



energy conservation services corp.

Fuel Reduction Program

Conducted at:

**Deepdale Gardens
Cooperative Community**

Property managed by:

Herbert Flachner

Director of Maintenance

Project Supervised and monitored by:

Thomas Fiori

Boiler Supervisor

Results for Tests of Intellidyne Economizers
Installed on 5 Steam Boilers Producing
Heat and Domestic Hot Water
Boilers Operated on Number 2 Heating Oil and Natural Gas



Deepdale Gardens Summary of Project

ECS Corp. was brought in by Herbert Flachner, Director of Operations for the community. The complex is a 25 acre complex in Little Neck, New York. The buildings are served by 25 independent boiler rooms. In order to test the technology of the IntelliCon CHS first hand Mr. Flachner had ECS install the Intellicon units on 5 boilers for fuel reduction testing.

During the project Mr. Thomas Fiori retrieved information from on-site systems to determine cycling, run-times and fuel consumption. Mr. Fiori also reviewed the findings presented here to ensure the integrity of the data.

These boilers are known as follows:

Boiler G-6: 255-25 61st AVE.

Reduced Cycling by 57%

Installation Date: 17-Oct-05

Reduced Run-Time 25%

Reduced Fuel Consumption by 43%

Saved \$19,800 in the first 5 months of operation.

Boiler F-12: 252-14 60th AVE.

Reduced Cycling by 40%

Installation Date: 1-Dec-05

Reduced Run-Time increased slightly

Reduced Fuel Consumption by 20%

Saved \$6,155 in the first 4 months of operation.

Installation Date: 20-Dec-05

Boiler D-16: 57-35 MARATHON PKY.

Reduced Cycling by 61%

Reduced Run-Time reduced by 3%

Reduced Fuel Consumption by 25%

Saved \$9,073 in the first 3 months of operation.

Boiler J-16: 251-32 61st AVE.

Installation Date: 12-Jan-06

Reduced Cycling by 42%

Reduced Run-Time reduced by 17%

Reduced Fuel Consumption by 31% (from 15% more to 16% less than control unit)

Saved \$11,270 in the first 2.5 months of operation.

Boiler G-13: 249-20 57th AVE

Installation Date: 3-Feb-06

Reduced Cycling by 24%

Reduced Run-Time reduced by 5%

Reduced Fuel Consumption by 30% (from 15% more to 14% less than control unit)

Saved \$10,686 in the first 2 months of operation.

Return On Investment

Deepdale Gardens spent \$27,500.00 to install Intellidyne Economizers on 5 of its 25 boilers. The operation of each boiler was then monitored by Deepdale Gardens and the test results show a **savings of over \$56,000.00 in the first 5 months** of operation. Deducting the cost of the Intellidyne Economizers from the savings, Deepdale Gardens' **net savings was in excess of \$28,500.00.**

