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SERVICES, INC.

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# Steam Trap Testing Report

**CLIENT:** ENERGY SAVINGS CORPORATION

**ADDRESS:** 100 Main Street  
Washington, DC 20001

**DATE:** April 6, 2009

**SUBJECT:** Steam Trap Survey Report



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April 6, 2009

This document presents the result of our steam trap survey at your facility.

The survey identified 11 blowing traps that are losing approximately \$ 40,745 worth of steam per year.

A total of 392 traps were tested. Of these, 259 were operating properly. 112 had no steam (for example, heat exchanger or heating coil traps). 9 traps were out of service. 13 traps were blowing.

We recommend that an annual steam trap survey be conducted to ensure optimal steam system operation.

Please call me if you have any questions concerning this report. We look forward to working with you in the future.

Regards,

Stephen A. Seeber

# BlowTable

Orifice size estimated for disk traps; Operation-24 hours/day, 365 days per year, non heat; 1/2 operating for heating traps; steam cost: \$10.50/1000 lbs.; Derating based on dB level and trap operation;25% condensate load

Building 0

Room	Location	TrapBrand	TrapModel	TrapID	Trap Use	Orifice	Stm Loss:1000 LB/Yr	Derating	Stm Loss:\$/Year
5090	AHU54	Dunham Bush	40-715A	0_09	Heat Coil	0.391	245.88	0.3	\$2,582

Building 3

Room	Location	TrapBrand	TrapModel	TrapID	Trap Use	Orifice	Stm Loss:1000 LB/Yr	Derating	Stm Loss:\$/Year
7300	HXB-3	Sarco	FT125	7_90	Drip Leg	0.125	202.41	0.5	\$2,125
B310	Tunnel, 8'	Sarco	B1H 125	3_09	Drip Leg	0.125	212.76	0.65	\$2,234

Building 4

Room	Location	TrapBrand	TrapModel	TrapID	Trap Use	Orifice	Stm Loss:1000 LB/Yr	Derating	Stm Loss:\$/Year
6400	AHU-48	Dunham Bush	40-215A	6_12	Humidifier	0.313	157.57	0.3	\$1,654

Building 5

Room	Location	TrapBrand	TrapModel	TrapID	Trap Use	Orifice	Stm Loss:1000 LB/Yr	Derating	Stm Loss:\$/Year
Loading Dock	UH2-03	Dunham Bush	40-215A	5_13	Unit Heater	0.313	131.31	0.25	\$1,379
Loading Dock	UH2-02	Dunham Bush	40-215A	5_14	Unit Heater	0.313	131.31	0.25	\$1,379

Building 6

Room	Location	TrapBrand	TrapModel	TrapID	Trap Use	Orifice	Stm Loss:1000 LB/Yr	Derating	Stm Loss:\$/Year
5600	AHU38, 2'	Dunham Bush	40-515A	6_81	Heat Coil	0.344	158.60	0.25	\$1,665

Building 7

Room	Location	TrapBrand	TrapModel	TrapID	Trap Use	Orifice	Stm Loss:1000 LB/Yr	Derating	Stm Loss:\$/Year
6700	HX-3B	Dunham Bush	SA30-815	6_46	Heat Exchange	1.032	1,427.43	0.25	\$14,988
7000	AHU55	Dunham Bush	40-215A	7_31	Humidifier	0.313	105.04	0.2	\$1,103

7000	Clean steam gen, 3'	Sarco	FT125	7_06	Drip Leg	0.125	<b>246.34</b>	0.65	<b>\$2,587</b>
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**Building**                      9

<i>Room</i>	<i>Location</i>	<i>TrapBrand</i>	<i>TrapModel</i>	<i>TrapID</i>	<i>Trap Use</i>	<i>Orifice</i>	<i>Stm Loss:1000 LB/Yr</i>	<i>Derating</i>	<i>Stm Loss:\$/Year</i>
Boiler room	HEAT EX 1@BSTR PMP,1'	Dunham Bush	40-215A	9_14	Drip Leg	0.313	<b>386.51</b>	0.65	<b>\$4,058</b>
Boiler room	AHU-63, 5'	Dunham Bush	40-215A	9_20	Drip Leg	0.313	<b>237.85</b>	0.4	<b>\$2,497</b>
Boiler room	Main steam header, 9'	Sarco	B1H 125	9_04	Drip Leg	0.125	<b>237.45</b>	0.85	<b>\$2,493</b>

