

Southern Eagle Distributing Test Results





Smart Cooling Solutions, LLC

Factory Representatives

Ron LeClair
772-332-6584

Ken Thompson
305-213-1914

August 22, 2014

Mr. Willie Roundtree, Operations Director
Southern Eagle Distributing
5300 Glades Cut Off Road
Fort Pierce, Florida 34981

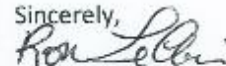
Dear Willie,

Both Ken and I want to express our gratitude for your help and professionalism regarding our opportunity to serve you at Southern Eagle. Also in need of mention is Dawn Hawk, who was courteous and professional as well.

Enclosed in this report is an explanation of the delta T and why we chose this methodology to evaluate your systems. Also enclosed are the actual readings from the various systems along with our observations and recommendations. Please note that we strongly suggest the remedies we have outlined are implemented, so that the full benefit of Cold-Plus can be realized.

We hope you find our analysis useful. We know our product is effective. Cold Plus has improved you're A/C systems by an overall average change of **11.2%**.

Going forward we can monitor the electric bills to track the changes.

Sincerely,

Ron and Ken



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Date: August 22, 2014

To: Willie Roundtree, Southern Eagle Distributing

From: Smart Cooling Solutions

Re: Observations & Recommendations from Cold-Plus Installation August 6, 2014

1. Large warehouse area - The desired temperature for beer storage is 69 degrees F. Actual temperature 71 degrees F.

A. We observed that the eastern most 40 ton A/C system cycled off before the desired temperature of 69 degrees was met. The set point should be checked and, if it is set for 69 degrees, set it lower to see if the system will lower the temperature.

B. Extend the return air ducts down to the level of the product. This will reduce the heat load by reducing the volume of space to be cooled thus allowing the heat rise to the upper levels of the warehouse that do not require cooling.

C. The set points at the control terminal need to be reviewed.

2. Office area glass line heat infiltration.

A. The current duct layout has the return air grills in the center of the office area which is pulling heat across the office to the return. We recommend reversing the return air grills to the glass line. This requires the existing returns to be capped and a return air duct system that pulls from the glass line be installed. Also need a new supply filter rack in the offices or a supply filter rack in the roof top unit.

B. RTU #8 and RTU #2 appear to have refrigeration problems. The average temperature delta T should range between 13 and 18 degrees.

RTU #8 - 5 ton is only dropping the temperature 8.5 degrees.

RTU #2 - 5 ton is only dropping the temperature 6.9 degrees.

