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NATIONAL PRIORITIES LIST

CAMP LEJEUNE, N.C.—As a result of a 1985 discovery of water contamination here, the Environmental Protection Agency is likely to place Camp Lejeune, as well as other Federal installations, on the National Priorities List (NPL).

The NPL establishes priorities for the EPA's use of Superfund monies to clean up what they consider to be among the most serious toxic sites in the United States. However, federal facilities are not eligible to receive Superfund monetary assistance unless the contamination is caused by a private concern.

The area under study at Camp Lejeune is the Hadnot Point industrial area. In 1985, traces of trichloroethylene, dichloroethylene and tetrachloroethylene were found in 8 of 35 wells in this area. The affected wells were immediately closed, and have remained closed since. No single contamination point has been identified as the source of contamination for the wells, and no contamination has been detected by periodic tests of drinking water aboard base.

Camp Lejeune continuously pursues a vigorous program of hazardous waste training, handling, and management that includes annual courses of instruction for those dealing with hazardous waste. In addition, the base has minimized the use of hazardous materials by substituting non-hazardous substances for vehicle maintenance and parts cleaning.

No hazardous waste is permanently disposed of aboard Camp Lejeune.

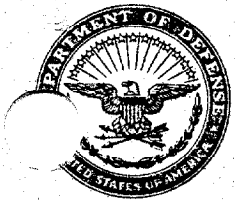
As a Model Installation and as a responsible part of the Eastern North Carolina community, Camp Lejeune is dedicated to protection and preservation of the environment in cooperation with state and national officials.

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UNITED STATES MARINE CORPS
MARINE CORPS BASE
CAMP LEJEUNE, NORTH CAROLINA 28542

IN REPLY REFER TO
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JUN 2 5 1982



From: Commanding General
To: Distribution List

Subj: NACIP Program

Encl: (1) Jacksonville Daily News Clipping of 14 June 1982
(2) Raleigh News and Observer News Clipping of 14 June 1982

1. As requested, enclosures (1) and (2) are forwarded for your information. These newspaper clippings address a problem identified by the subject program.

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Contamination forces closure of sitter service at Marine base

CAMP LEJEUNE (AP) — A baby-sitting service at Camp Lejeune has been ordered closed after tests showed pesticide contaminating the soil around the service building.

In March, surveys showed DDT at a level of 6.3 parts per million and chlordane at a level of 170 parts per billion in soil near the Staff-NCO Sitter Service. Local records indicate that the site was used for mixing insect-control chemicals in the 1940s.

A report prepared by the U.S. Naval Regional Energy and Environmental Support Activity of Port Hueneme, Calif., did not indicate at what level of contamination DDT and chlordane are considered a health hazard. Base commander Maj. Gen. Charles Cooper ordered the service closed as a precaution until information on the thresholds can be obtained from Port Hueneme.

So far, the baby-sitting service is the only site on Camp Lejeune where officials said they found evidence of contamination.

Because a second base sitting service must be expanded to accommodate the displaced children, the Staff-NCO Sitter Service will not close until Tuesday. Then, the eight employees and 65 children from Staff-NCO will be transferred to the Midway Park Sitter Service, also on the base.

Additional soil samples and air samples from inside the building have been collected and sent to the Port Hueneme facility for further tests.

Toxic chemicals found in soil at sitter service

A Staff Report

A Camp Lejeune baby-sitting service will be closed Tuesday because toxic chemicals have been found in the soil beneath the building housing the day-care facility.

Chlordane, DDT and two DDT derivatives, chemicals used for insect and pest control, were found by Navy Department inspectors in the soil beneath the Staff NCO Sitter Service at the corner of Holcomb and Brewster boulevards.

The site previously was used as a headquarters for mosquito-control activities on the base, according to the Joint Public Affairs Office, and the chemicals were mixed at the location for distribution to spray trucks.

Camp Lejeune officials waited until Tuesday to close the facility, the public-affairs office indicated, to provide time to expand the Midway Park sitter service to accommodate the 65 children and eight employees affected by the shutdown.

The presence of the chemicals was revealed in an initial report on soil samples taken from six inches beneath ground level at the sitter service. The report, prepared by the U.S. Naval Regional Energy and Environmental Support Activity, is part of a national survey required by law of all sites containing potentially hazardous waste.

A complete report on several toxic-waste sites at Lejeune is expected in August, although final results from the soil sample analysis from the sitter service site are expected in two or three weeks, according to the public-affairs office.

According to sketchy base records and the recollection of former base employees, the site was used to mix mosquito-control chemicals into the late 1950s and possibly as late as 1960.

Base inventory records indicate the building became a school in 1960 and was switched to a sitter service in 1967.

The initial soil sample report indicates 6.3 parts per million DDT was found six inches below ground level and 170 parts per billion chlordane were found.

Base officials do not know what levels of DDT and chlordane are considered hazardous to humans in samples taken from six inches below the soil, according to the public-affairs office.

The use of DDT, however, an abbreviation for the chemical dimethyl-dichloral-trichloral ethane, has been outlawed in the United States because of its lengthy adverse reaction on the environment and its potential as a cancer-causing substance.

Although its use has been severely restricted since chlordane was used at Lejeune for mosquito control, it is still a preferred chemical among many exterminators for use under buildings to control termites.

Both chemicals are heavily chlorinated hydrocarbons and as such, are highly toxic and suspected of causing cancer. The heavy chlorination results in a molecular bond that persists in the environment and does not easily break down for decomposition.

The public-affairs office indicated, however, that none of the children or employees have demonstrated any symptoms indicating a toxic reaction from any of the chemicals identified. There are no intentions at this time to medically examine any of the 73 people affected by the shutdown of the sitter service.

Base "officials have no firsthand knowledge of why the decision was made" to allow location of a school and the sitter service on the former mosquito-control chemical site.

Toxic chemical once at Lejeune, now at El Toro

By RICHARD F. SMITH
Daily News Staff

The same toxic chemical found during 1985 in 10 wells at Camp Lejeune is in three wells on or near El Toro Marine air station in California. Officials there recently began a probe into the cause of the contamination.

The 10 Lejeune wells were closed in 1985 after pollution by cancer-causing trichloroethylene and two other chemicals was discovered.

Lejeune water remains safe to drink, according to 1st Lt. Frank Shaw of the base Joint Public Affairs Office.

