Civilians, military investigating waste dumps at Camp Lejeune

By JERRY ALLEGOOD
Staff Writer

CAMP LEJEUNE — Since the 1960s, Building 712 had housed a nursery and day-care center for the children of Camp Lejeune's Marines. But the young children were moved away in 1982 when the soil of their fenced-in playground was found to be poisoned by a number of pesticides.

The building on Holcomb Boulevard hadn't always been a nursery. Over a 13-year span before toddlers were moved in, the Marine Corps had stored, mixed and spilled thousands of gallons of pesticides in and around Building 712. Among them, according to a 1983 Navy survey, were heavy volumes of chlordane, diazinon and DDT.

Some of the environmental impacts of military training at Camp Lejeune can be seen instantly, when artillery rounds slam into a target range and blast craters out of the sandy, shrub-covered soil.

But other effects are less apparent. Over the past 40 years, hazardous chemicals have been spilled, dumped, buried and burned at sites scattered across the 170-square-mile base in coastal Onslow County.

Gallons of mercury — enough to poison 184,000 acres of foot-deep water if it ever reached the shallow water table — were drained from radar equipment and buried. Tear gas and other poisons may have been buried beneath what later was a basketball court, the Navy survey found.

No one has been harmed by the wastes, officials said. But no one has yet fully assessed the long-term environmental risks, either. This year, however, the dump sites are receiving new attention from civilian and military environmental officials.

Since February, 10 of Camp Lejeune's 100 wells have been closed after they were found to be polluted. Eight had been tainted by small amounts of fuel and solvents used to clean weapons and vehicles. Solvents found in two of the wells, in a residential neighborhood at the northern edge of the base, have been tentatively linked to civilian dry-cleaning firms in nearby Jacksonville.

State environmental officials who tested the wells cited Camp Lejeune in May for violating groundwater standards. Partly in response to the state's findings, the Marines this summer commissioned a 15-month, $500,000 study of 22 known or suspected hazardous waste sites scattered around the base.

Environmental officials say they do not consider the waste dumps threats either to New River and nearby streams and estuaries or to the 35,500 military personnel and 11,500 dependents who live or work on the base. But the Marine Corps wants to measure pollution at the sites and assess the long-term risks. A Gainesville, Fla., firm conducting the new study will make recommendations about which dumps should be cleaned up.

"The last thing we want to find is that there is a large piece of Camp Lejeune that can't be used because of toxic waste disposal," Robert B. Alexander, a base environmental engineer, said in an interview last week. "This study will in some cases open up areas where there is enough question now to limit certain types of activity."

Alexander said the 22 sites are not considered dangerous because only trace amounts of contamination have been found to have escaped from the dumps. He said people had not been directly exposed to the pollutants. (The Navy report on Building 712, however, showed that the playground used by the children was among the contaminated areas.) Activities are restricted near contaminated sites, Alexander said, some of which are in remote locations.

In the 1983 survey, the Navy examined 73 waste disposal sites on the base and three outlying sites in Jones County. The 22 sites were flagged for further investigation because of known or suspected contamination from fuel, discarded explosives and chemicals including cancer-causing solvents, PCBs in transformer oil and pesticides.

Most of the known waste sites were located at New River Marine Corps Air Station and in the industrial area near Hadnot Point, where the Marines operate a steam heating plant, paint shops, fuel storage facilities and a sewage treatment plant. Other waste sites may never be found, the Navy report said.

According to the study, the Marines used many scattered sites all over the base for waste disposal. Pesticides were buried in pits. Battery acid was poured in holes in the ground. Waste oil, hydraulic fluids and solvents from aircraft and vehicles were routinely spread on dirt roads for dust control.

State, federal and military environmental officials said in separate interviews that the practices occurred before the mid-1970s, when environmental laws and controls on the handling of chemical waste were implemented. Solid and hazardous wastes on base are now regulated by the N.C. Department of Human Resources. Under a permit issued in September 1984, the Marine Corps is permitted temporarily to store waste from Camp Lejeune operations until it is shipped to South Carolina for permanent disposal.

Alexander said the Marine Corps in recent years has added millions of dollars worth of pollution abatement facilities, and waste material is now recycled or disposed of properly. He added that Marines receive regular training on proper waste disposal.

"The causes of these problems really aren't there any more," he said.

Wayne Mathis, an environmental engineer with the U.S. Environmental Protection Agency in Atlanta, Ga., said Camp Lejeune's past practices and its problems were neither unique nor alarming. He compared the base to a medium-sized city that would generate waste from residents, vehicle maintenance and industries.

"They would have a little of a lot of things rather than a lot of any one thing," he said.

