



Explosion and fire-damaged US refinery complex to close

On June 26, Philadelphia Energy Solutions (PES) said it would close its South Philadelphia oil refinery complex following the fire and explosions that caused serious damage to the site on June 21. The fire started in a butane vat and was followed by a series of explosions that destroyed at least one key unit at the plant.

"Today, Philadelphia Energy Solutions made the difficult decision to commence shutdown of the refining complex," the company's chief executive, Mark J. Smith, said in a statement. "While our teams include some of the most talented people in the industry, the recent fire at the refinery complex has made it impossible for us to continue operations."

Smith said the company would position the refinery complex for a sale and restart, but industry analysts were pessimistic that any outside operator might be tempted to take over refining operations on the site.

Closing the refinery would have a major impact on the Philadelphia economy and on regional fuel markets, according to local media. The *Philadelphia Inquirer* said the 335,000-barrel-a-day refinery, the largest on the East Coast, employs more than 1,000 people directly, including nearly 700 hourly union workers, and thousands of contractors.

The 1,400-acre South Philadelphia complex consists of the Point Breeze and Girard Point refineries, a tank farm on the west bank of the Schuylkill river, and the North Yard rail and storage facility.

Philip Rinaldi, the refinery's former chief executive, is talking to stakeholders about saving the plant. He was quoted by local media saying he was engaged in exploratory meetings looking at possible future roles for the site.

Sunoco acquired the two refineries three decades ago and merged them. But Sunoco threatened to close the complex in 2012, until public officials and unions helped engineer a joint venture between Sunoco and the Carlyle Group private equity firm.

The new owners kept the plant running profitably using cheap crude oil from North Dakota shale, but the refinery was badly affected by the fall in the price of oil and it declared bankruptcy last year.

It was then revived by the majority holders of its \$755 million long-term debt, Credit Suisse Asset Management and Bardin Hill Investment Partners. Carlyle and Energy Transfer Partners LP, Sunoco's parent, have a combined 25% minority stake.

Local environmentalists and neighbourhood

groups have long called for the refinery's closure, claiming it poses a serious health risk to much of the population of Philadelphia. The site is heavily polluted from more than a century of refining and Sunoco retains responsibility for pre-2012 environmental liabilities.

The *Inquirer* reported that the US Environmental Protection Agency had fined PES at least twice for environmental violations over the last two years — one under the Clean Water Act and one under the Resource Conservation and Recovery Act, which governs solid and hazardous waste disposal. PES was assessed \$250,000 in penalties for the violations. Over the last five years, the company was fined \$649,417 in penalties for environmental violations.

A number of federal bodies will investigate the June 21 incident, including the US Chemical Safety Board (CSB). Investigators may examine whether PES, which was under serious financial pressure, properly maintained the refinery.

The refinery's use of hydrofluoric acid (HF) in the refining process is also likely to become a focus of investigation. A leak of the substance into the atmosphere could have created a fatal toxic cloud over surrounding areas.

Earlier this year, the CSB called on the Environmental Protection Agency to revisit the effectiveness of existing regulations for HF. It said that 50 of the country's 150 refineries operate HF alkylation units.

Local officials in Superior, Wisconsin, last year ordered an evacuation of much of the city of 27,000 when a large-scale fire at a Husky Energy refinery risked engulfing a storage tank containing hydrofluoric acid.

The mayors of Superior and Duluth called on Husky to switch away from HF, but the company announced in April it plans to rebuild the refinery and continue to use the substance when it resumes operations in late 2020.

In a 2015 incident at a refinery in Torrance, California, the CSB discovered that a large piece of debris from an explosion narrowly missed hitting a tank containing hydrofluoric acid. ■