Trichloroethylene, or TCE, was commonly used during the 1970s as a solvent for degreasing aircraft and is in identified dump sites at Cherry Point air station in Havelock, said Cherry Point spokesman Gunnery Sgt. Bill Brown.

TCE has not been found in drinking water at Cherry Point, he said.

"We're dealing with skeletons of the past, 40 years of dumping with minimal or no control, to where now nothing goes into the ground," Brown explained.

Orange County, Calif., Water District officials agreed in late November to investigate high levels of TCE in three agricultural wells on or near El Toro, according to The Register newspaper there.

One well is on El Toro. Two are outside the base and supply water to farms.

The four-month study in California will cost between \$260,000 and \$590,000.

California water-quality officials ordered the Marine Corps in July to investigate the well contamination. However, Marines agreed to study only the pollution found on El Toro. They said a special Pentagon cleanup fund cannot be used on private property.

Fearing TCE could spread if negotiations dragged on, Orange County Water District officials agreed in late November to fund the study.

They will seek reimbursement from Marines if El Toro is responsible.

Up to seven monitoring wells will be drilled to identify the TCE source.

Water supervisors in Orange County are convinced TCE found in two Irvine Co. wells seeped from El Toro because it was formerly used for degreasing aircraft. The Register reported.

The Irvine Co. land has been used only for agriculture for decades. Farmers did not use the industrial-strength solvent.

Water from the three Orange County wells is safe for agriculture, but contains as much as 10 times more TCE than California allows for drinking water.

Irvine Co. planned to use its wells for homes in the Irvine area during a prolonged drought or if development strains existing supplies.

Ten of Lejeune's 100 wells were closed in May 1985 when TCE and two other toxic chlorinated solvents — dichloroethylene and tetrachloroethylene — were found in well water.

Lejeune was cited by N.C. agencies for violating ground water standards.

Eight of the closed wells were in the Hadnot Point water system. The other two were in Tarawa Terrace.

Well closings forced water-use restrictions in May 1985 in Tarawa Terrace.

An auxiliary waterline from the Holcomb Boulevard water plant to Tarawa Terrace was completed in June 1985 and water restrictions were lifted.

"The stuff (TCE) is still there" in the closed wells, Shaw said today.

Two wells were polluted by a dry cleaner on Lejeune Boulevard, Shaw said.

Eight were contaminated "by long-term spillage of materials on the ground. They (Lejeune officials) don't have a single source of contamination. It gets washed by rainwater into the ground (water) system. We're continuing to monitor the wells and track contamination," Shaw said.

TCE "is used as a solvent for a variety of things. We've developed a training program for hazardous waste handling and management. That's the long-term solution, the only way you'll clean it up," Shaw said.

Cherry Point waste sites bearing TCE in the soil are off-limits and are checked by that air station's Natural and Environmental Resources Office, Brown said.

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Environmental study kicks-off

A team of experts contracted by the Navy is conducting an extensive environmental study at Camp Lejeune and MCAS, New River. The study, which began in May, will assess pollution control operations and soil and ground water quality at 21 sites throughout Camp Lejeune and New River.

Environmental engineers and scientists from the consulting firm of Environmental Science and Engineering, Inc. of Gainesville, Fla., will spend approximately six weeks drilling wells and collecting water, soil and sediment samples to determine if hazardous materials exist and/or have the potential to contaminate the environment upon the base.

Colonel M. G. Lilley, assistant chief of staff, facilities, stated, "While contractor personnel will routinely wear personal protective equipment such as chemical resistant coveralls, we do not expect to expose anyone to any contaminants."

The results of the survey are due in August 1984. If any contaminants are discovered, a review of alternatives will determine action necessary to meet health and environmental standards.

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"Globe" 7 June 1984

Chemicals discovered in Lejeune water wells

By RICHARD F. SMITH
Daily News Staff

A Navy study of industrial contamination has found volatile chemicals in 10 deep-water wells at Camp Lejeune, causing Tarawa Terrace residents to face restrictions on water use while a new line is built.

Substances found in the wells were described today as "volatile organic chemicals" by Gunnery Sgt. John Simmons of Lejeune's Joint Public Affairs Office.

He said he had no information on whether the well water is dangerous to humans.

"According to the memo from the chief of staff, facilities, no federal or state regulations mandate an unacceptable level of these organic chemicals in drinking water," Simmons said.

"The wells were ordered closed pending further study and analysis under the Navy Assessment and Control of Installation Pollutants Program," the spokesman said.

"Ten deep-water wells aboard base have been taken off-line since December as a result of a Navy-wide study of industrial contamination aboard Navy and Marine Corps installations," Simmons said.

"Eight of the closed wells are in the Hadnot Point water-supply system, which services the main-side area of the base. The other two wells are in Tarawa Terrace," he said.

"The well closures have not created any water-supply problems for Hadnot Point, but the Tarawa Terrace system can barely meet current demand for finished water.

"As a result, the commanding general (Maj. Gen. Louis H. Buehl III) has imposed some water restrictions on Tarawa Terrace residents," Simmons said.

"A recent bulletin sent to Tarawa Terrace housing residents urged them to conserve water in the following ways: water lawns Monday through Thursday from 6 a.m. to 9 a.m. only, do not wash cars, do not let the water run while brushing your teeth or washing dishes and only flush toilets for sanitary

Base closes ten wells; wastes found

By Donna Long
and Shannon Brennan

Ten wells serving Camp Lejeune housing areas have been closed due to chemical contamination.

The contamination apparently comes from one or more of 72 old waste disposal sites at Camp Lejeune, said Lee Mittelstadt, public information officer for the Solid and Hazardous Waste Management Branch of the N.C. Department of Human Resources.

The chemicals include chlorinated solvents — dichloroethylene, trichloroethylene and tetrachloroethylene — and are toxic, she said. They are found in many types of cleaning products.

Because Camp Lejeune is a federal reservation, the state cannot fine the base for its old disposal sites and the base is not eligible for federal Superfund cleanup money, she said.

Chuck Rundgren, head of the state's Water Supply Branch, said the Navy has contracted with a private firm to analyze the water further. Rundgren said he did not think Camp Lejeune residents need to worry about getting bad drinking water.

"I think we kind of caught it right at the beginning," he said.

Eight of the closed wells served the Hadnot Point housing area and two served Tarawa Terrace. The closures leave Hadnot Point with an adequate water supply, but Tarawa Terrace residents have been ordered to conserve.