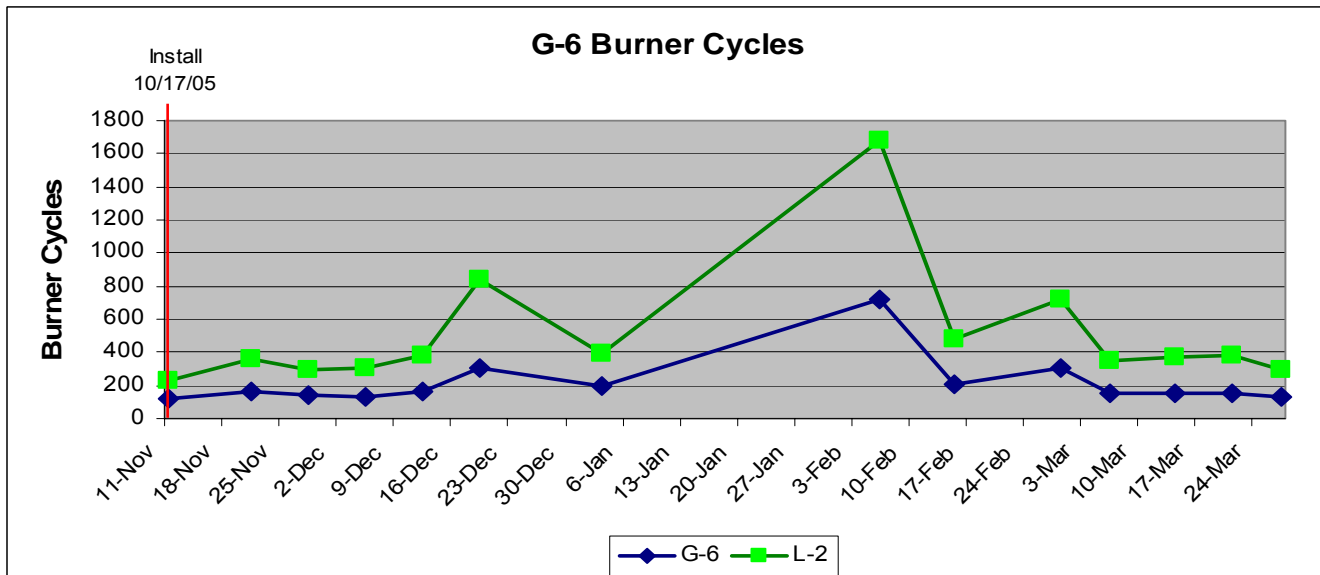
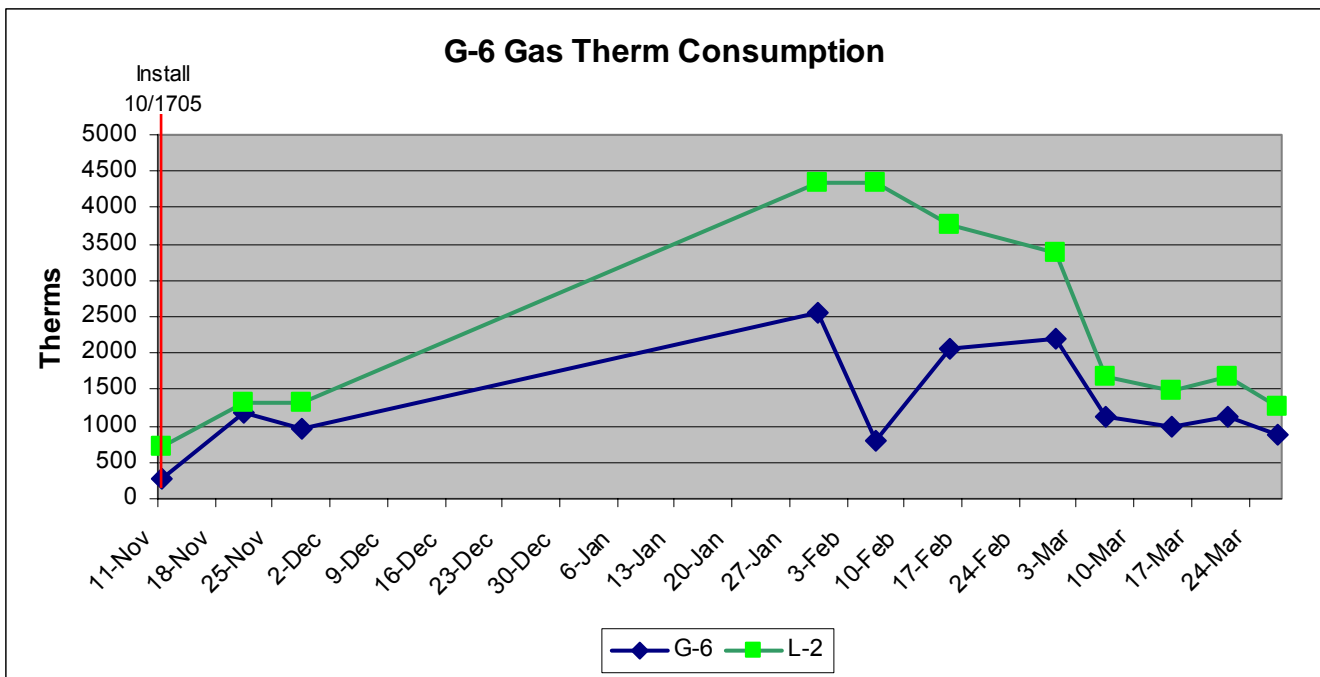
On average the project paid for itself in as little as 2 months. The average reduction in energy consumption achieved after the installation of the Intellidyne Economizers was 30%, well in excess of the minimum guaranteed savings of 10%. The cost to Deepdale Gardens to outfit the remaining 20 boilers would be \$110,000.00. Deepdale is currently spending approximately \$1,200,000.00 