

The school district in Upper Sandusky Ohio had Air Krete foam insulation installed in several buildings during 2004. The Air Krete was installed in the cores of the 8" concrete block walls and in the cavity between the block and the brick. The school replaced two 50,000 BTU gas-fired boilers with two 20,000 BTU boilers.

During December 2004 there was a severe ice storm in the Upper Sandusky area which knocked out power for 5 days. According to an employee familiar with the facilities the high school gymnasium (with seating capacity of about 1500 people) was used as a shelter by the local emergency management organization during the power outage. There was no heat from the boilers and a single 50K BTU propane heater was used in the gym during the power outage according to a local Emergency Management Office employee who was present. The temperature held with very little drop in temperature (less than 10 degrees) starting about 72 degrees despite the fact that outside temperature never exceeded 28 degrees during the 5 day period. We received documentation of utility bills for October, November, and December of 2004 indicating more than 48% reduction compared to the previous year for the same period.

This information is compiled from written information and telephone conversations where I spoke personally with some involved first hand in the events.

Leroy Miller 10-18-2005



The average utility consumption and cost from May through April for a local residence in Searcy AR is indicated on the table below. During the 2003 year *the living space was increased by 70%* from 2492 ft<sup>2</sup> to 4224 ft<sup>2</sup>. The entire perimeter of the home was insulated with Air Krete Cementitious foam to R 14 in the 2X4 walls. New siding was installed on the entire structure, as well as new windows and exterior doors. Additionally new HVAC units were installed.

	2001-2002 MONTHLY AVERAGES	2004-2005 MONTHLY AVERAGES	DIFFERENCE	%DIFFERENCE
Gas Cost	\$89	\$97	\$8	9%
CCF	91	71	-20	-22%
Cost / CCF	\$1.07	\$1.48	\$0.41	38%
<b>HEATING</b>				
MONTHS HEAT COST	\$106	\$107	\$1	0%
NON-HEAT GAS COST	\$27	\$35	\$8	29%
HEAT GAS CCF	118	86	-33	<b>-28%</b>
NON-HEAT GAS CCF	22	21	-1	-5%
<b>ELECTRICITY</b>				
COST	\$119	\$132	\$13	10%
KWH	1196	1472	276	23%
COST / KWH	\$0.10	\$0.09	\$-0.01	-12%
<b>COOLING</b>				
MONTHS A/C COST	\$76	\$48	\$-30	<b>-39%</b>
NON-A/C COST	\$100	\$120	\$20	20%
A/C KWH	770	432	-338	<b>-44%</b>
NON-A/C KWH	1003	1364	361	36%
<b>TOTALCOST</b>	<b>\$208</b>	<b>\$229</b>	<b>\$21</b>	<b>10%</b>

Note: This data was compiled by the home owner.

3-24-05

Keene Christopher  
Air Krete Corporate Headquarters  
Weedsport, NY

Dear Keene,

I am pleased to provide one of the most unusual and special testimonials ever heard in our business. As you know, our company was contracted to install Air Krete insulation in several school buildings for the Upper Sandusky School District in Ohio last summer. One of those buildings was a standard high school gymnasium, where we filled 8" block and the gap between the brick and the block with Airkrete.

An unfortunate act of Mother Nature has actually proven the insulating ability of Air Krete. Last winter, the Ohio region suffered a massive ice storm, knocking out power to thousands of people for many days. Emergency management officials used the Upper Sandusky high school gymnasium as a shelter during the crisis. Even though there was no heat in the building and the outside temperature never went above 28 degrees during a 5 day period, the inside temperature of that gymnasium went down from 72 degrees to just 68 degrees! Understand that there was no heat at all in the facility for 5 straight days!

That story is an obvious testament to the importance of proper insulation and to Air Krete in particular. Needless to say, the energy efficiency and environmental benefits of Air Krete are now well known in and around the Upper Sandusky region.

We look forward to more of the same on future projects.

Sincerely,

Matt Bauer  
Owner – Gutters, Insulation & More, Inc.

**CASE STUDY-PERFORMANCE BASED CONTRACTING  
UPPER SANDUSKY EXEMPTED VILLAGE SCHOOL DISTRICT**

**Upper Sandusky High School**



Upper Sandusky High School is a 98,500 square foot building with classroom unit ventilators and hot water boilers. It has an attached auditorium and a standard sized gym. In 2003, Synergy Mechanical provided the school with an energy savings based proposal under the State House Bill 264, which allows school districts to negotiate and enter into a contract with a contractor to provide upgrades to the building that will save energy and pay for themselves over a fifteen year period. This contract included new Capital Aluminum windows, new AERCO boilers, upgraded 6 lamp florescent gym lighting, Air Krete insulation, upgraded Circon DDC temperature controls and a new Plexus central monitoring system.

The school system was in need of new boilers as the old one had holes in the bottom. They were not fit to be run another year. With the school district under heavy budget constraints, alternative financing for the replacement was needed. Synergy Mechanical with their expertise worked hard to find a solution to the schools heating dilemma. The existing boilers were replaced but other items were needed to help pay the new boilers back in the required 15 years.

**CASE STUDY-PERFORMANCE BASED CONTRACTING  
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**Old Boiler Pictures**



**New Boiler Pictures**



**School Budget Analysis**

Year	Base Year Utility Cost	Base Year Repairs	Total Operations Budget	Current Energy	Current Services	Annual Payment	Annual Operations Budget	Current budget VS. Base Budget
2004	\$ 86,472	\$ 32,171	\$ 118,643	\$ 44,188	\$ -	\$ 61,407	\$ 105,595	\$ 13,048
2005	\$ 89,931	\$ 33,458	\$ 123,389	\$ 46,176	\$ 5,450	\$ 61,407	\$ 113,033	\$ 10,355
2006	\$ 93,528	\$ 34,796	\$ 128,324	\$ 48,254	\$ 5,695	\$ 61,407	\$ 115,357	\$ 12,968
2007	\$ 97,269	\$ 36,188	\$ 133,457	\$ 50,426	\$ 5,952	\$ 61,407	\$ 117,784	\$ 15,673
2008	\$ 101,160	\$ 37,636	\$ 138,796	\$ -	\$ -	\$ -	\$ -	\$ -
2009	\$ 105,206	\$ 39,141	\$ 144,347	\$ -	\$ -	\$ -	\$ -	\$ -
2010	\$ 109,415	\$ 40,707	\$ 150,121	\$ -	\$ -	\$ -	\$ -	\$ -
2011	\$ 113,791	\$ 42,335	\$ 156,126	\$ -	\$ -	\$ -	\$ -	\$ -
2012	\$ 118,343	\$ 44,028	\$ 162,371	\$ -	\$ -	\$ -	\$ -	\$ -
2013	\$ 123,077	\$ 45,789	\$ 168,866	\$ -	\$ -	\$ -	\$ -	\$ -
2014	\$ 128,000	\$ 47,621	\$ 175,621	\$ -	\$ -	\$ -	\$ -	\$ -
2015	\$ 133,120	\$ 49,526	\$ 182,645	\$ -	\$ -	\$ -	\$ -	\$ -
2016	\$ 138,444	\$ 51,507	\$ 189,951	\$ -	\$ -	\$ -	\$ -	\$ -
2017	\$ 143,982	\$ 53,567	\$ 197,549	\$ -	\$ -	\$ -	\$ -	\$ -
2018	\$ 149,742	\$ 55,710	\$ 205,451	\$ -	\$ -	\$ -	\$ -	\$ -