"That system can just barely meet the current water demand," Gunnery Sgt. John Simmons of Lejeune's Joint Public Affairs office

10 wells serving two base housing areas have been closed.

said of Tarawa Terrace.

Lawns in the housing project may be watered only between 6 and 9 a.m. Monday through Thursday and washing cars is prohibited.

Residents are urged not to let water run while they wash dishes or brush their teeth and to flush toilets only for sanitary purposes.

Simmons said an auxiliary water line to ease the water shortage in Tarawa Terrace should be completed in early June.

The wells were closed after a Navy study in December of industrial contamination on Navy and Marine Corps bases, Simmons said.

Simmons said all 10 of the contaminated wells will remain closed pending "further study and analysis under the Navy Assessment and Control of Installation Pollutants Program."

Simmons said he could not say how the contamination got in the wells. He did not know how deep the wells were.

Simmons said that while there were no state or federal regulations that mandate an unacceptable level of such contaminants in drinking water, "we ordered the closure of all wells that showed even a trace amount."

Donna Long is a Star-News correspondent; Shannon Brennan is a staff writer.

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Friday, May 10, 1985

Chemicals discovered in Lejeune water wells

By RICHARD F. SMITH
Daily News Staff

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Substances found in the wells were described today as "volatile organic chemicals" by Gunnery Sgt. John Simmons of Lejeune's Joint Public Affairs Office.

He said he had no information on whether the well water is dangerous to humans.

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"The well closures have not created any water-supply problems for Hadnot Point, but the Tarawa Terrace system can barely meet current demand for finished water.

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Saturday, May 11, 1985

State officials identify chemical contaminates

A Staff and Wire Report

State officials have identified the chemicals that have contaminated 10 deep-water wells at Camp Lejeune, forcing base officials to close the wells and institute conservation measures at the Tarawa Terrace housing area.

The toxic substances include chlorinated solvents — dichloroethylene, trichloroethylene and tetrachloroethylene — said Lee Mittelstadt, public information officer for the Solid and Hazardous Waste Management Branch of the state Department of Human Resources. They are found in many types of cleaning products.

The contamination apparently comes from one or more of 72 old waste disposal sites on the base, Ms. Mittelstadt said.

Because Camp Lejeune is a federal reservation, the state cannot fine the base for its old disposal sites, and the base is not eligible for federal Superfund clean-up money, she said.

Chuck Rundgren, head of the state's Water Supply Branch, said the Navy has contracted with a private firm to further analyze the water. Rundgren said Camp Lejeune should not worry about getting bad drinking water.

"I think we kind of caught it right at the beginning," he said. "It's not

something that has been running for two or three years.

Eight of the 10 wells are in the Hadnot Point water supply system, while the other two supply Tarawa Terrace.

Gunnery Sgt. John Simmons of the base Joint Public Affairs Office said Friday that the Hadnot Point closures have not threatened the water supply of the base's mainside area, but that Tarawa Terrace residents have been urged in letters sent by Maj. Gen. Louis Buehl to take several conservation measures.

Among those measures are watering lawns only from 6 a.m. to 9 a.m. Mondays through Thursdays, not washing cars, not letting the water run while brushing teeth or washing dishes, and flushing toilets only for sanitary purposes.

The letter states that the crisis will be eased early next month with the completion of an auxiliary waterline from the Holcomb Boulevard water plant to Tarawa Terrace.

Simmons said the wells were closed after a Navy study last December of industrial contamination on Navy and Marine Corps bases and will remain closed pending "further study and analysis under the Navy Assessment and Control of Installation Pollutants Program."

WILMINGTON **MORNING STAR**

Saturday, May 11, 1985
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Lejeune turns off tap; wastes found in wells

By Donna Long and Shannon Brennan

Ten wells serving Camp Lejeune housing areas have been closed due to chemical contamination.

The contamination apparently comes from one or more of 72 old waste disposal sites at Camp Lejeune, said Lee Mittelstadt, public information officer for the Solid and Hazardous Waste Management Branch of the N.C. Department of Human Resources.

The chemicals include chlorinated solvents — dichloroethylene, trichloroethylene and tetrachloroethylene — and are toxic, she said. They are found in many types of cleaning products.

Because Camp Lejeune is a federal reservation, the state cannot fine the base for its old disposal sites and the base is not eligible for federal Superfund cleanup money, she said.

Chuck Rundgren, head of the state's Water Supply Branch, said the Navy has contracted with a private firm to analyze the water further. Rundgren said he did not think Camp Lejeune residents need to worry about getting bad drinking water.

10 wells serving two base housing areas have been closed.

"I think we kind of caught it right at the beginning," he said. "It's not something that has been running for two or three years."

Eight of the closed wells served the Hadnot Point housing area and two served Tarawa Terrace. The closures leave Hadnot Point with an adequate water supply, but Tarawa Terrace residents have been ordered to conserve.

"That system can just barely meet the current water demand," Gunnery Sgt. John Simmons of Lejeune's Joint Public Affairs office said of Tarawa Terrace.

Lawns in the housing project may be watered only between 6 and 9 a.m. Monday through Thursday and washing cars is prohibited.

Residents are urged not to let water run while they wash dishes or brush their teeth and to flush toilets

Please see WELLS, 7A

Wells

Continued from 1A

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Simmons said an auxiliary water line to ease the water shortage in Tarawa Terrace should be completed in early June.

The wells were closed after a Navy study in December of industrial contamination on Navy and Marine Corps bases, Simmons said.

Simmons said all 10 of the contaminated wells will remain closed pending "further study and analysis

under the Navy Assessment and Control of Installation Pollutants Program."

Simmons said he could not say how the contamination got in the wells. He did not know how deep the wells were.

Simmons said that while there were no state or federal regulations that mandate an unacceptable level of such contaminants in drinking water, "we ordered the closure of all wells that showed even a trace amount."

Donna Long is a Star-News correspondent; Shannon Brennan is a staff writer.

Camp Lejeune wells closed after discovery of toxic contamination

JACKSONVILLE (AP) — Ten wells serving Camp Lejeune Marine base housing areas have been closed after the discovery of toxic chemical contamination, a state spokesman said.

The contamination apparently comes from one or more of 72 old waste disposal sites on the base, said Lee Mittelstadt, public information officer for the solid and hazardous waste management branch of the state Department of Human Resources.

