

# LANL plans test wells

## Drinking water OK, but officials say they need to know more about LA's water system

By **STEPHEN T. SHANKLAND**  
Monitor Managing Editor

Although Los Alamos County's drinking water remains very high quality, officials are concerned about the potential for contamination of the deep aquifer from which that water is drawn.

Bruce Gallaher, a Los Alamos National Laboratory hydrologist, said Wednesday the lab will be drilling new test wells into the aquifer to gather more data on contamination found in other test wells.

Gallaher was one speaker at a water quality panel discussion organized by the League of Women Voters, the Pajarito Group of the Sierra Club, and New Mexico Citizens for Clean Air and Water.

Gallaher said in recent years, water from test wells has shown tritium and strontium-90, two radioactive isotopes, as well as nitrates, Gallaher said. However, in the case of the strontium-90 findings, the tests themselves are suspect since the results have not been

He emphasized that the contaminants have been found only in test wells, not in the production wells that provide the county's drinking water supply.

LANL plans to build about 32 test wells to better understand what's going on with the water system beneath the county, Gallaher said.

There currently are eight test wells, four of them built in about 1950 and four in about 1960, and their age is showing. The test wells penetrate 600 to 1,000 feet below the surface, just to the top of the main aquifer that lies deep underground. The production wells penetrate deeper into the aquifer, stretching down 1,000 to 3,500 feet.

The test wells don't begin to cover the area the lab's activities have affected, Gallaher said. The western one-third of the lab's property, where many potentially contaminating activities have occurred, has no wells at all, he said.

The New Mexico Environment Department is "concerned" about contamination risks from the lab, said Steve Yanicek of NMED's Department of Energy Oversight Bureau. Yanicek was another speaker at the meeting.

And Kim Hill, another panelist from NMED, said scientists lack a basic understanding of how the water system works.

"We don't have a lot of the simple information to determine whether ground water will be affected or not," Hill said.

NMED analyzes "split samples," in which the NMED and

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LANL ~~General~~ General

LANL separately analyze water taken from the same sample.

Yanicek said the strontium-90 finding was "questionable." However, it's significant enough to warrant further testing, he said.

The strontium-90 was found in upper Pueblo Canyon, Gallaher said.

The tritium, a radioactive isotope of hydrogen, was found in Pueblo, Los Alamos, and Mortandad canyons. It was found at levels 1/50th of the allowed drinking water limits, and the U.S. Public Health Service concurred that there is no risk, Gallaher said.

The nitrates were found in lower Pueblo Canyon.

In addition, the current test wells are "very old and inadequate, and should be replaced," Yanicek said. Another reason for concern is that contaminants can take decades to move through the ground.

NMED agrees with LANL that the drinking water quality is "quite good," Yanicek said.

An NMED finding that the lab hasn't complied with its hazardous waste permit gave "the force of law" to the lab's program to build new test wells, Gallaher said. When the notice of noncompliance came, "that was the hammer that came down," he said.

The lab currently envisions 32 new wells, each costing a minimum of about \$500,000, to be built over the next seven to eight years.

It's not clear exactly how many test wells will be required, Gallaher and Hill said. The lab and NMED will evaluate the data from the wells as they are installed to plan how to proceed.

well program.

Gallaher said the wells can be very expensive. As some of them are drilled, core samples of the rock will be taken so geologists can understand what rocks lie beneath the surface. Such work adds a lot of money to the cost of drilling a well, he said.

"We'll take the information and apply it to the next step," Hill said. NMED hopes to have 32 wells, but doesn't know how many will be required.

Gallaher said the lab is negotiating with NMED on the scope of the

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