Security questions emerge at stricken fertiliser plant



Several break-ins reported in years before the fatal explosion

THE fertiliser plant at the heart of the devastating explosion in West, Texas, has suffered a series of thefts and break-ins, according to an investigation by Reuters.

Police records show that over the past dozen years the small plant suffered at least 11 burglaries, as well as five ammonia leaks. According to reports, obtained through a freedom-of-information request, it was thought that intruders were looking to steal anhydrous ammonia – a chemical that can be used in fertilisers, but

also to produce the illegal drug methamphetamine.

Matt Cawthon, chief deputy sheriff McLennan County – which contains West – told Reuters that thefts of anhydrous ammonia are common in the area, with burglars siphoning off the fertiliser into propane containers. Several of the breakins are thought to have led to leaks of anhydrous ammonia at the site.

The perimeter was not fenced, and the facility had no burglar alarms or security guards, he said. "It was a hometown-like situation. Everybody trusts everybody."

As well as relatively casual thefts and leaks, the poor security at the site has raised fears of terrorism. As well as anhydrous ammonia, the site is believed to have stored huge amounts of ammonium nitrate – a fertiliser than can explode violently when ignited. The product can be mixed with fuel oil to create an explosive widely used in the

mining industry, and was used in the devastating Oklahoma City bombing in 1995.

Fifteen people were killed and more than 100 injured by the West explosion in mid-April. The exact cause is still unknown. The US Chemical Safety Board has already launched an investigation and the Senate's Environment and Public Works (EPW) committee says it will launch an oversight investigation.

Alaska pushes for drilling in huge wildlife refuge

THE Alaskan state government is offering to spend tens of millions of dollars financing efforts to drill for oil and gas in the Arctic National Wildlife Refuge (ANWR).

Covering over 77,000 km² of largely uninhabited wilderness on the Alaskan North Slope, the ANWR is the biggest wildlife refuge in the US. Though the region has been protected by law since 1980, a 6,100 km2 stretch of land along the coast - 1002 Area - was portioned out for oil and gas exploration. A study conducted 26 years ago by the US Geological Survey showed estimated technically recoverable reserves of between 4.3-11.8bn bbl of oil.

In a letter to the US interior secretary, governor Sean

Parnell announced that the state has developed a plan to refine this estimate. He said he is planning to ask the Alaskan state legislature to contribute US\$50m in funding towards a modern seismic exploration scheme, provided the US federal government is willing to partner it, and claimed that the state would be willing to offer private firms "generous exploration credits" in return for their assistance.

Though proponents of drilling argue that development of the 1002 Area would have a minimal impact on wildlife compared to the benefits it would provide, it still remains a controversial and politically-charged topic. The 1002 Area covers much of the porcupine caribou's calving grounds.

Shale players must focus on water, warns Ceres

THE US' booming shale industry needs to pay more attention to water use or risk losing out on production, according to green business group Ceres.

Virtually all of the shale gas and liquids produced in the US relies on the use of hydraulic fracturing, better known as 'fracking' that requires huge volumes of water that must be treated before it can be re-used.

Ceres warns that the shale industry's water consumption will become an increasingly important factor in terms of both cost and production. It claims that the problems can already be observed in many parts of Texas and Colorado, where prolonged drought conditions last summer "created increased competition and conflict between farmers, communities and energy developers, which is only likely to continue."

In some regions, industry has been able to secure water supplies by paying a higher premium than other users or by getting temporary permits but Ceres warns these practices may not be available in future.

Ceres sets out several recommendations including making it mandatory for companies to disclose how much fresh water, non-fresh water and recycled water they are using and having regulators set targets for water use.

"The bottom line," the report claims, is that "shale energy development cannot grow without water."

"But in order to do so the industry's water needs and impacts need to be better understood, measured and managed." Copyright of TCE: The Chemical Engineer is the property of Institution of Chemical Engineers and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use.