The toxic chemicals include chlorinated solvents: dichloro-

ethylene, trichloroethylene and tetrachloroethylene, she said. They are found in many types of cleaning products.

Because Camp Lejeune is a federal reservation, the state can't fine the base for its old disposal sites, and the base is not eligible for federal "superfund" cleanup money, Ms. Mittelstadt said.

Chuck Rundgren, head of the state's water supply branch, said the Navy has contracted with a private firm to analyze the water further. Rundgren said Camp Le-

jeune should not worry about getting bad drinking water.

"I think we kind of caught it right at the beginning," he said. "It's not something that has been running for two or three years."

The wells were closed after a Navy study last December of industrial contamination on Navy and Marine Corps bases, said Gunnery Sgt. John Simmons of Camp Lejeune's Joint Public Affairs Office.

Simmons said all 10 contaminated wells will remain closed pending "further study and analysis."

Toxins close wells at Lejeune

The Associated Press

JACKSONVILLE — Toxic chemical contamination, which apparently came from one or more of 72 old waste disposal sites at Camp Lejeune, has forced the closing of 10 wells serving the Marine base housing areas, a state spokesman says.

The toxic chemicals include chlorinated solvents — dichloroethylene, trichloroethylene and tetrachloroethylene — according to Lee Mittelstadt, spokesman for the Solid and Hazardous Management Branch of the state Department of Human Resources. They are found in many types of cleaning products.

Because Camp Lejeune is a federal reservation, the state can't fine the base for its old disposal sites, and the base is not eligible for federal "superfund" cleanup money, Ms. Mittelstadt said.

Pollutants were dumped at many sites

JERRY ALLEGOOD

Staff Writer

CAMP LEJEUNE — When amphibious vehicles needed their oil changed, they were backed into the woods near Courthouse Bay. 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, 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.

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 contamination has been detected.



Alexander

■ 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.

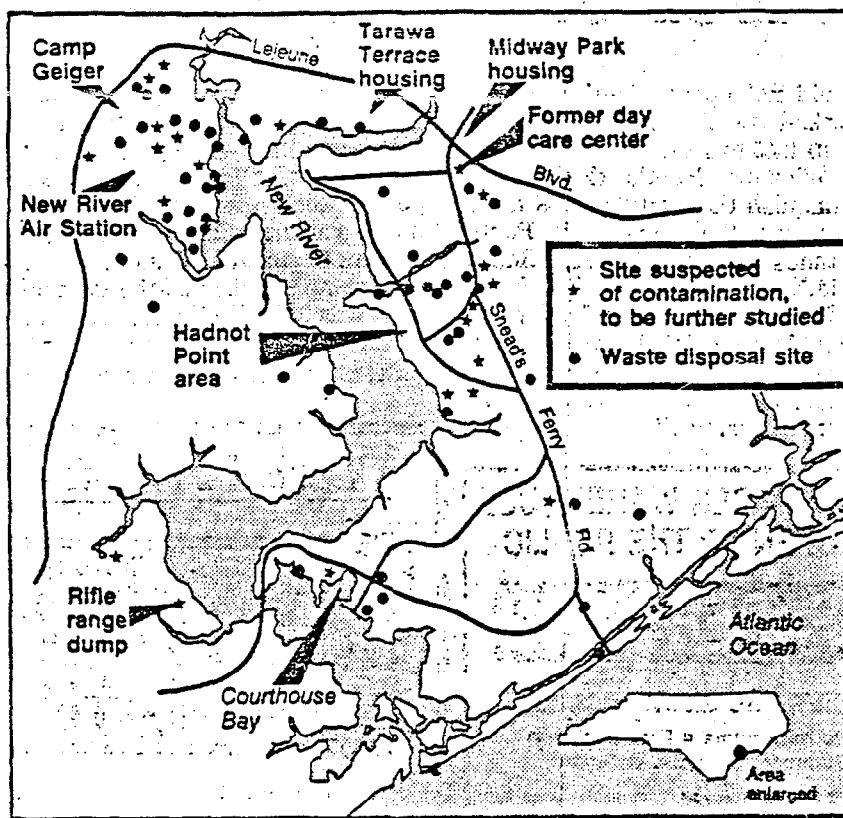
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Camp Lejeune waste sites studied



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 ques-

tion 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, said spokesmen 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.

Pollutants were dumped at many sites

By FERRY ALLEGOOD

Staff Writer

CAMP LEJEUNE — When amphibious vehicles needed their oil, they were backed into 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.

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.

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 water table. But no mercury contamination has been detected.



Alexander

■ 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.

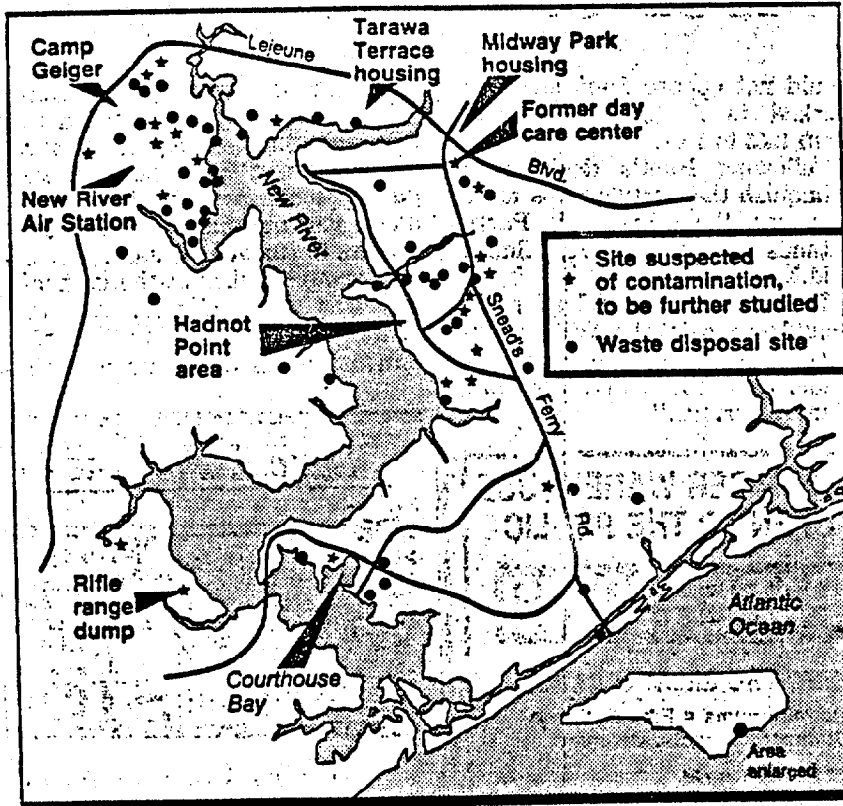
Wayne Mathis, an environmental engineer with the Environmental Protection Agency, said he could not speculate on the potential risks at each site without knowing specifics about the surrounding area. He said the risk from a particular site would depend on whether the material was in a stable location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

