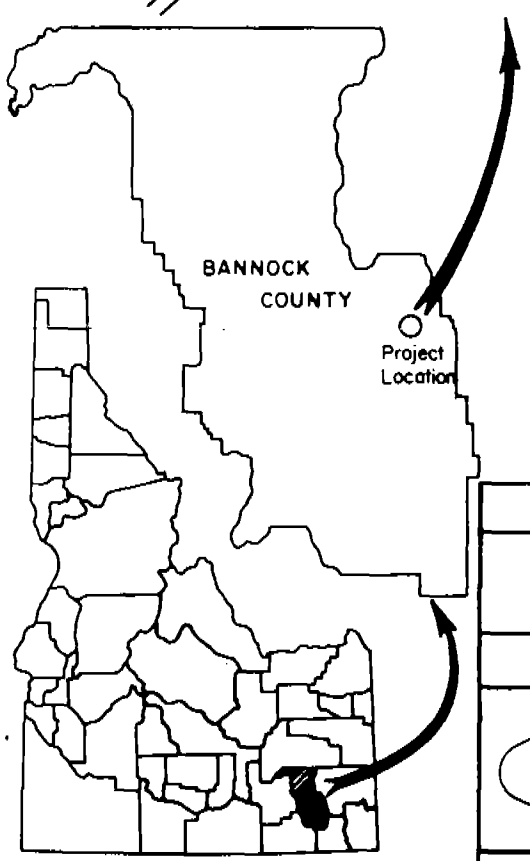
Should your agency have any general needs or specific study concerns please let me know.

Sincerely

Geo. G. Harrington
Environmental Consultant

Enclosure





PROJECT LOCATION: Lot 9, Section 22, T.9S., R.38E., B.M.

Revised 8-31-83 Added Project Boundary

200 100 0 100 200 300 400 500 600 700 800

SCALE IN FEET

EXHIBIT 4

PORTNEUF RIVER HYDROELECTRIC PROJECT

LOCATION MAP

J-U-B ENGINEERS, INC.
Engineers Surveyors Planners
Boise, Idaho

DE.	DR.	CK.	SHEET OF
SCALE AS SHOWN	DATE JUNE, 1983		DWG. NO. B830621

FERC # 7447-000

June 16, 1983

Marlon Bird
175 Labelle Drive
Rigby, ID 83442

Dear Mr. Bird:

You recently received a copy of a petition to intervene by the Lava Hot Springs Foundation against your Application for Permit No. 29-7699 to divert 250 cubic feet per second of water from the Portneuf River for power purposes.

If you have any objections to or comments about the petition, please let us know within 20 days as we will take final action on the petition shortly following that time.

Sincerely,

BOBBY D. FLEENOR
Chief, Regional Offices Bureau

BDF:sc

cc: Lava Hot Springs Foundation
Idaho Dept. of Fish and Game
Dept. of Fish and Game, Region 5

JAMES B. GREEN
ARCHIE W. SERVICE
CLARK GASSER
RON KERL
JIM D PAPPAS
DUANE A. BYBEE
FREDERICK L. RINGE

ALBERTA M. PHILLIPS
STEVEN V. RICHERT
STEVEN A. THOMSEN

GREEN, SERVICE, GASSER & KERL
ATTORNEYS AT LAW
CENTER PLAZA . P. O. BOX 4883
POCATELLO, IDAHO 83201
TELEPHONE (208) 232-4471

ROBERT M. TERRELL
1883 - 1971

RECEIVED
JUN 10 1983

June 8, 1983

Mr. Bob Fleenor
Dept. of Water Resources
450 West State Street
Boise, ID 83724

Re: Application for Permit No. 29-7699
Marlon Bird for Portneuf River

Dear Mr. Fleenor:

Enclosed find original Affidavit for filing in the above matter.

Thank you.

Very truly yours,

GREEN, SERVICE, GASSER & KERL

Archie W. Service

mdc
Enclosure

GREEN, SERVICE,
GASSER & KERL
Attorneys at Law
P.O. Box 4883
Pocatello, Idaho
83201-0883
(208) 232-4471

STATE OF IDAHO DEPARTMENT OF WATER RESOURCES

Application of Marlon Bird	AFFIDAVIT OF MAILING No. 29-7699

STATE OF IDAHO)
ss
County of Bannock)

Melanie Clark, being first duly sworn on her oath, deposes and says:

That she is a citizen of the United States and of the State of Idaho, of legal age and that she is employed in the office of Green, Service, Gasser & Kerl, Attorneys at Law; that on the 2nd day of June, 1983, she deposited in an envelope addressed to the following persons at their respective addresses:

The Hon. Kenneth Dunn
Director, Dept. of Water Resources
450 West State
Boise, ID 83724

State Dept. of Fish & Game, Region 5
P.O. Box 4229
Pocatello, ID 83201

Mr. Marlon Bird
175 Labelle Drive
Rigby, ID 83442

a copy of the Petition for Leave to Intervene of the Lava Hot Springs Foundation, and deposited same in the United States Post Office at Pocatello, Idaho, postage prepaid; and that between Pocatello, Idaho, and the above addressed there is a regular communication of the United States Mail.

