

Shell plant gets football-field-sized tower delivered by barge

Shell Pennsylvania has moved a football-field-long, 1,800-ton tower integral to its Beaver County ethane cracker from Texas to the Potter Township site in the past few weeks.

The Quench Tower, as it's called, is a critical step in the key work that will be done at the facility when it's up and running early next decade. The tower is where the ethylene stream is cooled by water. It was shipped from overseas to the Port of Houston and then shipped by barge up the Mississippi and Ohio rivers to Beaver County, where a specially made dock along the Ohio straddling the site disembarked the tower on its side.

[Hilary Mercer](#), the vice president in charge of Shell's Pennsylvania Chemicals unit, provided to the Northeast U.S. Petrochemical Construction Conference the most in-depth look yet at the construction of the \$6 billion cracker, the centerpiece of what officials and industry executives hope will be a huge tri-state petrochemical industry. It included photos of the quench tower, as well as the rapidly visible transformation up out of the ground.



[Enlarge](#)

The view of construction at the Shell Chemicals Appalachia ethane cracker that is being built in Potter Township, Beaver County, as of May 30, 2018.

“May was a really big month for the site,” Mercer said.

In a brief interview after the presentation, Mercer said the quench tower will be one of the largest pieces that will be brought to the site. It will be installed vertically sometime in the third quarter using what is the world’s third-largest crane that will itself have to be shipped to Beaver County and assembled on site, she said.

Mercer’s presentation also provided a look into how deeply technology is being embedded into not only the state-of-the-art plan being built in Beaver County, but also the construction process. Shell’s (NYSE: RDS.A) technological advances — along with big data, drones, robotics, RFID tags and logistics systems — allows it to not only track every piece of equipment, wherever it is in the world, but it also allows it to discover potential challenges in the next phase of construction and simulate the process to improve efficiency and safety.



[Enlarge](#)

Shell Pennsylvania provided a glimpse of the construction at the site this month in Beaver County.

Drones are heavily used to take thousands of photographs, from specific locations, and compare and guide processes. The drone photographs are done every Sunday.

Mercer showed video of 3-D and 4-D simulations that are being done at Shell Pennsylvania. With the quench tower, for instance, Mercer said simulations and extensive mapping are being used to ensure the tower will put into place safely and accurately.

“We can do that for every single piece of kit on our site,” Mercer said.

Shell’s technology riveted the mostly technical crowd at the conference. [John P. Stampfel](#), vice president of strategy and innovation at Eaton, said after Mercer’s presentation that what Shell and other companies are doing will change the way petrochemical plants are being built.

“Now you can optimize your future assets before you’ve even built,” Stampfel said.

She also said Shell extensively uses the Internet of Things — the connection of many devices to the cloud — and a smart-torque system to connect every bolt, for instance, in the quench tower that will allow Shell to know ahead of time whether and when a piece will fail.