

INSULTECH INSULATION BLANKETS
CHCP & HTHW TUNNELS

Project: Cover the uninsulated expansion joints and valves in the HTHW Tunnels. Insulate the Expansion tank in the CHCP, the large HTHW valves and part of the new hot water generator that was installed as part of the ESPC II Contract. The INSULTECH® Thermal Blankets are a custom fit high quality, pre-engineered insulation system designed to save energy, retain radiant heat, minimize insulation maintenance and improve the surrounding work environment. INSULTECH® is also capable of withstanding weather conditions and chemical environments. INSULTECH® is flexible and easy to install, easy to remove and reinstall allowing quick access and easy equipment serviceability.

Savings are based on 0.06 KWH for electricity and \$7.49 DKTH for Natural Gas

	INITIAL INVESTMENT	ANNUAL SAVINGS	PAYBACK PERIOD MONTHS	15 YEAR SAVINGS
CHCP HTHW TUNNELS PH I	\$39,903.13	\$25,927.59	18.2	\$388,913.86
CHCP HTHW TUNNELS PH II	\$37,157.18	\$24,008.39	18.1	\$360,125.88
MECHANICAL ROOMS PH III	\$91,182.38	\$47,967.44	22.3	\$719,511.63
CHCP BOILER #2	\$10,596.60	\$8,945.10	14.1	\$134,176.57
CHCP VALVES FLANGES	\$26,031.20	\$23,417.80	13.3	\$351,266.93
CHCP EXPANSION TANK	\$4,137.74	\$13,440.60	0.3	\$201,609.00
TOTAL	\$209,008.23	\$143,706.92	14.4	\$2,155,603.87

	TOTAL REDUCTION GHG EMISSIONS	
(GHG) Greenhouse Gases are compounds of the atmosphere that contribute to the greenhouse effect. Greenhouse Gases include water vapor, carbon dioxide, methane, nitrous oxide and ozone. Greenhouse Gases have increased the effect of long wavelength radiant energy downward to the earth's surface, thereby creating the "Greenhouse Effect". The absorption of this long wave radiant energy by the earth's atmosphere is what causes the warming of the atmosphere. (NOx) Nitrogen pollutants generated by boilers are Nitric Oxide (NO) & Nitrogen Dioxide (NO2) commonly referred to as NOx. NOx in itself is harmful to humans; it initiates reactions that result in the production of ozone (O3) and acid rain. (VOCs) Volatile Organic Compounds are organic chemical compounds that have high enough vapor pressures under normal conditions to significantly vaporize and enter the atmosphere.	1984.22	CO2 (Tons)
	8189.39	NOx (lbs)
	72.02	VOC (lbs)
	480.23	CO (lbs)
	19.65	N2O (lbs)
	5.09	SO2 (lbs)
	16.74	PM10 (lbs)
	20.235	Mercury Compounds (tons)
	1186.75	Cadmium Compounds (lbs)
	22.56	Lead Compounds (tons)

Equivalency Results

Annual greenhouse gas emissions from 1,747 passenger vehicles

CO2 emissions from 998,717 gallons of gasoline consumed

CO2 emissions from 20,718 barrels of oil consumed

CO2 emissions from 117 tanker trucks' worth of gasoline

CO2 emissions from the electricity use of 1,111 homes for one year

CO2 emissions from the energy use of 773 homes for one year

Carbon sequestered by 228,424 tree seedlings grown for 10 years

Carbon sequestered annually by 1,899 acres of pine or fir forests

Carbon sequestered annually by 88.3 acres of forest preserved from deforestation

CO2 emissions from 371,190 propane cylinders used for home barbeques

CO2 emissions from 48.5 burning railcars' worth of coal

Greenhouse gas emissions avoided by 3,104 recycling tons of waste instead of sending it to the landfill

Annual CO2 emissions of 0.002 coal fired power plants