## Possible Leak Probed at Pig Farm's Waste Lagoon

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A possible leak has been detected in one of the ponds holding pig manure at Circle Four Farms in southwestern Utah.

A monitoring well near the sewage lagoon, located about 12 miles south of Milford, has detected elevated levels of nitrogen compounds in the shallow groundwater, said Dennis Frederick, manager of the groundwater-protection section for the Utah Division of Water Quality. The nitrogen could be coming from the breakdown of ammonia in the pig manure.

If confirmed, this would be the first leaky lagoon at the massive hog operation.

Nitrogen levels in the water still are well below the drinking water standard, said Frederick, but they are a concern because they may indicate a problem with the lagoon's liner. Circle Four Farms has been asked to conduct additional testing to find the source of the problem.

"It's more likely to be coming from that facility [the lagoon] than another source," Frederick said.
"But we'll leave open the option for them to show us otherwise through good, scientific investigation."

If a leak is found, the company would be required to drain the lagoon and repair the liner. Further studies will be needed before regulators know whether the groundwater needs to be cleaned up.

Brian Mauldwin, spokesman for Circle Four Farms, said Friday it is premature to blame the lagoon. "We simply don't know" where the contamination is coming from, he said. "That's why we hired an outside engineering firm to figure it out."

Mauldwin said the levels of contamination in the groundwater have been going up and down in this monitoring well since July 1999. "If there were a leak, the data would most likely show a rise that would either level out or still be increasing," he said.

Frederick said Circle Four Farms failed to institute the proper follow-up studies after the elevated nitrogen levels were identified last July. The company normally checks its monitoring wells once every three months. But when a possible problem is found, Circle Four is supposed to begin monthly monitoring. The company did not begin that more frequent monitoring as soon as required, he said.

Both the leak and monitoring delay could result in the state issuing a "notice of violation" of the state's groundwater- protection rules.

Circle Four Farms is the nation's 17th largest hog farm. It has about 50 scattered "farms," or barn complexes, in Beaver County where pigs are raised.

Each farm has two sewage lagoons where hog waste is allowed to decompose and the liquids to evaporate. The solids in these ponds eventually will be hauled to a landfill for disposal or spread on the land as fertilizer.

Leaky lagoons have been a problem in other states with hog farms, so Utah required that the ponds be built with clay and plastic liners.

Monitoring wells were built near each lagoon to detect a leak. State rules require the company to take corrective action when even small levels of contamination are encountered to control problems before they grow too large.

Recent studies in Utah and North Carolina suggest people living near large hog farms may suffer from increased rates of respiratory illness and diarrhea.

Researchers are trying to figure out whether the strong odors and gases released from the sewage lagoons are triggering the health problems.