Dow coal gas plant begins operation this month

By MARY BROUSSARD
Westside bureau

PLAQUEMINE — Rodney Webb believes Dow Chemical U.S.A. wants to fight the ghosts along the Mississippi River.

Instead of real apparitions, the company, which manufactures bulk chemicals, has a plan to use an alternative source of power — gasified coal — as a buffer against the uncertain oil and natural gas market.

Webb's reference to apparitions is apparently linked to "Ghosts Along the Mississippi," a book in which author Clarence John Laughlin photographed plantation homes in various stages of decay.

A former Dow general manager once compared the fate of the "ghost" homes with what could happen to the Louisiana petrochemical industry.

Webb said Dow doesn't want to become a petrochemical casualty along the river.

"I guess we are just trying to circumvent that so we won't be forced to move," said Webb, Dow's solid fuels manager.

Dow's new coal gasification plant, developed through its "Dow SynGas Project," is scheduled to begin commercial operation this month in the Louisiana Division on the Iberville and West Baton Rouge Parish lines.

Partially funded by the now-defunct federal Synthetic Fuels Corp, the SynGas project is the largest commercial venture of its type in the country and cost $325 million, including research and construction.

Coal gasification is a process in which coal and steam are mixed with either air or oxygen at a high temperature to produce fuel. The heat value of the fuel produced depends on what type of coal is used. Dow's project is unique from others because it has two reactor stages for better heat recovery and efficient use of most grades of coal.

"We see our competition diversifying from domestic chemical companies to the international and think that our ability to use solid fuel — especially solid fuel located relatively close to this location — as being the key to our long-term ability to remain competitive," Webb said.

The Syngas project uses technology Dow developed to convert sub-bituminous coal into synthetic gas with a medium Btu (British thermal unit) output, Dow officials said. The synthetic gas will be used as fuel in combined cycle gas turbines, cogenerating electricity and steam, officials said. The technology is versatile because the gasification plant also can use lignite, a low-grade or young coal.

Although Dow is using sub-bituminous coal from Wyoming shipped by rail, the company has other prospective sources. As Dow developed...
Coal

CONTINUED FROM 11

Its gasification technology, it acquired fuel reserves in DeSoto Parish and Fairfields County, Texas, Dow officials said. If coal is needed from another source, the two sites could provide lignite, officials said.

"In the event that our demand economically justifies opening those mines, we will consider it," Dow spokesman Tom Joffrion said. "It is a possibility."

When the project is officially on line, the gasification plant will use 2,400 tons of coal a day and provide 30 billion Btu a day of medium Btu gas, Dow spokeswoman Marina Ashain said.

Steam, another byproduct, will be funneled into the plant's steam system and used in the heating process, she said.

The project is owned and operated by Louisiana Gasification Technologies Inc., a wholly owned subsidiary of Dow Chemical.

Dow decided to develop a new technology when the Synthetic Fuel Corp. was formed in the mid-1970s to reduce dependence on foreign oil and free up natural gas for domestic use. The federal agency provided incentives for the successful development of alternative energy sources.

Dow paid millions in research and facilities for the Syngas project. Once the commercial operation of the gasification plant is permanent, the federal program will provide price supports if needed to ensure that the fuel is supplied on a competitive basis with natural gas prices.

Syngas plant superintendent Roger Hudson said the company has made two test runs on the system, sent power to the plant and halted operations to work on modifications.

"I think the runs went very well for the initial operation," Hudson said. "From what we expected, we did much, much better."

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