Melanie Clark

SUBSCRIBED AND SWORN TO Before me this 8th day of June, 1983.

Laurie Sells
NOTARY PUBLIC for Idaho
Residing at Pocatello, Idaho

(SEAL)

JAMES B. GREEN
ARCHIE W. SERVICE
CLARK GASSER
RON KERL
JIM D PAPPAS
DUANE A. BYBEE
FREDERICK L. RINGE

ALBERTA M. PHILLIPS
STEVEN V. RICHERT
STEVEN A. THOMSEN

GREEN, SERVICE, GASSER & KERL
ATTORNEYS AT LAW
CENTER PLAZA - P. O. BOX 4883
POCATELLO, IDAHO 83201
TELEPHONE (208) 232-4471

ROBERT M. TERRELL
1883 - 1971

RECEIVED
JUN 6

June 2, 1983

Eleanor

The Honorable Kenneth Dunn
Director, Dept. of Water Resources
450 West State
Boise, ID 83724

Re: Application for Permit No. 29-7699
Marlon Bird for Portneuf River

Dear Director Dunn:

Enclosed herein please find Petition for Leave to Intervene in the above entitled matter.

The Foundation members, according to the enclosed Petition, respectfully request the Director to allow their intervention in this matter.

Very truly yours,

GREEN, SERVICE, GASSER & KERL

Archie W. Service

mdc
Enclosure
c: State Dept. of Fish & Game
Mr. Marlon Bird

GREEN, SERVICE,
GASSER & KERL
Attorneys at Law
P.O. Box 4883
Pocatello, Idaho
83201-0883
(208) 232-4471

STATE OF IDAHO DEPARTMENT OF WATER RESOURCES

Application of Marlon Bird	)	PETITION FOR LEAVE TO INTERVENE
	)	
	)	NO. 29-7699

COMES NOW the Lava Hot Springs Foundation of the State of Idaho and petitions the Director of the Department of Water Resources for leave to intervene in the above entitled Petition.

Petition is based upon the following circumstances:

1. The Idaho Department of Fish and Game, by and through their representative, Jerry Mallet, has filed opposition to the above application and is requesting a hearing.

2. The waterway in question borders Lots 7 and 8 in Section 21, Northwest Quarter of the Southwest Quarter, and Lots 9 and 10 in Section 22, all in Township 9 South, Range 38 East, Boise Meridian, Bannock County, Idaho, the lands under the management and control of the Lava Hot Springs Foundation which waterway contributes to the esthetic quality of said land under the supervision and control of the Lava Hot Springs Foundation.

3. Intervenor has been informed that Applicant is requesting and proposing that the diversion flue or tunnel for the hydro project go across a portion of said lands under the direction and control of Lava Hot Springs Foundation.

GREEN, SERVICE,
GASSER & KERL
Attorneys at Law
P.O. Box 4883
Pocatello, Idaho
83201-0883
(208) 232-4471

4. For the general welfare of the State of Idaho and the public at large for which the Lava Hot Springs Foundation is trustee, Intervenor would have essential and necessary information and comment at any hearing.

WHEREFORE, your Petitioner requests the Director of the Department of Water Resources allow the Lava Hot Springs Foundation for the State of Idaho to intervene in the above entitled hearing as an interested party.

DATED this 3 day of June, 1983.

GREEN, SERVICE, GASSER & KERL
Attorneys for Lava Hot Springs Foundation

By: Archie W. Service
Archie W. Service
Attorney for the Foundation

IT IS SO ORDERED.

DATED this ___ day of June, 1983.

IDAHO DEPARTMENT OF WATER RESOURCES

By: _____
Its Director

June 1, 1983

RE: Application for Permit No. 29-7699

Marlon Bird
175 Labelle Drive
Rigby, ID 83442

Dear Mr. Bird:

The initial processing of your hydropower application on the Portneuf River has been completed, with the only protest submitted by the Department of Fish and Game. Normally, for protested applications the Department proceeds with scheduling an administrative hearing to consider the protests. However, since your proposal must be reviewed by the Federal Energy Regulatory Commission, the Department will delay further processing of your application until you provide verification that FERC has determined whether or not they have jurisdiction over your project.