**Total Annual Steam Loss:**                      \$40,744.79

## FAILED TRAP REPORT

06-Apr-09

Trap ID	Bldg.	Room	Location	Type	Brand	Model	Size	Pres	TrapUse	Operation	Recommend
0_09	0	5090	AHU54	Float & Thermost	Dunham Bush	40-715A	1.5	15	Heat Coil	Blowing	Service/Replace
3_09	3	B310	Tunnel, 8'	Bucket	Sarco	B1H 125	0.75	125	Drip Leg	Blowing	Service/Replace
7_90	3	7300	HXB-3	Float & Thermost	Sarco	FT125	0.75	125	Drip Leg	Blowing	Service/Replace
6_12	4	6400	AHU-48	Float & Thermost	Dunham Bush	40-215A	0.75	15	Humidifier	Blowing	Service/Replace
5_13	5	Loading Dock	UH2-03	Float & Thermost	Dunham Bush	40-215A	0.75	15	Unit Heater	Blowing	Service/Replace
5_14	5	Loading Dock	UH2-02	Float & Thermost	Dunham Bush	40-215A	0.75	15	Unit Heater	Blowing	Service/Replace
6_81	6	5600	AHU38, 2'	Float & Thermost	Dunham Bush	40-515A	1.25	15	Heat Coil	Blowing	Service/Replace
6_46	7	6700	HX-3B	Float & Thermost	Dunham Bush	SA30-815	2	15	Heat Exchange	Blowing	Service/Replace
7_06	7	7000	Clean steam gen, 3'	Float & Thermost	Sarco	FT125	0.75	125	Drip Leg	Blowing	Service/Replace
7_31	7	7000	AHU55	Float & Thermost	Dunham Bush	40-215A	0.75	15	Humidifier	Blowing	Service/Replace
9_04	9	Boiler room	Main steam header, 9'	Bucket	Sarco	B1H 125	0.75	125	Drip Leg	Blowing	Service/Replace
9_14	9	Boiler room	HEAT EX 1@BSTR PMP, 1'	Float & Thermost	Dunham Bush	40-215A	0.75	15	Drip Leg	Blowing	Service/Replace
9_20	9	Boiler room	AHU-63, 5'	Float & Thermost	Dunham Bush	40-215A	0.75	15	Drip Leg	Blowing	Service/Replace

Note: Where trap is designated "Failed Closed" , the strainer, rather than the trap, may be clogged. Both should be checked.

## *Failed Trap Report With Notes*

<i>Building</i>	<i>Room</i>	<i>TrapID</i>	<i>Location</i>	<i>TrapType</i>	<i>Brand</i>	<i>Model</i>	<i>Operation</i>	<i>Recommendation</i>	<i>Notes</i>
4	6400	6_02	AHU-49	Float & Thermostatic	Dunham Bu	40-715A	Good	None	Condensate tank floods AHU room when AHU 49 is operating. Check for restriction on outlet.
7	6700	6_44	HX-2B	Float & Thermostatic	Dunham Bu	SA30-815	Good	None	Steam Leak at HX tank.