per year on fuel. Using the minimum guaranteed savings of 10%, Deepdale Gardens would save approximately \$120,000.00 in the first year of operation. **If Deepdale Gardens experiences a similar savings of 30%, the first year's savings alone would total nearly \$360,000.00.** In either scenario, the project would pay for itself in less than one year.

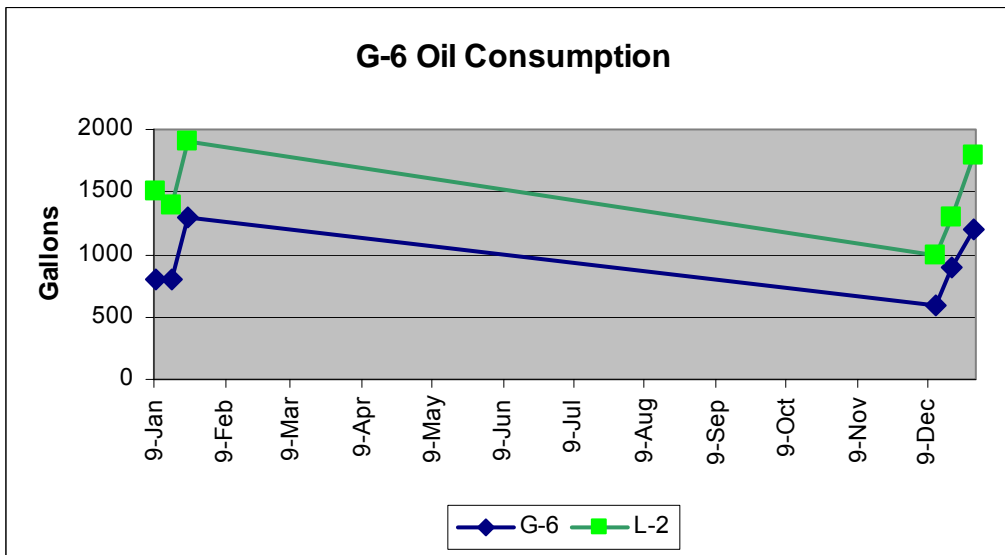
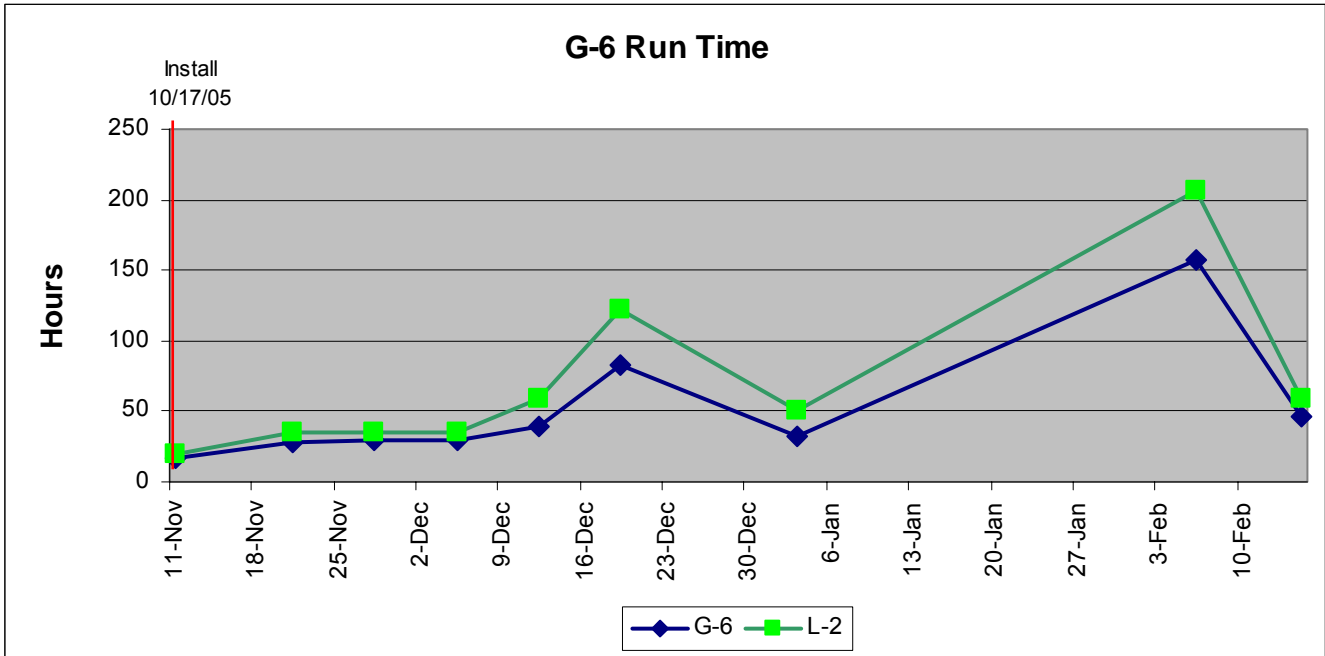
IntelliCon Results for Boiler G-6