Camp Lejeune waste sites studied



No high concentrations of pollutants found

By RICHARD F. SMITH
Daily News Staff

Tests of suspected hazardous-waste pollution sites at Camp Lejeune have detected heavy metals, organic chemicals and pesticides, but concentrations are not high enough to endanger humans, according to base officials.

"The first round of contamination study monitoring has detected compounds, including organic chemicals, pesticides and heavy metals in some cases," said Sgt. Pam Vajner of Lejeune's Joint Public Affairs Office.

Technicians are checking water and soil samples for more than 50 possible pollutants.

"While compounds listed as toxic by (U.S.) Environmental Protection Agency standards have been found in detectable levels, no concentrations have been found which present human health hazards," the sergeant said.

Information on Lejeune's anti-pollution effort was released through the office of Assistant Chief of Staff, Facilities, Marine Corps Base.

Environmental Science and Engineering Co. of Gainesville, Fla., will begin monitoring

Base officials have said that only trace amounts of contamination have been found at the sites.

22 suspected pollution sites on base in early 1986 "upon completion of Navy contract negotiations with ESE," Ms. Vajner said.

"Continued sample collection of soil, ground water and surface waters will be completed by ESE."

That review is expected to take about 15 months.

When the entire \$500,000 study is finished, "Camp Lejeune and Headquarters, Marine Corps, will review the studies, recommend remedial measures and request Department of Defense funding for the best options," the sergeant said.

For the past 40 years, hazardous chemicals — including mercury and the pesticides chlordane, Diazinon and DDT — have been spilled, dumped and burned at locations

across the 170-square-mile base.

No one has been identified as being harmed by the pollutants.

However, long-term environmental risks have not been fully assessed, an omission the study is intended to correct.

The project is necessary for the base to comply with the federal Superfund Act, which stipulates military officials must identify all hazardous-waste disposal sites on bases and report them to the EPA.

In a 1983 survey, the Navy examined 73 waste-disposal sites at Lejeune and three outlying sites in Jones County.

The 22 sites were targeted for more investigation because of known or suspected contamination from fuel, discarded explosives and chemicals including cancer-causing solvents, toxic polychlorinated biphenyls or PCBs in transformer oil and pesticides.

Base officials have said the 22 sites are not considered dangerous because only trace amounts of contamination have been found to have escaped from the dumps and said people have not been directly exposed to those pollutants.

Ten of Lejeune's 100 wells were closed in May when toxic substances were found in the well water.

The organic chemicals included chlorinated solvents which are found in many types of cleaning products.

Lejeune authorities were cited in May for violating ground water standards by state officials who tested the well water.

No additional contaminants were found in water samples taken in late May from the 10 wells, base officials said.

Closing of the wells forced some water-use restrictions during early May in Tarawa Terrace.

An auxiliary waterline from the Holcomb Boulevard water plant to Tarawa Terrace was completed in early June and water restrictions were lifted.

In a related matter, about 4,000 gallons of fuel leaked in September from an underground storage tank at the Tarawa Terrace gas station.

Plans for recovery of the gasoline are complete and removal of the fuel should start within days, Ms. Vajner said.

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• Pollution

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have escaped from the dumps and said people have not been directly exposed to those pollutants.

Environmental officials have said they do not consider the dumps to be threats either to New River or streams, estuaries or people living or working on base.

Ten of Lejeune's 100 wells were closed in May when toxic substances were found in the well water.

The organic chemicals included chlorinated solvents — dichloroethylene, trichloroethylene and tetrachloroethylene — which are found in many types of cleaning products.

Lejeune authorities were cited in May for violating ground water standards by state officials who tested the well water.

No additional contaminants were found in water samples taken in late May from the 10 wells, base officials said.

Closing of the wells forced some water-use restrictions during early May in Tarawa Terrace.

An auxiliary waterline from the Holcomb Boulevard water plant to Tarawa Terrace was completed in early June and water restrictions were lifted.

About 4,000 gallons of fuel leaked in September from an underground storage tank at the Tarawa Terrace gas station.

Base officials employed a civilian engineering firm to make recommendations on cleaning up that spill.

According to the Navy survey, spills of hazardous materials over the past four decades at Lejeune have included gallons of mercury — enough to poison 184,000 acres of foot-deep water if it ever reaches the shallow water table.

The mercury was drained from radar equipment and buried, according to officials.

Tear gas and other poisons may have been buried beneath what was later a basketball court, according to the Navy review.

Since the 1960s, Building 712 had housed a nursery and day-care center for children of Marines and sailors.

However, the children were moved away in 1982 when the soil of their fenced-in playground were found to be poisoned by a number of pesticides.

For 13 years before the site became a nursery, the Corps stored, mixed and spilled thousands of gallons of pesticides in and around Building 712.

Navy investigators said those pesticides included large amounts of chlordane, Diazinon and DDT.

Chlordane is a chlorinated, highly poisonous, volatile oil used as an insecticide.

Diazinon is a colorless, liquid insecticide. DDT is a powerful insecticide.

Activities are restricted near the 22 contaminated sites, some of which are in remote locations.

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Company to study extent of pollution at Lejeune

By RICHARD F. SMITH
Daily News Staff

A Florida company will begin work in November to pinpoint hazardous-waste pollution sites at Camp Lejeune, base officials announced today.

"Twenty-two study sites have been selected for detailed ground water, surface water and soil monitoring," said Sgt. Pam Vajner of the base Joint Public Affairs Office.

"The purpose of the program is to confirm the locations and extent of hazardous pollutants in the environment at Camp Lejeune."

For the past 40 years, hazardous chemicals — including mercury and the pesticides chlordane, Diazinon and DDT — have been spilled, dumped and burned at locations across the 170-square-mile base.