# STEAM TRAP SURVEY RESULTS

06-Apr-09

TrapID	Building	Room	TrapType	TrapUse	Inlet Temp	Outlet Temp	Inlet Pres.	Operation	Recommend.
0_01	0	5090	Float & Thermostatic	Humidifier	216	185	9	Good	None
0_02	0	5090	Float & Thermostatic	Humidifier	216	185	9	Good	None
0_03	0	5090	Float & Thermostatic	Drip Leg	215	185	8	Good	None
0_04	0	5090	Float & Thermostatic	Humidifier	100	100	0	No Steam	None
0_05	0	5090	Float & Thermostatic	Humidifier	140	140	0	No Steam	None
0_06	0	5090	Float & Thermostatic	Humidifier	215	190	8	Good	None
0_07	0	5090	Float & Thermostatic	Humidifier	215	190	8	Good	None
0_08	0	5090	Float & Thermostatic	Heat Coil	220	190	11	Good	None
0_09	0	5090	Float & Thermostatic	Heat Coil	215	190	8	Blowing	Service/Replace
0_10	0	5090	Float & Thermostatic	Drip Leg	215	190	8	Good	None
0_11	0	5090	Float & Thermostatic	Humidifier	215	190	8	Good	None
0_12	0	5090	Float & Thermostatic	Humidifier	215	190	8	Good	None
0_13	0	5090	Float & Thermostatic	Heat Coil	215	190	8	Good	None
0_14	0	5090	Float & Thermostatic	Unit Heater	220	190	11	Good	None
0_15	0	5090	Float & Thermostatic	Unit Heater	220	190	11	Good	None
0_16	0	Cafeteria	Disk	Drip Leg	230	200	16	Good	None
0_17	0	Cafeteria	Disk	Heat Exchanger	80	80	0	Out of Service	None
1_01	1	6100	Float & Thermostatic	Drip Leg	220	190	11	Good	None
1_60	1	6198	Bucket	Humidifier	215	190	8	Good	None
1_61	1	6198	Bucket	Humidifier	220	190	11	Good	None
1_62	1	6100	Float & Thermostatic	Humidifier	215	190	8	Good	None
1_63	1	6100	Float & Thermostatic	Unit Heater	220	190	11	Good	None
1_64	1	6100	Float & Thermostatic	Humidifier	215	190	8	Good	None
1_65	1	6100	Float & Thermostatic	Drip Leg	220	185	11	Good	None
1_66	1	6100	Float & Thermostatic	Heat Coil	220	190	11	Good	None
1_67	1	6100	Float & Thermostatic	Heat Coil	220	190	11	Good	None
1_68	1	6100	Float & Thermostatic	Heat Coil	220	190	11	Good	None
1_69	1	6100	Float & Thermostatic	Heat Coil	220	190	11	Good	None
1_70	1	6100	Float & Thermostatic	Drip Leg	215	190	8	Good	None
1_71	1	6100	Float & Thermostatic	Heat Coil	150	150	0	No Steam	None
1_71	1	6100	Float & Thermostatic	Heat Coil	150	150	0	No Steam	None
1_72	1	6100	Float & Thermostatic	Heat Coil	130	130	0	No Steam	None

