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Big Rock Point Nuclear Power  
Plant  
Charlevoix, Michigan

**Project:** Big Rock Nuclear Power Plant  
**Location:** Charlevoix, Michigan  
**Owner:** Consumers Energy  
**Contract Type:** Firm Fixed Price  
**Contact:** Greg Garlock, Phone: (231) 547-8359

**Background**

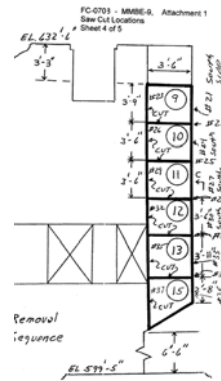
Consumers Energy Company began operation of the Big Rock Point Plant in September 1962. It was the first commercial nuclear power plant constructed in Michigan and the fifth in the United States. The General Electric Boiling Water Reactor was rated for 240 Megawatts Thermal and was built by the Bechtel Corporation. The plant is located 4 miles northeast of Charlevoix, Michigan. The service water source and ultimate heat sink is Lake Michigan.

In June 1997, Consumers Energy Company notified the Nuclear Regulatory Commission, that Big Rock Point Plant would permanently cease operation in August 1997. The reactor was permanently shut down as stated, ending 35 years of electric power generation as the nation's oldest and longest running nuclear power plant. It was closed because its relatively small size (67 MW Electric) was likely to make it too expensive to operate in an increasingly competitive environment.

**Scope**

Diamond Drilling was contracted to saw the South West reactor vessel wall into (16) large blocks for removal by overhead crane.

This phase of concrete removal was completed to provide adequate room for the subsequent dismantlement and removal of the retired reactor vessel.



Vertical core drilling in excess of 25 feet was required to provide access for the diamond wire used to saw the pieces.

**Technology and Manpower**

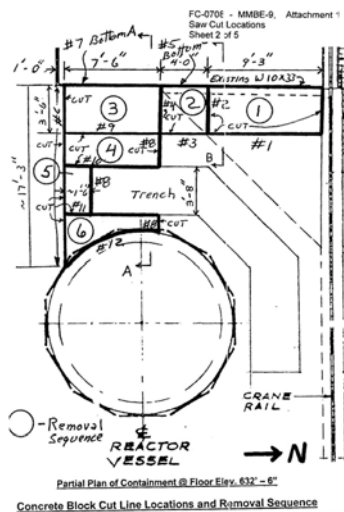
Wire sawing was completed using (2) Diamond Products wire saws equipped with automatic feed. While core drilling was completed with (4) Longyear hydraulic drill motors mounted on Dimas/Cushion Cut carriages and masts and (2) Dimas/Cushion Cut 480V electric hydraulic converters provided power for the drill motors and wire saws.

It was necessary to contain and recycle all the slurry generated to minimize the environmental impact and costs associated with radwaste.

Slurry containment was kept well below pre-work estimates.

Manpower consisted of (4) equipment operators and (1) field supervisor working (12) hour shifts (4) days a week.

**Left:** A concrete section is lifted for removal from the plant. Our team also drilled the holes and did the undercutting in preparation for Williams S-9 style anchors.



Above: Cutting sequence in relation to reactor vessel.