Arthur E. Linton, federal facilities coordinator for the EPA's southeast region in Atlanta, said Camp Lejeune and other military installations had disposed of waste in ways that were accepted practices in the past.

"The military hasn't done anything that wasn't done in the private sector," he said.

He said the contamination at Camp Lejeune is not as bad as cases at other military bases in other states involving larger amounts of chemicals and incidents where pesticides have contaminated drinking water. The EPA has proposed that four military installations — one in Tennessee, two in Alabama and one in Georgia — receive top priority for a cleanup effort by the Pentagon.

Linton said the most serious problem at Camp Lejeune was contamination of groundwater with solvents that are suspected of causing cancer. The solvents are commonly used for a number of purposes, including cleaning metal and engine parts.

State records indicate that water samples taken from the 10 Camp Lejeune wells that were closed since February contained varying amounts of nine chemicals.

The Marines first found contaminants in the wells last year and informed the state, saidspokesmen for the Marine Corps and the state. State testing confirmed the contamination, and the 10 wells all had been closed when, in May, the N.C. Department of Natural Resources and Community Development informed Marine officials that they had violated groundwater standards. The state said the Marines would have to take corrective measures.

In reply two months later, the Marines said they already had decided to commission the new 15-month study to assess hazardous wastes on the base and also to pinpoint the sources of the well pollutants.

Charles E. Rundgren, head of the state's water supply branch, said the wells had been plugged shortly after they became contaminated. The amount of chemicals found were not a threat to people who had been drinking the water during that short period, he said. The water would not cause someone to become ill from drinking it, he said, but ill effects could result from long-term exposure.

H. Lee Mittelstadt, spokeswoman for the state Solid and Hazardous Waste Branch, said state officials felt Camp Lejeune was taking "adequate steps to protect (people) from possible exposure to the contaminants" by closing down the wells.

She added that contamination from the 22 sites was a potential problem but not an immediate threat because the locations were known and monitoring could detect future trouble.

Camp Lejeune authorities in May notified base residents and water customers of the contaminants with leaflets and articles in the base newspaper. Officials said that after the 10 wells were closed, the base water system was able to provide water from other sources not affected by contaminants.

An NRCD report said contaminants were found in eight wells in the Hadnot Point system and two wells at Tarawa Terrace, a residential area. Some hazardous waste sites pinpointed in the 1983 study are located near the industrial area but none are located at Tarawa Terrace.

Alexander said there is no clear relationship between the closing of the wells and any specific waste site.

"The way we got onto the well problem was in sampling near one of our fuel farms," or fuel storage facilities, he said. "We sampled nearby wells. In one near the fuel farm, we didn't detect fuel but did detect organic solvents."

In its response to the NRCD notice of violation, the Marine Corps said 50 to 70 shallow would be drilled to test groundwater, and the soil near suspected disposal sites would be tested for the presence of chemicals.

Col. R.A. Tiebout, Camp Lejeune's assistant chief of staff for facilities, characterized all of the actions so far — closing wells, relocating the day-care center and extensive testing — as precautionary measures.

"We're going to do everything to make water, air and land as pure as possible," he said.

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Pollutants were dumped at many sites

By JERRY ALLEGOOD
Staff Writer

CAMP LEJEUNE — When amphibious vehicles needed their oil changed, they were backed into the woods near Courthouse Bay where, over three decades, they dumped as much as 400,000 gallons of waste motor oil into the soil.

The Marines at Camp Lejeune perform the task differently now, changing and collecting the oil in maintenance areas. But a 1983 Navy survey showed that for years, hazardous chemicals were scattered at a variety of sites around the base.

The survey recommended 22 waste sites for further environmental study. At 10 of the sites, the report said, contamination was caused by petroleum, oil and lubricants. Some of the contamination resulted from spills at fuel storage tanks. In other cases, chemicals had seeped into the ground from pits used to train firefighting crews.

In the past, the report said, about 1,000 gallons a week of contaminated fuel, crankcase fluids, paint thinners and other compounds were spread on roads for dust control, and some fuel and solvents were used for firefighting training.

At the Courthouse Bay site, about 10,000 to 20,000 gallons of used battery acid were poured out at an estimated rate of 60 gallons a month for at least 27 years. The fluid contained sulfuric acid, lead and possibly antimony.