## Trap Inventory Data

06-Apr-09

TrapID	Quad	Room	Location	TrapType	TrapUse	TrapBrand	TrapModel	TrapSize	Pressure
0_01	0	5090	AHU57	Float & Thermostatic	Humidifier	Dunham Bush	40-215A	0.75	15
0_02	0	5090	AHU57	Float & Thermostatic	Humidifier	Dunham Bush	40-215A	0.75	15
0_03	0	5090	AHU57	Float & Thermostatic	Drip Leg	Dunham Bush	40-215A	0.75	15
0_04	0	5090	AHU57	Float & Thermostatic	Humidifier	Dunham Bush	40-515A	1.25	15
0_05	0	5090	AHU57	Float & Thermostatic	Humidifier	Dunham Bush	40-515A	1.25	15
0_06	0	5090	AHU54	Float & Thermostatic	Humidifier	Dunham Bush	40-215A	0.75	15
0_07	0	5090	AHU54	Float & Thermostatic	Humidifier	Dunham Bush	40-215A	0.75	15
0_08	0	5090	AHU54	Float & Thermostatic	Heat Coil	Dunham Bush	40-715A	1.5	15
0_09	0	5090	AHU54	Float & Thermostatic	Heat Coil	Dunham Bush	40-715A	1.5	15
0_10	0	5090	AHU54	Float & Thermostatic	Drip Leg	Dunham Bush	40-215A	0.75	15
0_11	0	5090	AHU54	Float & Thermostatic	Humidifier	Dunham Bush	40-715A	1.5	15
0_12	0	5090	AHU54	Float & Thermostatic	Humidifier	Dunham Bush	40-715A	1.5	15
0_13	0	5090	AHU57	Float & Thermostatic	Heat Coil	Dunham Bush	40-215A	0.75	15
0_14	0	5090	UH0115	Float & Thermostatic	Unit Heater	Dunham Bush	40-215A	0.75	15
0_15	0	5090	UH0110	Float & Thermostatic	Unit Heater	Dunham Bush	40-215A	0.75	15
0_16	0	Cafeteria	Dish washing area	Disk	Drip Leg	Sarco	TD52	0.75	600
0_17	0	Cafeteria	Dish washing area	Disk	Heat Exchanger	Sarco	TD52	0.75	600
1_01	1	6100	Hall - in ceiling at entrance	Float & Thermostatic	Drip Leg	Dunham Bush	40-215A	0.75	15
1_60	1	6198	AHU31A, 1'	Bucket	Humidifier	Yarway	790	0.5	400
1_61	1	6198	AHU31B, 1'	Bucket	Humidifier	Yarway	600	0.5	40
1_62	1	6100	AHU67,4'	Float & Thermostatic	Humidifier	Dunham Bush	40-215A	0.75	15
1_63	1	6100	Unit heater, UH01-22, 8'	Float & Thermostatic	Unit Heater	Dunham Bush	40-215A	0.75	15
1_64	1	6100	AHU67,4'	Float & Thermostatic	Humidifier	Dunham Bush	40-215A	0.75	15
1_65	1	6100	AHU67,3'	Float & Thermostatic	Drip Leg	Dunham Bush	40-215A	0.75	15
1_66	1	6100	AHU67,3'	Float & Thermostatic	Heat Coil	Dunham Bush	40-515A	1.25	15
1_67	1	6100	AHU67,3'	Float & Thermostatic	Heat Coil	Dunham Bush	40-515A	1.25	15
1_68	1	6100	AHU67,3'	Float & Thermostatic	Heat Coil	Dunham Bush	40-515A	1.25	15
1_69	1	6100	AHU67,3'	Float & Thermostatic	Heat Coil	Dunham Bush	40-515A	1.25	15
1_70	1	6100	AHU66, 3'	Float & Thermostatic	Drip Leg	Dunham Bush	40-215A	0.75	15
1_71	1	6100	AHU66, 3'	Float & Thermostatic	Heat Coil	Dunham Bush	40-515A	1.25	15
1_72	1	6100	AHU66, 3'	Float & Thermostatic	Heat Coil	Dunham Bush	40-515A	1.25	15
1_73	1	6100	AHU66, 3'	Float & Thermostatic	Heat Coil	Dunham Bush	40-515A	1.25	15