This was the first boiler installed at Deepdale Gardens, on October 17, 2005. The customer selected boiler L2 as the “control” boiler as it was consuming the same amount, or less fuel than the treated unit (G-6). Data was not available to ECS prior to the installation. Immediately the consumption dropped so that G-6 was now using 11% to 61% less fuel than the control unit depending upon the demand on the boiler. Cycling was reduced by 43% and run-time reduced by 25%. Oil usage during the period was minimal however the treated unit used 31% less oil than the untreated unit.

During the period the untreated unit consumed 25,270 therms and the treated unit consumed 14,140 therms, reduction of 11,130 therms, or 44% reduction in fuel consumption. At a cost of \$1.779 per therm that is

a savings of \$19,800 in a 5 month period.





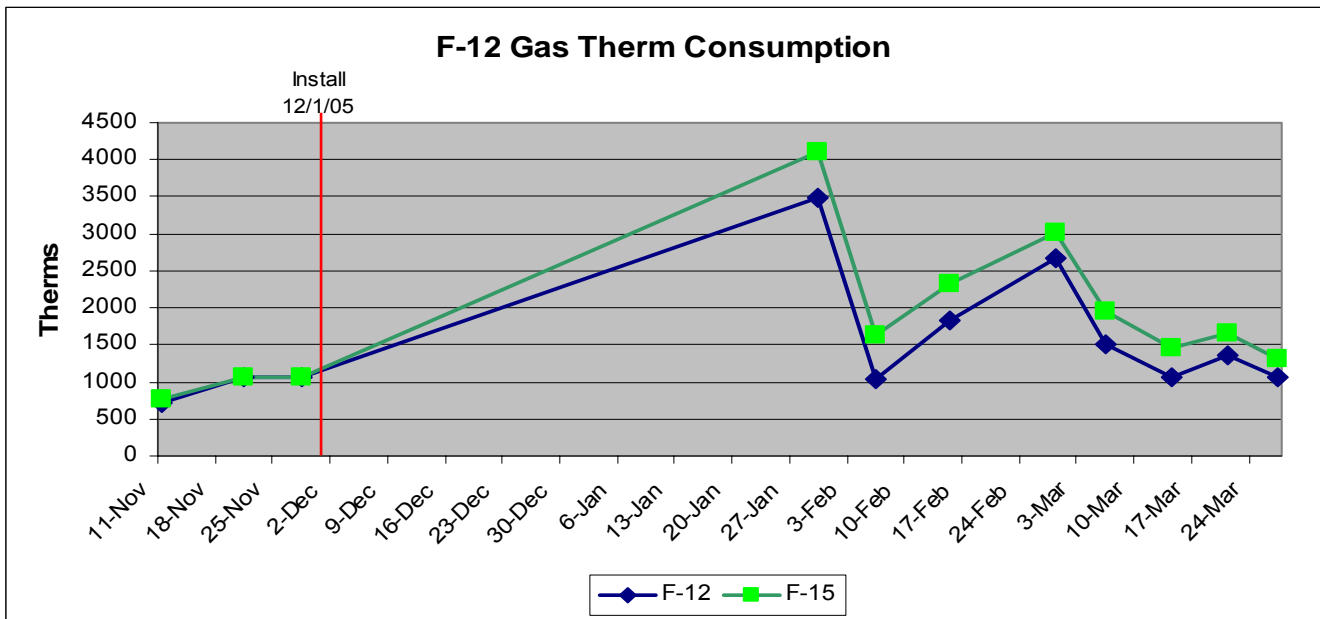
IntelliCon Results for Boiler F-12

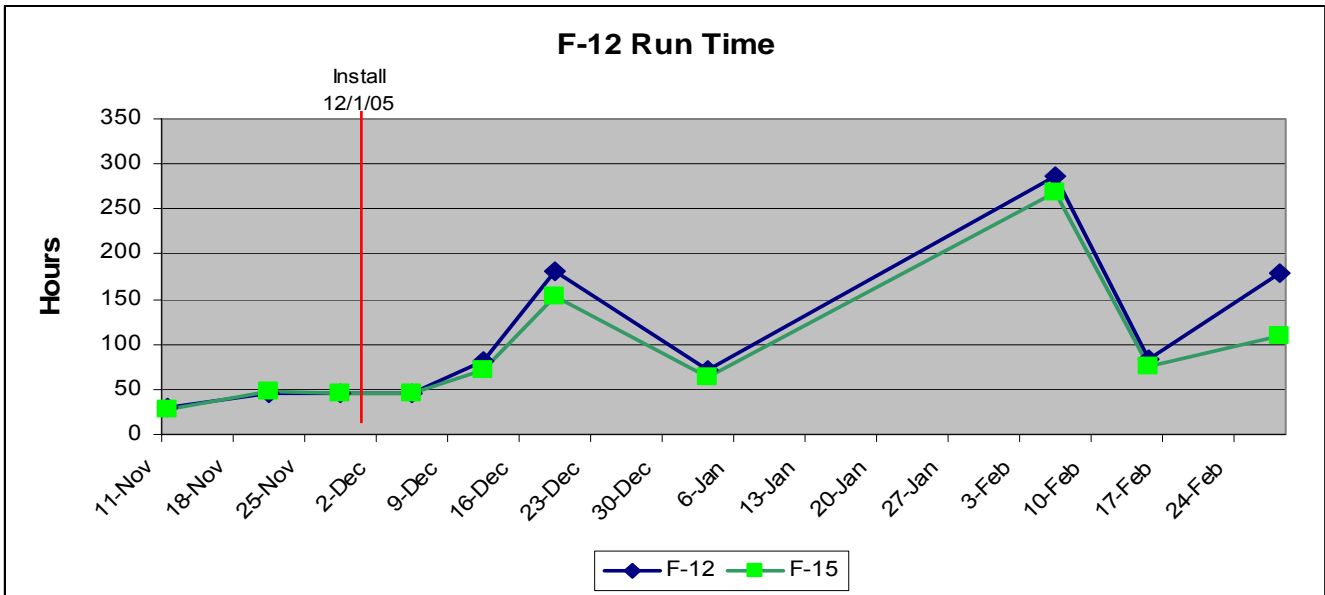
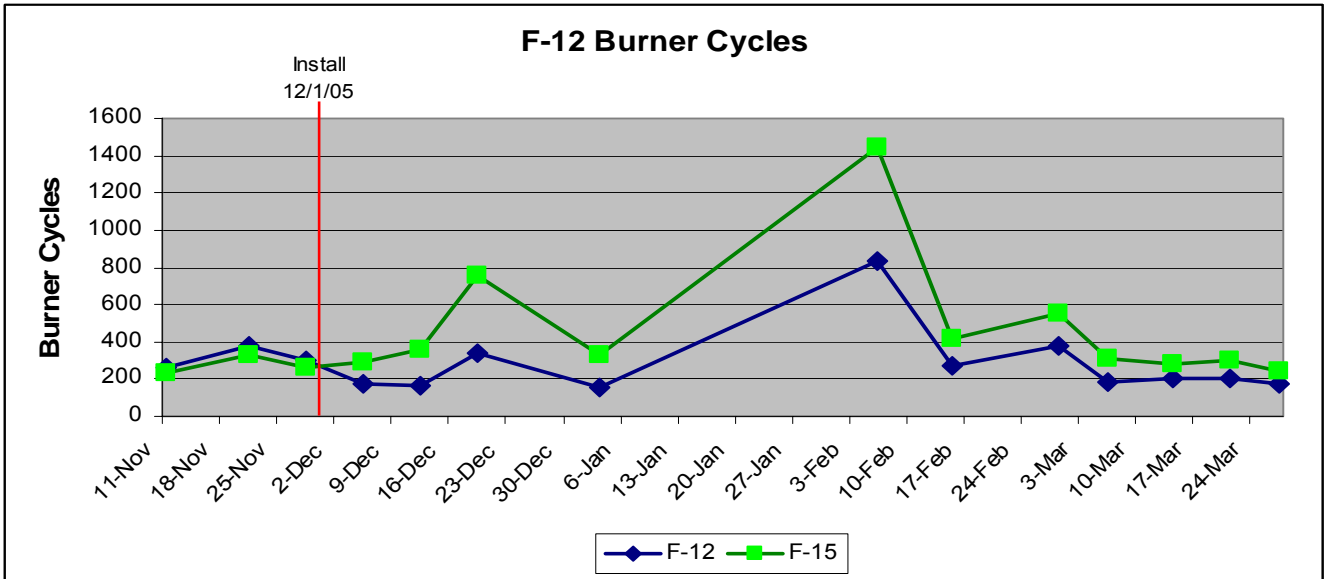
Prior to the installation of the IntelliCon CHS the “control” boiler (F-15) was using about the same amount of fuel as the treated boiler F-12. The IntelliCon was installed on December 1, 2005. Immediately the consumption dropped so that F-12 was now using 11% to 37% less fuel than the control unit, depending on the demand on the boiler. The average consumption during each period measured was 22%.