No one has been identified as being harmed by the pollutants. However, long-term environmental risks have not been fully assessed, an omission the study is intended to correct.

"The approximate cost of the project is \$500,000 in Navy funds. The exact amount has not been decided yet. The contract was awarded to Environmental Science and Engineering Inc. of Gainesville, Florida," the sergeant said.

No exact date has been selected to start the effort.

"The project is necessary in order to comply with the federal Superfund Act, which says we must know all locations of hazardous-waste disposal and must report them to the U.S. Environmental Protection Agency," she said.

"We also must research how serious they are and that's what this project is doing. The study, all total, should take about 18 months."

In a 1983 survey, the Navy examined 73 waste-disposal sites at Lejeune and three outlying sites in Jones County.

The 22 sites were targeted for more investigation because of known or suspected contamination from fuel, discarded explosives and chemicals including cancer-causing solvents, toxic polychlorinated biphenyls or PCBs in transformer oil and pesticides.

Base officials have said the 22 sites are not considered dangerous because only trace amounts of contamination have been found to

See POLLUTION, 14A

Lejeune likely to be on cleanup list

By RICHARD F. SMITH
Daily News Staff

The U.S. Environmental Protection Agency is likely to place Camp Lejeune on the national priorities list for hazardous waste cleanup, according to a base spokesman.

The EPA is considering that action as a result of the 1985 discovery of water contamination by toxic chemicals in 10 Lejeune wells that are now closed, said 1st Lt. Frank Shaw of the base Joint Public Affairs Office.

Other federal installations are likely to be placed on the list in addition to Lejeune.

"The national priorities list estab-

lishes priorities for the EPA's use of Superfund monies to clean up what they consider to be the most serious toxic sites in the United States," Shaw said.

"However, federal facilities are not eligible to receive Superfund monetary assistance unless the contamination is caused by a private concern," the spokesman said.

"The area under study is the Hadnot Point Industrial Area. In 1985, traces of trichloroethylene, dichloroethylene and tetrachloroethylene were found in eight of 35 wells in the area," Shaw said.

"The affected wells were immedi-

ately closed and have remained closed since. No single contamination point has been identified as the source of contamination for the wells and no contamination has been detected by periodic tests of drinking water aboard base," the lieutenant said.

"We're going to have to clean this up. The EPA is saying you've got to clean this up," Shaw said. He had no estimate of how much the project would cost or when it could begin.

If the base cannot prove the pollution comes from a private source, military funds must pay for the cleanup.

Trichloroethylene, or TCE, was

commonly used during the 1970s as a chlorinated solvent for degreasing aircraft and has been found in dump sites at Cherry Point air station in Havelock — but not in drinking water there — and in three wells on or near El Toro Marine air station in Orange County, Calif.

Dichloroethylene and tetrachloroethylene also are toxic chlorinated solvents. They are found in many types of cleaning products.

Lejeune was cited by North Carolina environmental agencies during 1985 for violating ground water standards.

Two of the 10 closed wells were in Sec CLEANUP, 14A

Base site may get cleanup priority

By Jack Murphy
Star-News Correspondent

CAMP LEJEUNE — An industrial complex on the base here is likely to be placed on a priority list for cleanup work by the Environmental Protection Agency, a base spokesman said Thursday.

First Lt. Frank Shaw, spokesman for the base public affairs office, said Camp Lejeune is being considered along with other federal installations to be included on the EPA's National Priorities List for the EPA's Superfund, a pool of money set aside to clean up what EPA identifies as the most serious toxic waste problems in the United States.

Shaw said federal facilities are not eligible for Superfund money unless the contamination is caused by a private concern. The Hadnot Point industrial area is Lejeune's major problem site, he said. It is on the left on Holcomb Boulevard as one enters the "mainside" area of the base across from the main post-exchange.

Shaw said a study of the area showed traces of trichloroethylene, dichloroethylene and tetrachloroethylene in eight of 35 wells in 1985. The wells were closed immediately and have remained closed.

No contamination has been detected during periodic testing of drinking water on the base, he said.

Shaw did not identify a possible source of the chemicals but said the base has minimized use of hazardous materials by substituting non-hazardous substances for vehicle maintenance and parts cleaning.

Dec. 25, 1987 P. 1C

EPA considers waste cleanup at Marine base

By RICHARD F. SMITH
Daily News Staff

The Environmental Protection Agency is likely to put Camp Lejeune on the national priority list for cleanup of groundwater contamination, according to a base spokesman.

EPA action is expected in the next few days, said Maj. Stuart Wagner of the Lejeune Joint Public Affairs Office.

EPA officials are expected to prioritize the cleanup as a result of a 1983 study to identify, evaluate control and correct groundwater pollution on base, particularly in the Hadnot Point industrial area.

Toxic chemicals were discovered in 1985 in eight wells at Hadnot Point. Those wells are now closed.

The list establishes priorities for the EPA's use of Superfund monies to clean up hazardous waste sites in the United States.

Lejeune "uses and produces large quantities of hazardous materials and waste products. Although no hazardous waste is permanently stored aboard base, past hazardous waste disposal relied on burial," Wagner said in a prepared statement.

"This disposal method was acceptable at the time, but was subsequently found to potentially cause long-term problems through release of hazardous material into the soil and water," Wagner said.

"Camp Lejeune realizes that the high amounts of hazardous material used aboard base presents the potential for damage to the environment and vigorously pursues hazardous-waste planning and training.

"The base has been recognized as a model installation and will use the same commitment to excellence to deal with the groundwater contamination and will work with the EPA to clean up the sites as rapidly as possible," Wagner said.

Initial steps involve the installation restoration program, a three-phase process to identify past hazardous waste sites and take necessary cleanup action.

The first stage is a preliminary assessment/site inspection, which was completed at Lejeune in April 1983.

That study identified 76 potentially contaminated sites and concluded that while none of the areas posed an immediate threat to human health or the environment, 22 sites warranted more investigation, Wagner said.

In 1985, the Hadnot Point industrial area showed traces of trichloroethylene, dichloroethylene and tetrachloroethylene in eight of 35 wells in the area. Affected wells were immediately closed.

No single contamination point has been identified as the source of pollution of the wells and no contamination has been detected by periodic tests of drinking water on base, Wagner said.

Lejeune's project coordinator, Col. Thomas J. Daizell, assistant chief of staff for facilities, said most of the pollution was caused by motor pools in Hadnot Point.

