

NLI

Northern Lights, Inc.

FAX (208)263-6092

FACSIMILE COVER LETTERDate: 1-23

Time: _____

Please deliver the following pages to:

Name: Michele EdlFirm: Dept Water ResourcesFax No: (208) 267-6700Number of pages (including cover sheet): 7Subject: Water usage for
Northern Lights, Inc

Remarks: _____

From: Rod Babcock

PLEASE CALL ROD AT (208)263-5141 EXT. 126 IF YOU DO NOT RECEIVE ALL
OF THE PAGES TRANSMITTED OR IF A PAGE HAS NOT BEEN COMPLETELY
COPIED.

Michele,

There was no btu or flow rate info on the heat exchanger and all paperwork only related to dimensions for installation so I don't know what to tell you. The exchanger is a TACO model AT20 C-20 but that's all I know.

Our building is approximately 18,500 square feet with 14,600 on the main floor and 3900 in the basement.

I did find some information regarding the design flow rates for the heat pumps themselves and am sending the to you along with some water system monitoring data for the month of December 2003. This is the month with the greatest volume of water usage since the system was put into operation in the spring of 2000. As you can see we used a little over 7 ½ million gallons that month.

I hope that this information is useful to you. If I can be of any further assistance just give me a call.

Rod Babcock



P.O. Box 269
421 Chevy Street
Sagle, ID 83860
rod.babcock@nli.coop

ph: 208-255-5384
ph: 208-263-5141 ext. 126
toll-free: 800-326-9594
fax: 208-263-6092

RATING BASIS: 2000 FT. ELEVATION; 90° F/64° F DB/WB AMBIENT - COOLING; 50° F MINIMUM OUTSIDE AIR TEMP - HEATING;

DESIGNATION				
MODEL NUMBER	WPHD041	WPHD041HS	WPHD041HS	WPHD051
ACTUAL AIR FLOW	1200	1300	1520	1680
E.S.P. (IN WG)	0.51	0.63	0.51	0.61
COOLING	EDB	84.9	84.4	76.1
	EWB	59.8	59.9	57.6
	CAP. MBH (SENS)	37.8	37.8	32.91
	HT OF REJECTION	44.34	44.88	43.13
	COOLING POWER KW	2.95	2.96	2.98
	EEER	11.6	11.7	11.0
HEATING	EDB	59.4	59.3	63.4
	CAP. MBH	38.16	38.61	37.21
	HT OF ABSORPTION	27.21	27.82	25.66
	HEATING POWER KW	3.21	3.16	3.39
	COP	3.5	3.6	3.2
	EEER	8.0	8.0	7.0
W/O HOSES	6.83	6.83	5.13	7.28
FILTERS	(1) 19 1/2 x 38 x 1	(1) 19 1/2 x 38 x 1	(1) 19 1/2 x 38 x 1	(1) 19 1/2 x 38 x 1
ELECTRICAL	FAN MOTOR HP	1/3	1/2	1/2
	FAN SPEED	HIGH	LOW	LOW
	WPA	16.3	17.6	17.6
	VOLT	208	208	208
	PHASE	3	3	3
	PIPE SIZE	1"	1"	1"
CFM	750	750	180	560

WATER SOURCE HEAT PUMP SCH

F EWT COOLING 45° F EWT HEATING; MAX 24" HOSE KIT LENGTH

			
WPHD051	WPHD028	WPHD051	WPHD035HS
1830	975	1400	1300
0.41	0.53	0.57	0.5
79.8	77.7	83.1	83.5
62.8	59.0	64.2	64.3
47.33	23.87	47.46	37.01
60.87	31.75	59.97	47.60
3.77	2.31	3.66	2.98
12.7	10.4	13.0	12.6
70.0	67.9	61.4	60.9
46.8	29.96	45.74	37.99
34.38	18.55	33.28	26.71
3.64	2.47	3.65	3.31
3.8	3.2	3.7	3.04
9.0	5.0	8.0	8.0
8.54	6.81	8.54	7.68
(1) 19 1/2x38x1	16 7/8x30x1	(1) 19 7/8x38x1	(1) 19 1/2x38x1
1/2	1/5	1/2	1/2
HIGH	HIGH	LOW	MEDIUM
23.0	11.9	23.0	15.3
208	208	208	208
3	3	3	3
1"	3/4"	1"	1"
275	180	500	500

			
WPHD035HS	WPHD051	WPHD035HS	WPHD041HS
1260	1600	1325	1550
0.47	0.56	0.48	0.4
77.2	81.7	76.4	77.2
57.9	63.6	58.3	58.8
31.75	47.89	32.36	33.70
41.35	60.52	42.03	43.98
2.81	3.70	2.83	3.01
11.3	13.0	11.4	14.2
68.1	63.8	69.3	68.4
32.76	46.48	33.07	37.28
22.73	34.06	23.0	25.82
2.94	3.64	2.95	3.36
3.3	3.7	3.3	3.3
6.5	9.0	6.5	7.0
10.96	8.54	12.24	5.83
16 7/8 x 30 x 1	(1) 19 1/2 x 38 x 1	16 7/8 x 30 x 1	(1) 19 1/2 x 38 x 1
1/2	1/2	1/2	1/2
HIGH	MEDIUM	HIGH	LOW
15.3	23.0	15.3	17.6
208	208	208	208
3	3	3	3
1"	1"	1"	1"
225	500	160	250

[illegible]