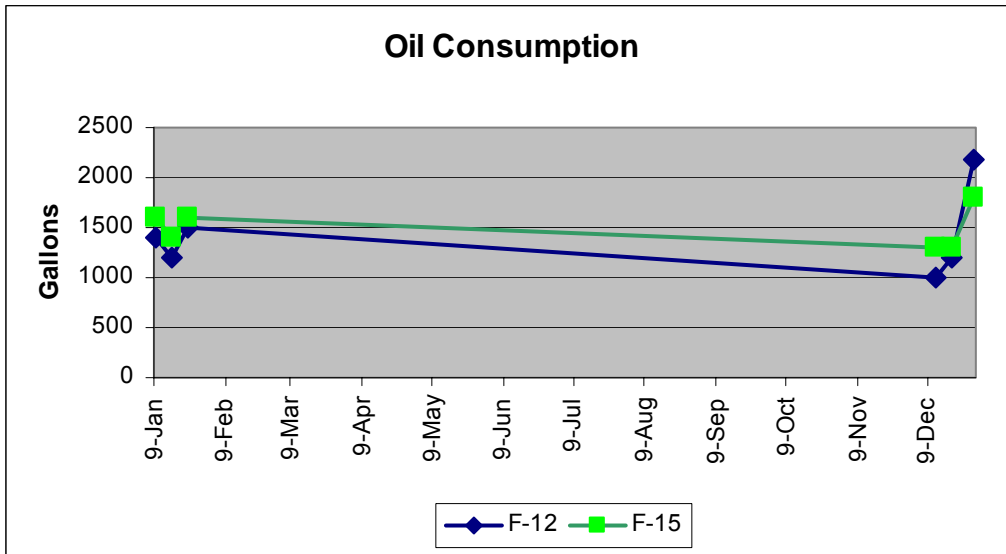
Cycling was reduced by 29% to 55% depending on demand with an average reduction of 40% and although the runtime increased slightly the reduction in the cycling resulted in the savings. Oil usage during the period was minimal however the treated unit used 5.7% less oil than the untreated unit.

During the period the untreated unit consumed 17,480 therms and the treated unit consumed 14,020 therms, reduction of 3,460 therms, or 20% reduction in fuel consumption. At a cost of \$1.779 per therm that is

A savings of \$6,155 in a 3 month period.







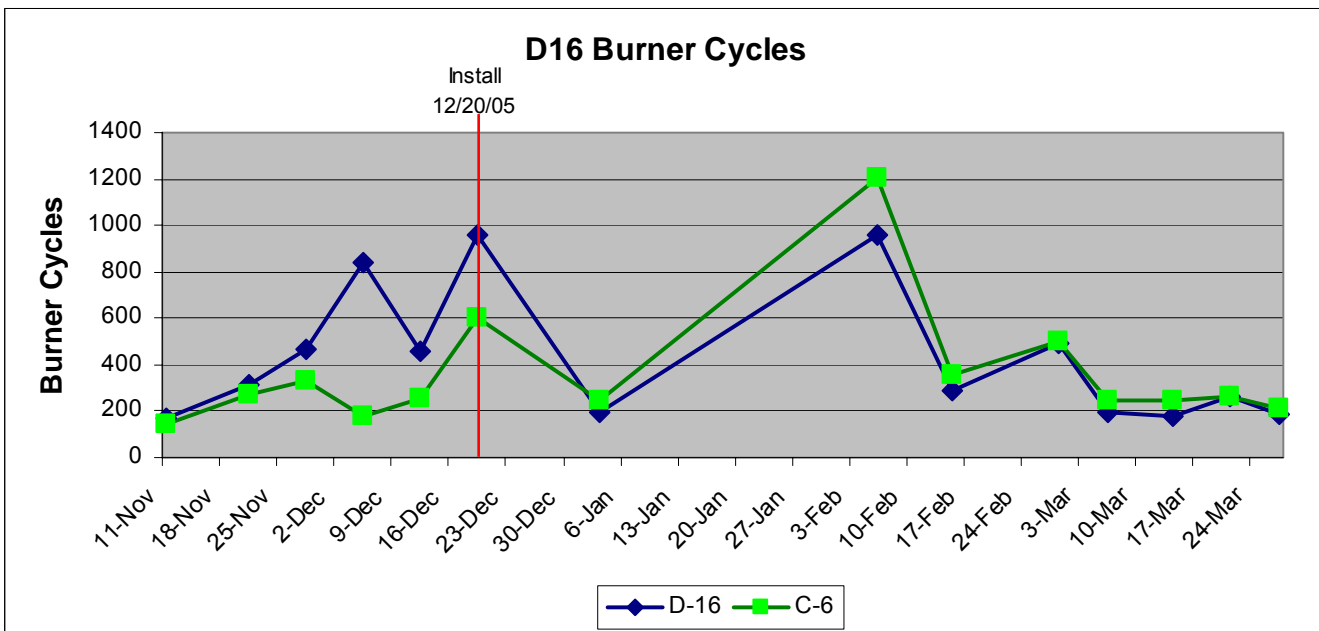
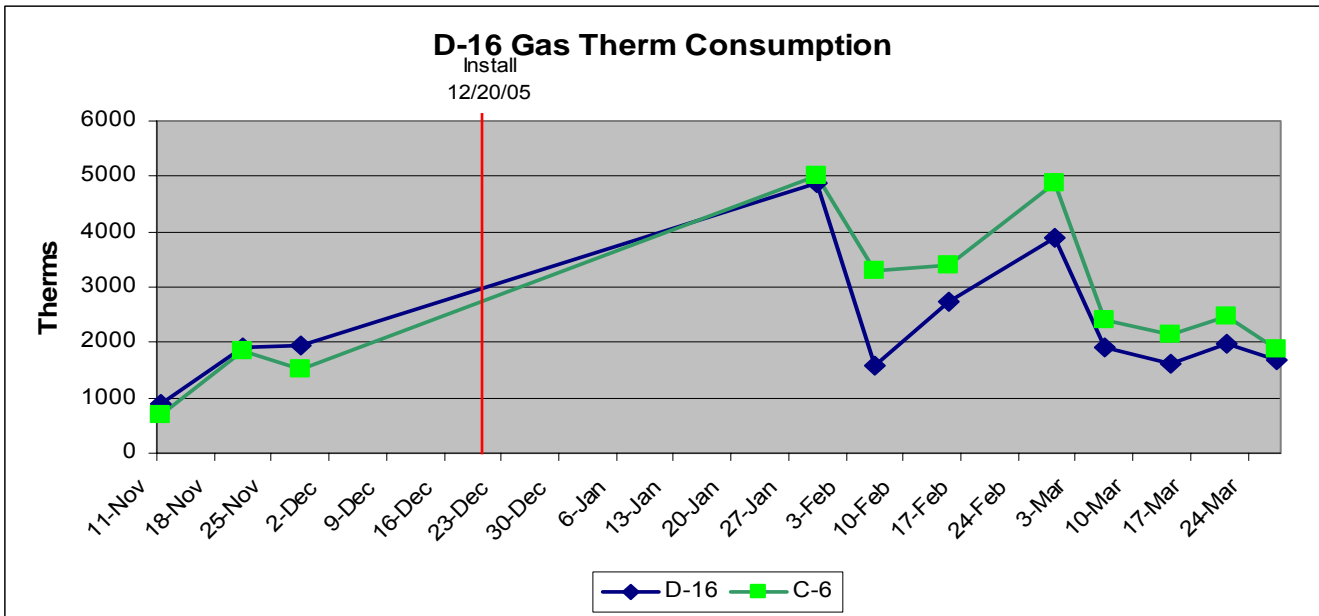
IntelliCon Results for Boiler D-16