TrapID	Quad	Room	Location	TrapType	TrapUse	TrapBrand	TrapModel	TrapSize	Pressure
9_13	9	Boiler room	HEAT EX 2@BSTR PMP,1'	Float & Thermostatic	Heat Exchanger	Sarco	FT15	2	15
9_14	9	Boiler room	HEAT EX 1@BSTR PMP,1'	Float & Thermostatic	Drip Leg	Dunham Bush	40-215A	0.75	15
9_15	9	Boiler room	HEAT EX 1@BSTR PMP,1'	Float & Thermostatic	Heat Exchanger	Sarco	FT15	2	15
9_16	9	Boiler room	AHU SF 75,15'	Float & Thermostatic	Heat Coil	Dunham Bush	40-715A	1.5	15
9_17	9	Boiler room	AHU-63, 5'	Float & Thermostatic	Heat Coil	Dunham Bush	40-715A	1.5	15
9_18	9	Boiler room	AHU-63, 5'	Float & Thermostatic	Heat Coil	Dunham Bush	40-715A	1.5	15
9_19	9	Boiler room	AHU-63, 5'	Float & Thermostatic	Heat Coil	Dunham Bush	40-715A	1.5	15
9_20	9	Boiler room	AHU-63, 5'	Float & Thermostatic	Drip Leg	Dunham Bush	40-215A	0.75	15
9_21	9	Boiler room	AHU-64, 10'	Float & Thermostatic	Drip Leg	Dunham Bush	40-215A	0.75	15
9_22	9	Boiler room	AHU-64, 5'	Float & Thermostatic	Heat Coil	Dunham Bush	40-715A	1.5	15
9_23	9	Boiler room	AHU-64, 5'	Float & Thermostatic	Heat Coil	Dunham Bush	40-715A	1.5	15
9_24	9	Boiler room	AHU-64, 3'	Float & Thermostatic	Drip Leg	Dunham Bush	40-215A	0.75	15
9_25	9	Boiler room	AHU 64 Outside air, 12'	Float & Thermostatic	Heat Coil	Dunham Bush	40-715A	1.5	15
9_26	9	Boiler room	AHU 64 Outside air, 12'	Float & Thermostatic	Heat Coil	Dunham Bush	40-715A	1.5	15
9_27	9	Elec Rm, fire pump	above pump	Float & Thermostatic	Drip Leg	Dunham Bush	40-215A	0.75	15
9_28	9	Elec Rm, fire pump	above pump	Float & Thermostatic	Unit Heater	Dunham Bush	40-215A	0.75	15
9_29	9	Elec Rm, 13kv rm	Unit heater, 12'	Float & Thermostatic	Unit Heater	Dunham Bush	40-215A	0.75	15
9_30	9	Elec Rm, 13kv rm	Unit heater, 12'	Float & Thermostatic	Unit Heater	Dunham Bush	40-215A	0.75	15
9_30.1	9	Elec Rm, Gen Rm	Unit heater, 12'	Float & Thermostatic	Drip Leg	Dunham Bush	40-215A	0.75	15
9_30.2	9	Elec Rm, Gen Rm	Unit heater, 12'	Float & Thermostatic	Unit Heater	Dunham Bush	40-575A	1.25	15
9_31	9	Boiler Rm, Acid Room	SF87, 10'	Float & Thermostatic	Drip Leg	Dunham Bush	40-215A	0.75	15
9_32	9	Boiler Rm, Acid Room	SF87, 10'	Float & Thermostatic	Heat Coil	Dunham Bush	40-515A	1.25	15
9_33	9	Boiler Rm, Acid Room	SF87, 10'	Float & Thermostatic	Heat Coil	Dunham Bush	40-515A	1.25	15
9_34	9	Boiler Rm, Acid Room	SF87, 10'	Float & Thermostatic	Heat Coil	Dunham Bush	40-515A	1.25	15
9_35	9	BoilerRm,LowTunnel	Tunnel	Bucket	Drip Leg	Sarco	B1H 125	0.75	125
9_36	9	BoilerRm,LowTunnel	Tunnel	Bucket	Drip Leg	Sarco	B1H 125	0.75	125
9_37	9	BoilerRm,LowTunnel	Tunnel	Bucket	Drip Leg	Sarco	B1H 125	0.75	125
9_38	9	BoilerRm,LowTunnel	Tunnel	Bucket	Drip Leg	Sarco	B1H 125	0.75	125
9_39	9	BoilerRm,LowTunnel	Tunnel	Bucket	Drip Leg	Sarco	B1H 125	0.75	125
9_40	9	Boiler Rm	Boiler B1B	Bucket	Drip Leg	Sarco	B1H 125	0.75	125
9_41	9	Boiler Rm	Boiler B1A	Bucket	Drip Leg	Sarco	B1H 125	0.75	125
9_42	9	Boiler Rm	Boiler B1C	Bucket	Drip Leg	Sarco	B1H 125	0.75	125
9_43	9	Boiler Rm	Boiler B1D	Bucket	Drip Leg	Sarco	B1H 125	0.75	125

<b>Total Trap Count</b>	<b>389</b>
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