"At that time, oils, greases, solvents, gasoline and cleaning fluids and other types of chemical compounds that were used in our everyday processes were just being dumped in the ground or dumped in sewers or things like that; we really were not aware back in the '60s and '70s of the effects on groundwater contamination," Daizell stated.

Following placement of Lejeune on the priorities list, base officials will have six months to start a remedial investigation/feasibility study in consultation with the EPA and state agencies. Time to complete that review is negotiable and must include public participation.

Within 180 days after completion of that stage, Lejeune must reach agreement with EPA and state officials for completion of all necessary corrective actions.

"Substantial continuous physical on-site remedial action must take place no later than 15 months after completion of the remedial investigation/feasibility study," Wagner said.

Lejeune continuously pursues a vigorous program of hazardous-waste training, handling and management that includes annual courses of instruction for those dealing with hazardous waste. In addition, the base has minimized the use of hazardous materials by substituting non-hazardous substances for vehicle maintenance and parts cleaning," the major said.

The base has set up a 24-hour hotline for questions and comments concerning the national priorities listing. The telephone number is 451-5100.

Trichloroethylene, or TCE, was commonly used during the 1970s as a chlorinated solvent for degreasing aircraft and has also been found in dump sites at Cherry Point air station in Havelock — but not in drinking water there — and in three wells on or near El Toro Marine air station in Orange County, Calif.

Dichloroethylene and Tetrachloroethylene also are toxic chlorinated solvents. They are found in many types of cleaning products.

Lejeune was cited by state environmental agencies during 1985 for violating groundwater standards.

Tests of 22 suspected hazardous-waste pollution sites at Lejeune have detected heavy metals, organic chemicals and pesticides, but concentrations are not high enough to endanger humans, base officials said in December 1985.

Those sites were targeted for more investigation because of known or suspected contamination from fuel, discarded explosives and chemicals including toxic solvents, cancer-causing polychlorinated biphenyls or PCBs in transformer oil and pesticides.

Waste sites at base likely to be included on EPA list

By Jack Murphy
Star-News Correspondent

CAMP LEJEUNE — Parts of the base where contaminated groundwater was detected are expected to be placed on the Environmental Protection Agency's list of hazardous waste sites later this month, base officials said Thursday.

The EPA plans to include the sites on its National Priorities List of hazardous waste locations which qualify for cleanup funded by what is commonly known as the EPA's Superfund.

In the case of military installa-

tions, however, the cleanup funds come from the Defense Environmental Restoration Account, established by Congress to pay for cleaning up Department of Defense hazardous waste sites.

A preliminary study completed in April 1983 identified 76 potentially contaminated sites on the base and said 22 warranted further investigation, although the study concluded that none posed an immediate hazard to the environment or human health.

In a 40-page document released Thursday outlining the cleanup efforts, base officials said no hazard-

ous waste was being stored permanently at the base now, but that in the past some waste had been buried, a disposal method later found to have long-term potential for contaminating soil and groundwater.

The report pledged base cooperation with the cleanup.

The investigation has focused on the industrial area of the base, where 8 of 35 wells showed traces of chemical contaminants in 1985.

The wells were closed. No source has been found for the chemicals, identified as trichloroethylene, dichloroethylene and tetrachlor-

oethylene — all used primarily as solvents.

Periodic tests since then have shown no contamination of base drinking water.

Once the sites are on the National Priorities List, the base will have six months to put together an additional study, with the assistance of the EPA and state environmental officials. After that, an agreement must be reached to correct problems within another six months.

For anyone with questions about the issue, the base has set up a 24-hour telephone hotline, 451-5100.

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Continuous sampling ensures safe drinking water

Story and photo by Pfc. Timothy Paullin

With the weather getting warmer and as training progresses, more and more water is being used for drinking here as well as in the outlying areas.

The water supply is plentiful and there shouldn't be any concern with how much water is being consumed.

But concerns about whether or not the drinking water is contaminated have been mentioned.

Elizabeth A. Betz, supervisory chemist, at the National Resources Environment Affairs Division is in charge of making sure the water is properly tested.

"The drinking water here is perfectly safe. I drink it myself," said Betz.

The ground lab where Betz works monitors the water and waste treatment facilities at Camp Lejeune, Camp Johnson and the Rifle Range, as well as MCAS, New River.

There are eight water treatment plants. Two of them are in the process of being shut down, but the Holcomb Blvd. facility has been expanded to cover the area of those two and better serve the Marines here.

These treatment facilities are monitored in compliance with the Water Safety Act, as well as the Clean Water Act regulations of the NREAD.

The water is tested through samples taken from water treatment plants and distribution systems here to ensure that the water we are drinking is safe.

Physical science technicians take these samples to their lab in Bldg. 65 and perform bacteriological tests on the water weekly.

If any samples are found to have traces of contaminants in the water, the same water supply is tested two more times to double check.

The technicians would also double check the water treatment process to make sure it is still putting out clean, drinkable water.

In the event they still find a contaminant, the lab with the help of the Preventive Medicine Clinic will make sure there is no chance of an epidemic resulting from the bacteria.

The micro-biology team monitoring the water treatment facilities will be the first to know problems with the drinking water here and will immediately correct problems that arise, according to Betz.



Physical science technician H. J. Burns makes a weekly bacteriological exam of waste water from the treatment plant.

Contaminated waste sites may lead to EPA National Priorities Listing

As a result of a 1983 study program to identify, evaluate, control and correct past deficient waste disposal sites and practices involving ground water contamination here, the Environmental Protection Agency is likely to place Camp Lejeune on the National Priorities List in late February.

The NPL establishes priorities for the EPA's use of Superfund monies to clean up hazardous waste sites in the United States.

Camp Lejeune uses and produces large quantities of hazardous materials and waste products. Although no hazardous waste is permanently stored aboard base, past hazardous waste disposal relied on burial.

This disposal method was acceptable at the time, but was subsequently found to potentially cause long-term problems through release of hazardous material into the soil and ground water. Camp Lejeune realizes that the high amounts of hazardous material used aboard base presents the potential for damage to the environment, and vigorously pursues hazardous waste planning and training. The base has been recognized as a Model Installation, and will use the same commitment to excellence to deal with the ground water contamination, and will work with the EPA to clean the sites as rapidly as possible.