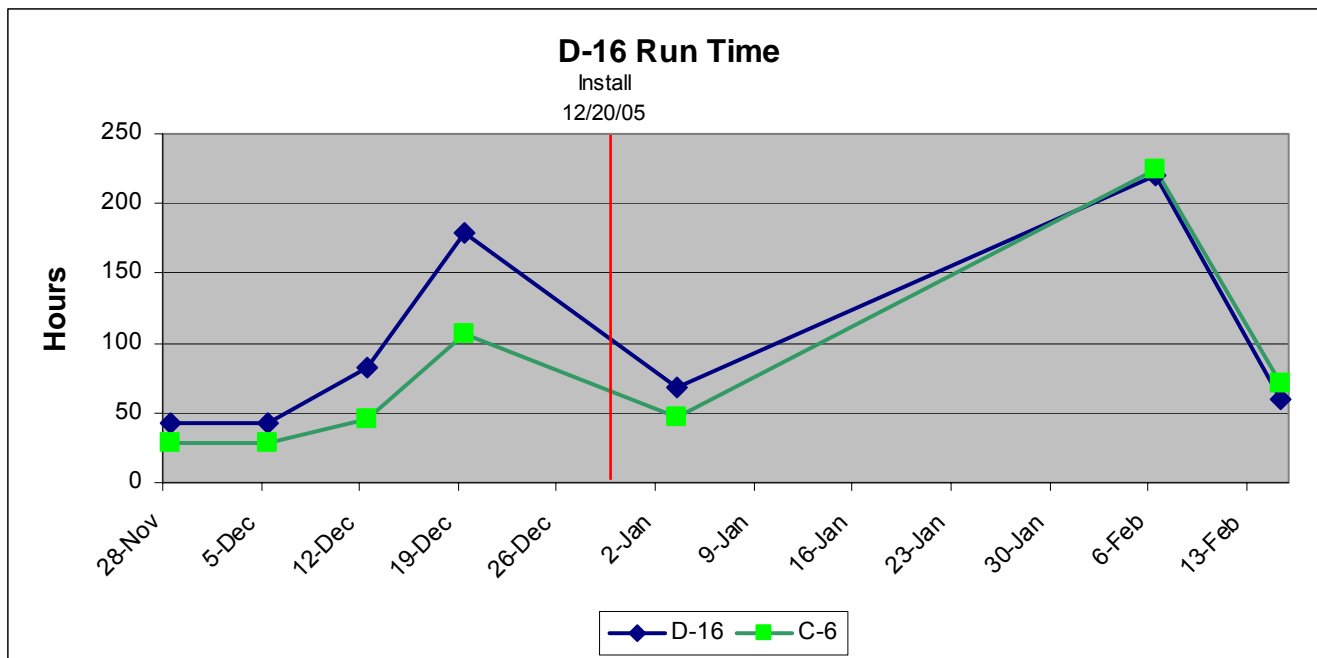
The customer selected boiler C-6 as the “control” boiler as it was consuming about the same amount fuel as the treated unit (D-16). Installation was done on December 20, 2005.

Cycling was significantly reduced. Prior to installation the D-16 (treated) boiler was cycling more than 45% more than the C-6 (untreated) unit. After the installation of the IntelliCon cycling was reduced to 16% less than the untreated boiler. No oil was used during the period.

From the time of installation of the IntelliCon the untreated unit consumed 20,500 therms and the treated unit consumed 20,500 therms, reduction of 5100 therms, or 25% reduction in fuel consumption. At a cost of \$1.779 per therm that is

a savings of \$9,073 in a 3 month period.