3. The refrigerant charge and compressor pumping ability need to be checked and corrected, if necessary, on all units.

4. All of the rooftop condenser coils show signs of deterioration due to salt and acid in the air.

5. All the wall thermostats need to be checked, calibrated or replaced if necessary.



Southern Eagle Distributors

Cold Plus Installation August 6, 2014

Temperature Comparisons

Manufacturer	Equipment	Unit Model #	Unit Serial #	Location	Tons	Stages	July 28, 2014			August 18, 2014			delta variance	baseline change	baseline % change
							baseline supply	baseline return	delta baseline	post supply	post return	delta post			
Trane	Split System	TTA180B300FA	5172417AD	#1 Cond/Roof	15	2	82.0	n/a	n/a	not running	n/a	n/a	n/a	n/a	n/a
Trane	Split System	TTA180B300FA	5101741AD	#2 Cond/Roof	15	2	55.7	65.4	9.7	52.1	68.5	12.6	2.9	3.6	6.5%
Trane	Split System	TTA180C400GA	52145E4AD	#4 Cond/Roof	15	2	68.9	70.2	10.3	53.6	62.4	11.6	1.3	15.3	22.2%
Trane	Split System	TTA180C400GA	4463KGDAD	#5 Cond/Roof	15	2	68.9	70.2	10.3	63.4	68.9	13.2	2.9	5.5	8.0%
Trane	Split System	TTA180C400GA	5291YDKAD	#6 Cond/Roof	15	2	71.9	74.6	10.1	58.7	70.0	12.8	2.7	13.2	18.4%
Trane	Roof Top Unit	TSC120A4E0A1	432102337L	#7/Roof	10	2	71.4	75.4	9.8	66.8	71.2	13.8	4.0	4.6	6.4%
Trane	Roof Top Unit	TSC060A4E0A1	517101488L	#8/Roof	5	1	63.7	68.5	7.9	60.0	68.5	8.5	0.6	3.7	5.8%
Trane	Roof Top Unit	TSC120A4E0A1	434101849L	#4/Roof	10	2	63.7	69.8	6.1	57.4	63.0	12.4	6.3	6.3	9.9%
Trane	Roof Top Unit	TSC120A4E0A1	432101747L	#10/Roof	10	2	57.3	69.2	11.9	48.1	66.5	18.4	6.5	9.2	16.1%
Trane	Roof Top Unit	TSC060A4E0A1	51610140L	#2/Roof	5	1	57.3	61.5	4.2	55.7	64.0	6.9	2.7	1.6	2.8%
Trane	Roof Top Unit	TCD480A40U0A2	C06H08381	RTU 1/Roof	40	1	68.1	71.2	10.1	56.5	74.3	13.1	3.0	11.6	17.0%
Trane	Roof Top Unit	TCD480A40U0A2	C06H08381	RTU 2/Roof	40	1	68.9	72.2	9.3	55.6	70.3	12.6	3.3	13.3	19.3%
Trane	Condenser	TTR036D100A0	Z16141L4F	Repack Room	3	1	81.4	n/a	n/a	81.4	81.4	n/a	n/a	n/a	n/a
Trane	Split System	2TTE0036A100AA	43917G05	Poster Rm/Cond Roof	3	1	57.6	65.0	12.2	55.4	69.5	14.1	1.9	2.2	3.8%
Trane	Split System			garage	2.5	1	68.7	72.0	10.2	61.4	73.1	13.5	3.3	7.3	10.6%

SED 1 Cooler

Heatcraft	Keg Cooler	BHB040H2C	T06J04480	not running	3.5	1	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Heatcraft	Keg Cooler	BHB040H2C	T06K01584		3.5	1	33.8	n/a	n/a	32.6	n/a	n/a	n/a	1.2	3.6%
Heatcraft	Keg Cooler	BHB040H2C	T06K01585		3.5	1	32.1	n/a	n/a	30.5	n/a	n/a	n/a	1.6	5.0%

This chart reveals the changes that Cold Plus has made to the systems. Because these were snapshot readings as opposed to logged readings the moments captured at the time of readings may or may not be exact. The trends are clear that Cold Plus has increased the efficiency of these treated units. The average change overall is an 11.2% improvement.

YOUR ELECTRIC BILLING

For: Aug 02 2013 to Sep 04 2013 (33 days)

Customer name: SOUTHERN EAGLE
Service address: 5300 GLADES CUT OFF RD

ACCOUNT NUMBER: 07072-23094

Statement date: Sep 04 2013
Next meter reading: Oct 02 2013

Amount of your last bill	Payments (-)	Additional activity (+ or -)	Balance before new charges (=)	New charges (+)	Total amount you owe (**)	New charges due by
10,753.16	10,753.16 CR	0.00	0.00	11,508.29	\$11,508.29	Sep 25 2013

Meter reading - Meter 6V53957

Current reading 11893
 Previous reading - 10540
 kWh constant x 120
 kWh used 138360

Demand reading 2.21
 kW constant x 120.00
 Demand kW 265

Energy usage

	Last Year	This Year
kWh this month	126240	138360
Service days	33	33
kWh per day	3825	4192

****The electric service amount includes the following charges:**

Customer charge: \$18.83
 Fuel: \$4,069.92
 (\$0.029560 per kWh)
 Non-fuel: \$2,728.48
 (\$0.019720 per kWh)
 Demand: \$2,899.10
 (\$10.94 per kW)

Enroll now in Budget Billing by paying \$8,844.39 in 1 payment by the due date instead of \$11,508.29. Your bill will be about the same each month & year-round. Learn more at: www.FPL.com/companybb.