Feel free to contact me if you have questions concerning the above matter.

Respectfully submitted,

ERNEST CARLSEN
Assistant Regional Supervisor

EC:cw

CONVERSATION MEMORANDUM

DATE May 17, 1983

FILE 29-7699

NAME OF PARTY Archie Service, Atty at Law

EMPLOYEE Ernie EAC

RE: Mr. Service, as attorney for the Lava Hot Springs Foundation, called this morning to discuss the above captioned application. He indicated that the foundation is concerned about the adverse impact this application may have on the aesthetics of the Portneuf River as it flows through Lava Hot Springs. I advised Mr. Service that the Dept. of Fish & Game did protest the application and it may be possible for the foundation to resolve their concerns about this application by working through the Fish & Game. Another alternative available to the foundation would be to petition the Director for leave to intervene in the matter. Mr. Service concluded the discussion by indicated they would review the application and contact Mr. Bird to see what his intentions are regarding the water falls through Lava and if needed they would probably petition to intervene in the case.

May 16, 1983

Marlon Bird
175 Labelle Drive
Rigby, ID 83442

Dear Mr. Bird:

Enclosed is a copy of a protest filed against the issuance of a permit pursuant to your Application No. 29-7699. The Department suggests you contact the protestant directly in an effort to determine the nature of the protest and to attempt to resolve the protest.

If you do not advise us within twenty (20) days that the protest has been resolved, the matter will be scheduled for conference and/or hearing. At such a conference and/or hearing, the following are the principle items the Department can consider in either approving or denying the application for permit (Section 42-203, Idaho Code):

1. Will the proposed use reduce the quantity of water under existing water rights?

2. Is the proposed water supply insufficient for the purpose intended?

3. Is the application made in good faith or for delay or speculative purposes?

4. Has the applicant sufficient financial resources with which to complete the project?

5. Will the proposed use under this permit conflict with the local public interest?

If this office can be of further assistance, please contact us.

Very truly yours,

RONALD D. CARLSON
Eastern Regional Supervisor

RDC:cw

Enclosure

cc: IDWR - State Office

May 16, 1983

RE: Application for Permit No. 29-7699 BIRD

Jerry Mallet
Region 5 Supervisor
Department of Fish & Game
P.O. Box 4229
Pocatello, ID 83201

Dear Mr. Mallet:

Your protest against the approval of the above referenced application has been received and a copy has been sent to the applicant. The Department suggests you contact the applicant directly in an effort to determine what is proposed by the application and to attempt to resolve the protest.

If you do not advise us within twenty (20) days that the protest has been resolved, the matter will be scheduled for conference and/or hearing. At such a conference and/or hearing, the following are the principle items the Department can consider in either approving or denying an application for permit (Section 42-203, Idaho Code):

1. Will the proposed use reduce the quantity of water under existing water rights?

2. Is the proposed water supply insufficient for the purpose intended?

3. Is the application made in good faith or for delay or speculative purposes?

4. Has the applicant sufficient financial resources with which to complete the project?

5. Will the proposed use under this permit conflict with the local public interest?

If this office can be of further assistance, please contact us.

Very truly yours,

RONALD D. CARLSON
Eastern Regional Supervisor

RDC:cw

cc: IDWR - State Office

IDAHO DEPARTMENT OF FISH AND GAME
REGION 5 Phone 232-4703
South Fifth Avenue • P.O. Box 4229
Pocatello, Idaho 83201

RECEIVED
MAY 3 1983
Department of Water Resources
Eastern District Office

May 2, 1983

Ernest Carlson
Assistant Regional Supervisor
Department of Water Resources
Eastern Region
150 Shoup
Idaho Falls, ID 83401

Re: Application for Permit #29-7699
By Marlon Bird for the Portneuf
River.

Dear Ernest:

We have reviewed the application by Mr. Marlon Bird to divert 250 cubic feet per second of water from the Portneuf River for hydropower production, and oppose this application until further engineering information regarding the project is developed.

Sincerely,

Jerry Mallet

Jerry Mallet
Region 5 Supervisor

May 4, 1983

RE: Application for Permit No. 29-7699

Marlon Bird
175 Labelle Drive
Rigby, ID 83442

Dear Mr. Bird:

The Department has received notice of insufficient funds in your account to cover the $1,975.00 check you wrote on April 14, 1983, as payment of the statutory filing for application No. 29-7699. This will stop further processing of the application and also voids any priority that would have been established.

In order for the Department to resume processing we must receive a cashier's check or money order in the amount of $1,975.00. Since the priority date will be established on the day sufficient funds are received, it is hoped you can give this matter your immediate attention.