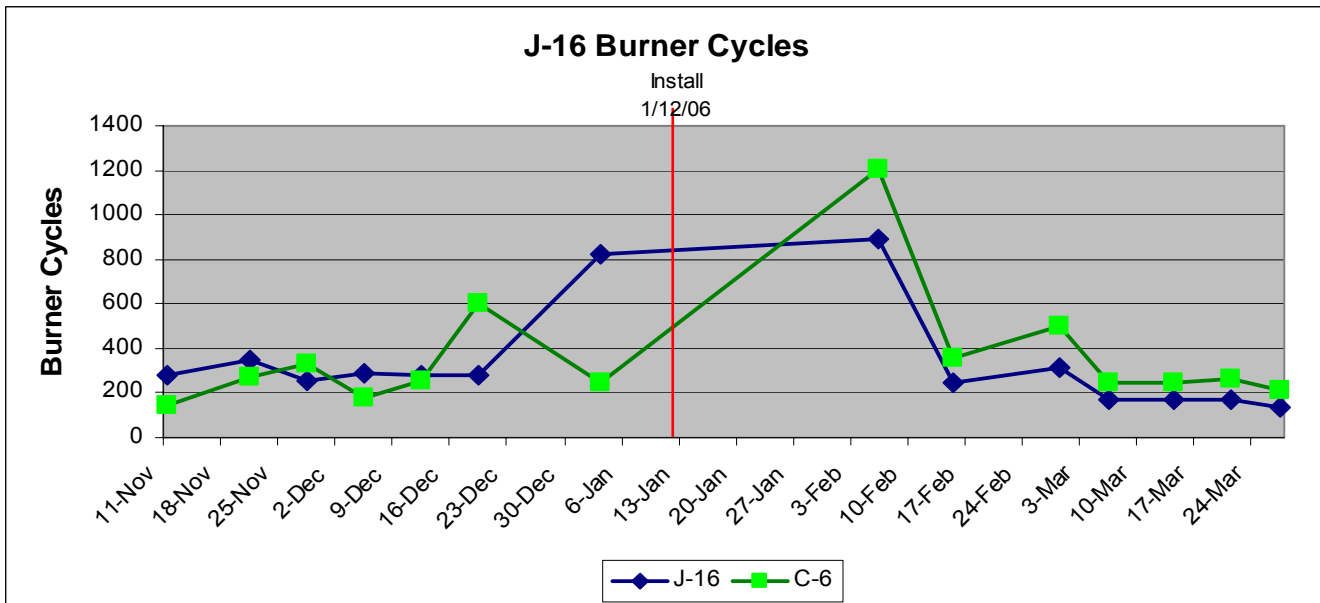
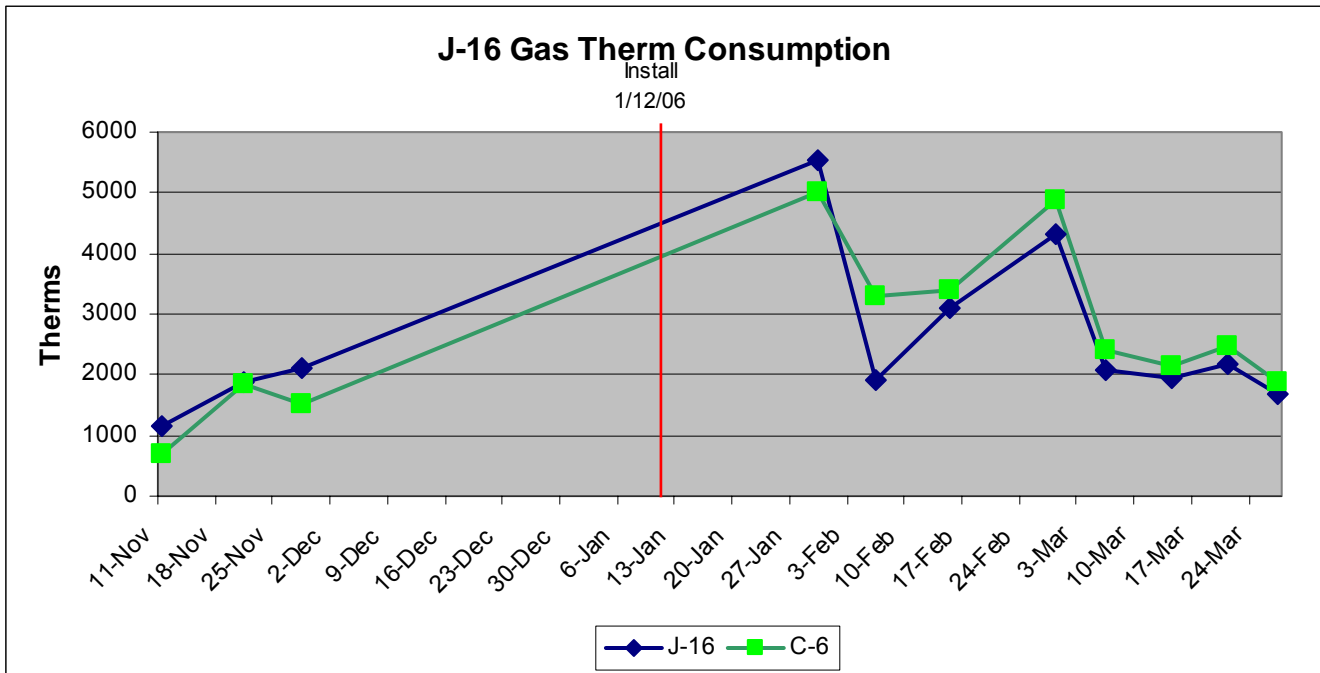
IntelliCon Results for Boiler J-16