Amount of your last bill 10,753.16
 Payment received - Thank you 10,753.16 CR
 Balance before new charges \$0.00

New charges (Rate: GSD-1 GENERAL SERVICE DEMAND)

Electric service amount 9,736.11**
 Storm charge 95.47
 Gross receipts tax 252.09
 Utility tax 693.76
 Florida sales tax 705.86
 Discretionary sales surtax 25.00
 Total new charges \$11,508.29

Total amount you owe \$11,508.29

- Payments received after September 25, 2013 are considered late; a late payment charge, the greater of \$5.00 or 1.5% of your past due balance will apply. Your account may also be billed a deposit adjustment.
- Get more than a bird's eye view of your energy use and save your business up to \$500 a year. We can help you change the current way you use energy and make your bill even lower at FPL.com/PelProject.

APPROVED BY B3 BO
 AMOUNT 11,508.29
 ACCOUNT NO. 67000-50 Florida Power & Light August Statement
 VENDOR NO. 640
 GL PERIOD 8/13

PAID
 SEP 04 2013

Please have your account number ready when contacting FPL
 Customer service: 1-800-375-2434
 Outside Florida: 1-800-228-3545
 To report power outages: 1-800-4OUTAGE (466-8243)
 Hearing/speech impaired: 711 (Relay Service)
 Online at: www.FPL.com



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Please request changes on the back.
Notes on the front will not be detected.

The amount enclosed includes the following donation:
FPL Care To Share \$ _____

B 5,8 4402 9

SOUTHERN EAGLE
DISTRIBUTING INC
PO BOX 12399
FORT PIERCE FL 34979-2399

Make check payable to FPL in U.S. funds
and mail along with this coupon to:

FPL
GENERAL MAIL FACILITY
MIAMI FL 33188-0001

Account number	Total amount you owe	New charges due by	Amount enclosed
67672-25094	\$9,574.16	Sep 24 2014	\$

Your electric statement

Account number: 67672-25094

For: Aug 04 2014 to Sep 03 2014 (30 days)
Customer name: SOUTHERN EAGLE
Service address: 5300 GLADES CUT OFF RD

Statement date: Sep 03 2014
Next meter reading: Oct 02 2014

Amount of your last bill	Payments (-)	Additional activity (+ or -)	Balance before new charges (=)	New charges (+)	Total amount you owe (=)	New charges due by
10,159.79	10,159.79 CR	0.00	0.00	9,574.16	\$9,574.16	Sep 24 2014

Meter reading - Meter 6V53957

Current reading 21773
Previous reading - 20904
kWh constant x 120
kWh used 104280

Demand reading 1.87
kW constant x 120.00
Demand kW 224

Energy usage

	Last Year	This Year
kWh this month	138360	104280
Service days	33	30
kWh per day	4192	3476

****The electric service amount includes the following charges:**

Customer charge: \$19.48
Fuel: \$3,412.04
(\$0.032720 per kWh)
Non-fuel: \$2,133.57
(\$0.020460 per kWh)
Demand: \$2,544.64
(\$11.36 per kW)

Enroll now in FPL Budget Billing by paying \$9,284.93 in 1 payment by the due date instead of \$9,574.16. Your bill will be about the same each month & stabilized year-round. Learn more at FPL.com/bb

Amount of your last bill 10,159.79
Payment received - Thank you 10,159.79 CR
Balance before new charges \$0.00

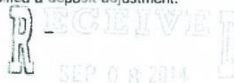
New charges (Rate: GSD-1 GENERAL SERVICE DEMAND)

Electric service amount	8,109.73**
Storm charge	77.16
Gross receipts tax	209.92
Utility tax	588.77
Florida sales tax	583.58
Discretionary sales surtax	25.00
Total new charges	\$9,574.16

Total amount you owe \$9,574.16

- Payments received after September 24, 2014 are considered late; a late payment charge, the greater of \$5.00 or 1.5% of your past due balance will apply. Your account may also be billed a deposit adjustment.

APPROVED BY _____
AMOUNT 9,574.16
ACCOUNT NO. 67000-50 Florida Power & Light
VENDOR NO. 640 August Statement
GL PERIOD 8/14



Please have your account number ready when contacting FPL.
Customer service: 1-800-375-2434
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Hearing/speech impaired: 711 (Relay Service)
Online at: www.FPL.com

Doc
2014

ColdPlus™ Return On Investment Calculator

This spreadsheet will help to calculate your approximate current baseline energy cost for cooling, your projected savings after treating the system with ColdPlus, the time-to-payoff the cost of the treatment and Return On Investment over a the expected life of the HVAC system. The expected reduction in energy cost will vary with the age of the system. Average values are:

1 to 4 years	5 to 8 years	9 to 12 years	13 to 18 years
9 to 14%	11 to 16%	15 to 22%	15 to 24%

Note: Efficiency increases of as much as 40% have been documented in systems 20 years and older, but in these instances a licensed HVAC contractor should confirm the physical condition of the system.