Alexander

Other sites and possible pollutants described in the study include:

- A 100-by-200-foot corridor near Building 804 on Longstaff Road at the New River Air Station, where mercury was drained from radar units and dumped or buried in randomly selected spots. About one gallon per year or 1,000 pounds in all were dumped from 1956 to 1966. The study said that amount of mercury could poison thousands of gallons of water if it reached the water table. But no mercury water contamination has been detected.
- A former chemical dump near the rifle range area, at Camp Lejeune's remote southwest corner, which was used from 1950 to 1976. The six-acre dump could contain 93,000 cubic yards of wastes, including the pesticides DDT, malathion, diazinon, lindane and PCBs sealed in concrete tanks. PCBs, or polychlorinated biphenyls, are cancer-causing agents once used as fire-retarding agents in electrical transformers.
- Two separate sites near Curtis Road at the New River Air Station, one of which had a basketball court on the property. The materials were believed to include drums containing tear gas and solvents that may include chloroform, carbon tetrachloride and benzene. Drums with 4,100 to 5,500 gallons of chemicals were believed to have been buried at the basketball court site, and 1,400 to 4,100 gallons at the other site.
- An area between Sneads Ferry Road and Ash Street that contained a lot used for pesticide mixing and a pit that received transformer oil, which probably contained PCBs. It was estimated the site contained 100 to 1,000 gallons of pesticides and 1,300 to 11,800 gallons of oil. The study noted that quantity estimates were not based on reliable data.
- A former nursery and day-care center in Building 712 that was used from 1945 to 1958 for pesticide storage and mixing. Chemicals used in significant amounts included chlordane, DDT and diazinon. Stored or used to a minor extent were dieldrin, lindane, malathion, silvex and 2,4,5-T. Contaminated areas include a 6,300-foot playground.

Robert B. Alexander, an environmental engineer at Camp Lejeune, said there were no health tests done on children at the center because tests of the building and the site indicated the occupants were not exposed to harmful amounts. He said the children were not located in the same outdoor areas where contamination was suggested but the center was relocated as a precaution.

Wayne Mathis, an environmental engineer with the Environmental Protection Agency, said he could not speculate on the potential risks at each site without knowing specifics about the surrounding area. He said the risk from a particular site would depend on whether the material was in a stable location and whether people had access to the chemicals.

"To have a hazard, you've got to have someone exposed to it or have it moving," he said.

For example, he said, the report of discarded mercury was serious "in that it represents an unknown," but he could not gauge the risk to humans unless it was directly threatening people. In general, he said, pesticides such as DDT do not migrate in the soil so contamination would be localized.

"You wouldn't want kids out there digging in the soil," he said.

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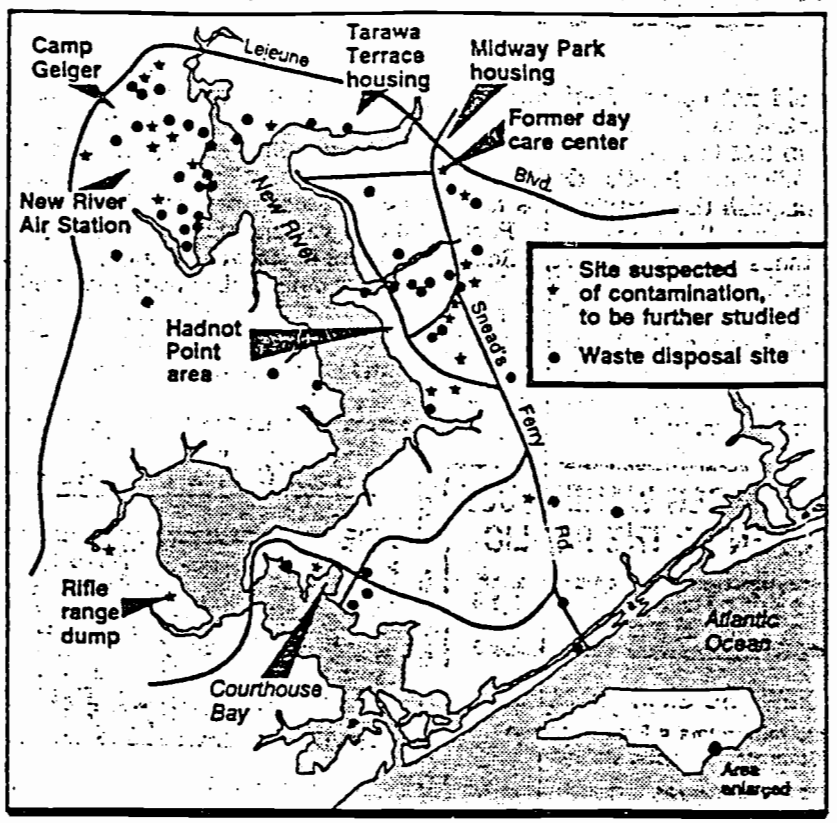
Camp Lejeune waste sites studied



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