



## Description

<b>LOCATION:</b>	27780 Blue Star Highway, Covert, MI49043	<b>FUEL:</b>	210,524 pounds of uranium oxide, enriched to 4% U-235. Core contains 43,168 fuel rods in 204 assemblies, each 12 feet long and 8.3 by 8.3 inches. A new fuel load permits 18 months of power operation.
<b>OWNERSHIP:</b>	Entergy Palisades, LLC - 100%	<b>CONTROL RODS:</b>	Forty-five cruciform rods made up of a silver - indium - cadmium alloy to control the rate of nuclear fissions in the reactor core.
<b>CAPACITY:</b>	805,000 kilowatts per hour	<b>STEAM GENERATORS:</b>	Weight: 460 tons each Height: 58 feet Diameter: 20 feet # of Tubes: 8,519 tubes, 3/4 inch in diameter
<b>TYPE:</b>	Pressurized Water Reactor (PWR) Manufactured by Combustion Engineering Inc., Windsor, CT.	<b>OPERATING PRESSURES / TEMPERATURES:</b>	Primary coolant at 2,101 pounds per square inch (PSI) pressure, allowing water to be heated to 583°F
<b>TURBINE/GENERATOR:</b>	Westinghouse Electric Company, Pittsburgh, PA.	<b>TURBINE / GENERATOR:</b>	Up to 10,800,000 pounds per hour, 505°F temperature, 710 psi pressure steam is directed against rotor of high pressure Turbine stage, then against two low Pressure turbine stages. Rotor spinning at a constant 1,800 rpm will allow generator to produce up to 820 MWe of electricity.
<b>ARCHITECT - ENGINEER / CONSTRUCTOR:</b>	Bechtel Power Corporation, San Francisco, CA.	<b>ENVIRONMENTAL STUDIES:</b>	Samples from air, lake water, lake bottom sediment, well water, milk, fish and crops in plant area are sampled and monitored on a monthly basis. Environmental monitoring shows no significant change in results from pre-plant operation levels. Studies of Lake Michigan water temperatures show no significant thermal impact from plant operation. Meteorological study has shown no adverse weather effects from cooling tower steam cloud off plant site.
<b>CONSTRUCTION:</b>	Site construction started March 1967	<b>OPERATING RECORDS:</b>	Longest electric generating run of 478 days was achieved between April 20, 2003 and August 10, 2004.  Record hourly generation established on January 15, 2006 - 821,000 kilowatts-hour.  Record monthly generation established in March 2008- 607,111,000 kilowatt-hours net generated.  Record yearly generation set in 2008 with 6,837,235,000 kilowatt-hours produced.
<b>COST:</b>	Original construction cost was \$149 million.		
<b>STATUS:</b>	First commercial electric generation was December 31, 1971.		
<b>PLANT SITE:</b>	432 acres in Covert Township, MI on eastern shore of Lake Michigan		
<b>EMPLOYEES:</b>	Approximately 600 Entergy employees		
<b>COOLING WATER:</b>	Lake Michigan is the source of water for closed cycle mechanical draft cooling towers. Cooling water flow is 390,000 gallons per minute. Cooling towers do not cool the nuclear reactor.		
<b>REACTOR VESSEL:</b>	Weight: 425 tons Height: 41 feet Diameter: 15 feet Thickness: 8.5" of carbon steel		
<b>CONTAINMENT BUILDING:</b>	Height: 189 feet Diameter: 116 feet Wall Thickness: 3.5 feet reinforced concrete, pre-stressed with 840 steel tendons		
<b>FOUNDATION:</b>	8.5 to 13 feet concrete		

## Milestones

<b>January 28, 1966</b>	Announcement of plans for plant construction	<b>November 20, 1971</b>	AEC grants license for 20% of full power
<b>August 25, 1966</b>	Start of excavation	<b>December 31, 1971</b>	First commercial generation of electricity
<b>March 4, 1967</b>	First concrete poured	<b>October 16, 1972</b>	AEC grants license for 100% operation
<b>March 13, 1967</b>	Atomic Energy Commission grants construction permit	<b>April 11, 2007</b>	Entergy Corp. purchases Palisades from Consumers Energy for \$380 million.
<b>August 5, 1967</b>	Containment building started	<b>Longest continuous generation run</b>	478 days achieved between April 20, 2003 to August 10, 2004
<b>October 22, 1968</b>	Reactor vessel delivered to site	<b>Record electric output</b>	821,000 kilowatts per hour, generated on January 15, 2006
<b>December 1968</b>	Reactor vessel installed in Containment building		
<b>May 24, 1971</b>	First nuclear chain reaction		