Conditioned area floorspace	:	109,000	sq. ft.	Enter sq. ft. and sq. ft./Ton design values and we'll calculate the cooling load, or
sq ft / Ton of cooling	:	519	sq. ft./Ton	
Cooling Load	:	210	Tons	Enter cooling load value or existing chiller Tonnage
Cost per kW/hr	:	\$0.09		
daily hours of operation	:	12		
days per year of operation	:	365		
Reduction in energy consumed	:	17.0%	kW/h per T	This can be calculated from your electrical bill and is indicative of the amount of oil fouling.

Before: Baseline Energy Cost Calculation

Cooling Load (T)	*	kW/h per T	*	\$ per kW/h	*	daily hours	*	days per	=	Current Annual Cooling Cost
210		1		\$0.09		12		365		\$83,701.80

After: Post-ColdPlus™ Treatment Energy Cost Calculation

Cooling Load (T)	*	Improved	*	\$ per kW/h	*	daily hours	*	days per	=	Estimated Annual Cooling Cost
210		0.83		\$0.09		12		365		\$69,472.49

Reduction in energy consumed	*	annual cooling cost	=	Annual savings
17.0%		\$83,701.80		\$14,229.31

Post ColdPlus™ Treatment Cost Calculation

Cooling Load (T)	*	Cold-Plus / T	*	Cold-Plus \$ / oz.	=	Cost of Cold-Plus
210		1.3		\$35.00		\$9,555.00

Post ColdPlus™ Treatment Time to Pay-Off Calculation

Cost of Cold-Plus	/	Annual savings	=	time to pay-off (years)
\$9,555.00		\$14,229.31		0.7

Post ColdPlus™ Treatment Return On Investment Calculation

Life expectancy of compressor (yrs)	-	time to pay-off (years)	*	Annual savings	=	Lifetime savings	=	Return On Investment
10		0.7		\$14,229.31		\$132,738.06		933%

Monthly Degree Day Comparison (Station: FPR View Map)

Month	Base Year (2013)			Comparison Year (2014)			Comparison Percentages		
	HDD	CDD	TDD	HDD	CDD	TDD	HDD	CDD	TDD
January	5	266	271	83	147	230		-44%	-15%
February	32	204	236	10	247	257		21%	8%
March	86	108	194	4	257	261		137%	34%
April	0	441	441	0	377	377		-14%	-14%
May	0	468	468	0	522	522		11%	11%
June	0	614	614	0	590	590		-3%	-3%
July	0	641	641	0	683	683		6%	6%
August	0	680	680	0	727	727		6%	6%
September	0	569	569						
October	0	489	489						
November	4	407	411						
December	1	307	308						
Through August	123	3422	3545	97	3550	3647	-21%	4%	3%
Annual Total	128	5194	5322						

A negative percentage means the Comparison Year was more mild than the Base Year. A positive percentage means the Comparison Year was more severe than the Base Year. When the monthly degree days in either the base year or the comparison year are less than 30, a percentage comparison is not calculated. However, the Annual Total comparison percentages include all heating and cooling degree days.

Smart Cooling Solutions LLC September 10, 2014

1001 Coral Way

Coral Gables, Fl. 33134

Base Line temperature readings were recorded for a period leading up to July 28, 2014 when Cold-Puls treatment was installed. The simple change in supply and return temperatures were recorded one week after treatment showing a 11.2 % improvement. This method does not account for latent heat removal (moisture) which makes up approximately 30% of the total heat removed. We chose to wait for the August 2014 electric bill to compare to the August 2013 bill. The National Weather Service published cooling degree day data shows that August 2014 was 6% warmer than the previous year.

Mr. Willie Roundtree verified that there has been no material changes to their operation that would affect their electrical consumption from the previous year.

The electric bills show a 17% reduction in the KWH and thus a lower bill.

Ken Thompson

Smart Cooling Solutions LLC