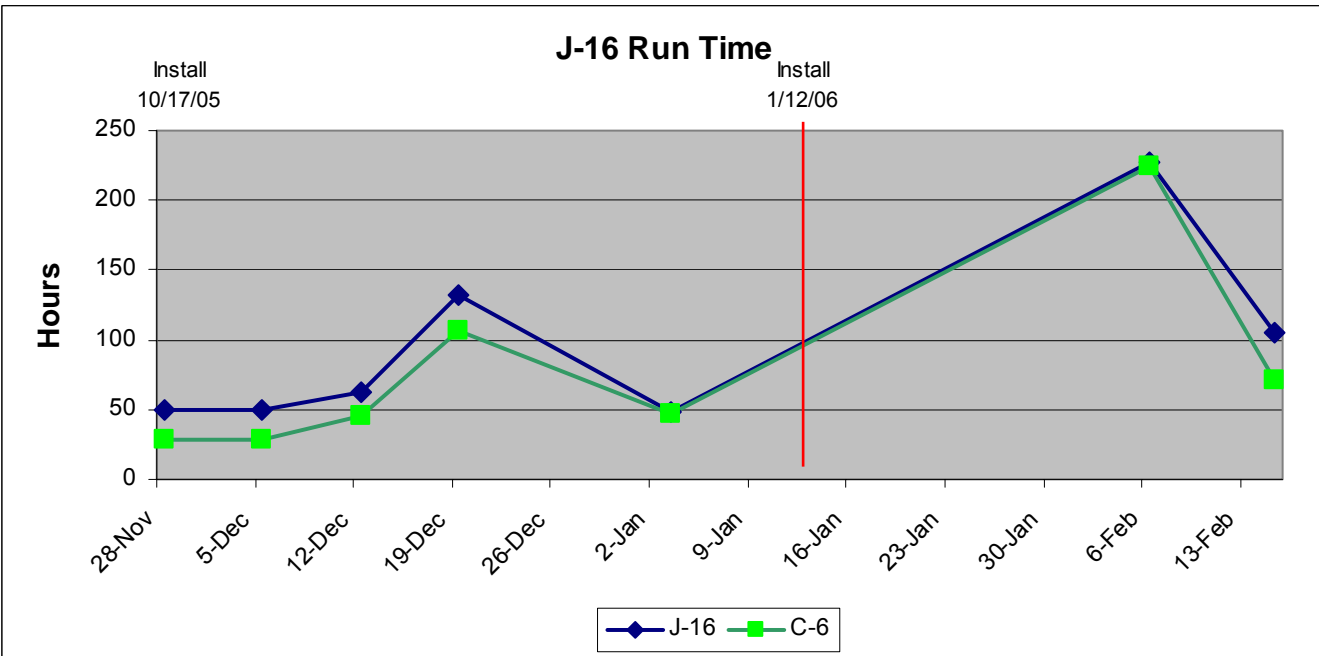
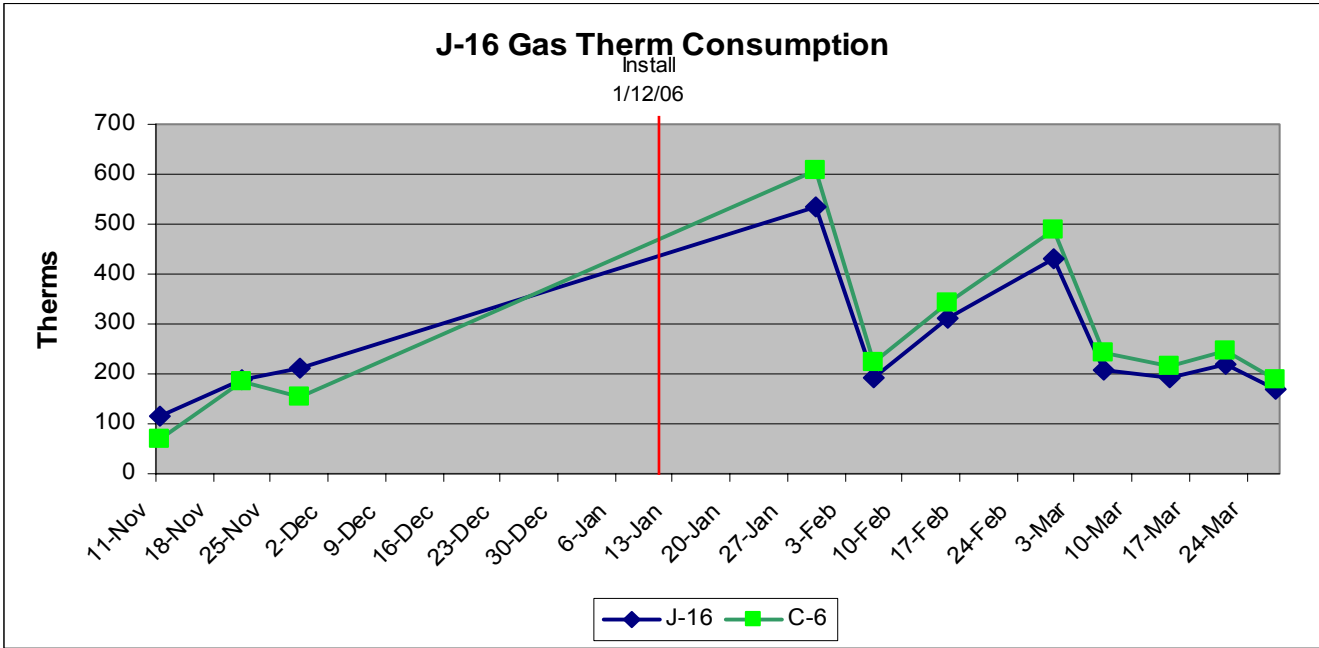
The customer selected boiler C-6 as the “control” boiler as it was consuming approximately 15% more fuel than the treated unit (J-16).

Cycling was significantly reduced by 32% less than C-6. Run-time reduced from 25% more than the control unit to an average of 17% less than the untreated unit.

From the time of installation of the IntelliCon the untreated unit consumed 20,500 therms, and the treated unit consumed 17,240 therms, reduction of 3,260 therms, or 16% reduction in fuel consumption. Since this unit started out consuming 15% more fuel (3,075 therms) and is now consuming 16% less that equates to a savings of 31% or 6,335 therms. At a cost of \$1.779 per therm that is

a savings of \$11,270 in a 2.5 month period.





IntelliCon Results for Boiler D-13

The customer selected boiler L-2 as the “control” boiler, the treated boiler used about the same amount of fuel as the control boiler before ECS treated D-13.

Cycling was reduced by from 5% more than the control unit to only 19% less than the control a reduction of 24% less than L-2. Run-time reduced by 5% over the runtimes before treatment.

From the time of installation of the IntelliCon the untreated unit consumed 17,580 therms, and the treated unit consumed 14,810 therms, reduction of 2,770 therms, or 15.8% reduction in fuel consumption. However, the treated unit (D-13) was consuming 14% more than the control unit, a reduction of 30%. At 14% more than the control boiler, the consumption for the period would have been 2,137 therms, less the 2,770 reduction over the control boiler brings the total savings of 6,007 therms, at a cost of \$1.779 per therm that is

a savings of \$10,686 in a 2 month period.