Respectfully submitted,

ERNEST CARLSEN
Assistant Regional Supervisor

EC:cw

INTER-DEPARTMENT MEMO — 1

DATE 4/25/83

FROM Deann

TO Colleen

SUBJECT Insufficient Funds check – Sundance, Inc. $1,975.00

REMITTANCE ADVICE

UNITED FIRST FEDERAL SAVINGS AND LOAN ASSOCIATION

No.

PREPARED BY	DESCRIPTION	ACCOUNT NUMBER	AMOUNT
ksc	withdrawal acct. 0170008603, Bird		**$1,975.00**

RECEIVED
MAY 9 1983
Department of Water Resources
Eastern District Office

DETACH AND RETAIN FOR YOUR RECORDS
PLEASE CASH OR DEPOSIT WITHIN 30 DAYS

April 27, 1983

RE: Application for Permit No. 29-7699 BIRD

Idaho Department of Fish & Game
P.O. Box 4299
Bocatello, ID 83201

Gentlemen:

We are enclosing a copy of an application that may be of interest to your agency. Please review the application and submit any comments you may have to our Department as soon as possible. The last date of protest is May 16, 1983, and we are required to take final action shortly thereafter.

If we may be of further assistance, please feel free to contact us.

Respectfully submitted,

ERNEST CARLSEN
Assistant Regional Supervisor

EC:cw

Enclosure

April 27, 1983

RE: Application for Permit No. 29-7699 BIRD

State of Idaho
Department of Lands
Statehouse
Boise, ID 83720

Gentlemen:

We are enclosing a copy of an application that may be of interest to your agency. Please review the application and submit any comments you may have to our Department as soon as possible. The last date of protest is May 16, 1983, and we are required to take final action shortly thereafter.

If we may be of further assistance, please feel free to contact us.

Respectfully submitted,

ERNEST CARLSEN
Assistant Regional Supervisor

EC:cw

Enclosure

April 27, 1983

RE: Application for Permit No. 29-7699 BIRD

Thomas Bloxham, Watermaster
Water District No. 29
Downey, Idaho 83423

Dear Mr. Bloxham:

We are enclosing a copy of an application that may be of interest to your water district. Please review the application and submit any comments you may have to our Department as soon as possible. The last date of protest is May 16, 1983, and we are required to take final action shortly thereafter.

If we may be of further assistance, please feel free to contact us.

Respectfully submitted,

ERNEST CARLSEN
Assistant Regional Supervisor

EC:cw

Enclosure

NOTICE OF APPLICATION FOR WATER RIGHT

The following application(s) have been filed to appropriate the public waters of the State of Idaho:

The permit(s) will be subject to all prior water rights. Protests must be filed with the Director, Dept. of Water Resources, 150 Shoup Ave., Suite 15, Idaho Falls, Idaho 83402 on or before MAY 16, 1983.

KEN DUNN, Dir.

Published 4/28 & 5/5/83.

29-7699

BIRD, MARLON

175 LABELLE DRIVE, RIGBY, ID 83442

Source: PORTNEUF RIVER trib. to SNAKE RIVER

Date Filed: 04/14/1983

Diversion Pt: SWSW Sec 22 T 09S R 38E

Use: POWER (250.00 CFS)

In: SWSW Sec 22 T 09S R 38E

29-7699
BIRD, MARLON
175 LABELLE DRIVE, RIGBY, ID 83442
Source: PORTNEUF RIVER trib. to
SNAKE RIVER
Date Filed: 04-14-1983
Diversion Pt: SWSW Sec 22 T 09S R 38E
Use: POWER (250.00 CFS)
In: SWSW Sec 22 T 09S R 38E
The permit(s) will be subject to all prior
water rights. Protests must be filed with
the Director, Dept. of Water Resources,
150 Shoup Ave., Suite 15, Idaho Falls,
Idaho 83402 on or before MAY 16, 1983.
S/KEN DUNN, Dir.
April 28, May 5, 1983
No. 873
<o<o<o<o

3/83

IDENT. NO. 29 7699

IDAHO DEPARTMENT OF WATER RESOURCES

WATER RIGHT DATA ENTRY LOG

Initials	Date	Item
BP	4/20/83	Original form entered
		Edit Report Correct
		Date Protested
		Date of Hearing
		Date Approved/Denied (Proof due date, stage and/or status, conditions of approval, water district)
		Record Verified
		Amendment Approved
		Extension Approved
		Partial Proof
		Proof Complete
		Field Exam Received
		Field Exam Accepted and changes entered
		License Updated
		Transfer Updated
		Keypunched by State Office