The initial steps to clean up the sites involve the Installation Restoration (IR) Program, a three-phase nationwide process to identify past hazardous waste sites and take necessary cleanup action.

The first phase is a Preliminary Assessment/Site Inspection (PA/SI), and was completed in April 1983 for Camp Lejeune. The study identified 76 potentially contaminated sites, and concluded that while none of the sites pose an immediate threat to human health or the environment, 22 sites warranted further investigation.

The area primarily under study at Camp Lejeune is the Hadnot Point

industrial area. In 1985, traces of trichloroethylene, dichloroethylene and tetrachloroethylene were found in 8 of 35 wells in this area. The affected wells were immediately closed, and have remained closed since. No single contamination point has been identified as the source of contamination for the wells, and no contamination has been detected by periodic tests of drinking water aboard base.

The chemicals found are used primarily as solvents and degreasers.

Following the placement of Camp Lejeune on the NPL, the Base has six months to initiate Remedial Investigation/Feasibility Study (RI/FS) action in consultation with EPA and appropriate state authorities. Time to complete the RI/FS is negotiable and must include public participation.

Within 180 days after completion of the RI/FS, Camp Lejeune must reach an

agreement with EPA and state authorities for the completion of all necessary remedial actions at Camp Lejeune. Substantial continuous physical on-site remedial action must take place no later than 15 months after completion of the RI/FS.

Camp Lejeune continuously pursues a vigorous program of hazardous waste training, handling and management that includes annual courses of instruction for

those dealing with hazardous waste. In addition, the base has minimized the use of hazardous materials by substituting non-hazardous substances for vehicle maintenance and parts cleaning.

The base has established a 24-hour Hotline for questions and comments concerning the National Priorities Listing. The number is 451-5100.

Hazardous wastes and their effects explained

The overall coordinator for Camp Lejeune's placement on the National Priorities List will be Col. Thomas J. Dalzell, Assistant Chief of Staff, Facilities, Marine Corps Base. He recently answered some questions concerning NPL and the effects it might have on Camp Lejeune residents and workers.



Colonel Thomas J. Dalzell

Q. What is the National Priorities List?

A. Congress passed the Resource Conservation and Recovery Act back in the late 1970s, and that Resource Conservation and Recovery Act is our nation's hazardous waste management program. As part of that program, Congress requested that all the various activities within DoD and the federal government take a look at past hazardous waste dump sites and practices and initiate a plan to clean up these hazardous waste sites—especially where they impact on ground water contamination.

Q. Are there any hazardous waste sites aboard Camp Lejeune?

A. Yes there are. As a result of the Resource Conservation and Recovery Act the Navy developed what was called the NACIP program, and it was a program to go out and look at all Navy and Marine Corps installations and find out where past hazardous waste dump sites or any types of dumps were located. A study was done back in 1983 at Camp Lejeune, and from research of records, talking to people, and going out to look through the area, 77 old dump sites were identified here at Camp Lejeune. Of those 77 sites, 22 of them that were marked for further study, we have a number of sites right now, mainly in the Hadnot Point area where we have some test wells to monitor the amount of contamination and whether or not it's migrating through the ground.

Q. Is my health or the health of my family in any danger?

A. No it's not. All the wells which we get our raw water out of are continually tested and the wells that were identified as being contaminated have been closed off. All the other wells with water coming out

contain no health problems at all to any individual who is living or working aboard Camp Lejeune or anyone in the local community.

Q. What about prior to 1983?

A. At that time we were not aware of any of these particular compounds that might have been in the ground water and we have no information that anyone's health was in any danger at that time.

Q. Could the contamination escape Camp Lejeune into Jacksonville?

A. Right now all the information we have is the contamination within the strata underground is contained, and we have no evidence of it migrating out into the local community. It's contained within Camp Lejeune.

Q. How do you test the drinking water?

A. Our drinking water is tested in accordance with the Safe Water Drinking Act. We do a bacteriological test on all of our water once a week, we do a heavy metal test once every three years, we do a volatile organic compound test once every three months, trihalomethane test once every three months and a radiological test every four years. All these tests are in accordance with federal and state regulations and meet those requirements.

Q. What are the chemicals found used for?

A. Most of the chemicals found mainly come from solvents, degreasers and other types of materials that we use in the maintenance and repair of vehicles aboard the base.

Q. What are the long term effects of exposure to these contaminants?

A. Heavy long term exposure to these chemicals could cause some health hazards, depending on the amount of chemicals ingested.

Q. What precautions should we take?

A. The only precaution anybody here at Camp Lejeune needs to take is to ensure they only drink water that is coming through our approved water sources. Don't drink water out of streams; don't drink raw water from a well site that somebody may have drilled around the area. These are the only precautions that individuals need to be aware of. At any time

if an individual feels there's a different taste or a different odor or whatever in their drinking water, they need to contact us right away through the Joint Public Affairs Office at 451-5100 to let us know so that we can get an investigation going right away.

Q. How will we prevent this from happening again?

A. We have a number of procedures that are currently in effect that were mandated by the Environmental Protection Agency. All hazardous materials are accounted for aboard base. Hazardous waste is stringently controlled by federal and state EPA regulations, and all of it is taken off the base through the Defense Reutilization and Marketing Office and sold to private firms who handle and process the material. We are no longer dumping hazardous materials in sites like was done in the past. It's all handled in a very strict program that's monitored and inspected by federal and state EPA officials.

Q. How long will it take to clean up the wells?

A. We really don't know how long it will take to get these cleaned up. As part of our remedial action we have to negotiate with the federal and the state officials relative to the types of contamination we have and the processes that we'll utilize to clean it up, and then the question comes up "How clean is clean?" and those are the things we have to work out. Some of these processes only take a few years, others may take a lifetime to clean.

Q. What was the source of contamination?

A. Most of the sources of contamination were the motor pools that existed down in the Hadnot Point area. At that time oils, greases, solvents, gasoline and cleaning fluids and other types of chemical compounds that were used in our everyday processes were just being dumped in the ground or dumped in sewers or things like that; and we really were not aware back in the 60s and 70s of the effects on ground water contamination. Now we are more aware of these things and have taken appropriate precautions to ensure the ground water contamination is not progressing any further.

Q. Is it likely that other sites on Camp Lejeune will be identified as NPL candidates?

A. The NPL listing applies to Camp Lejeune, and it's possible that other sites may show that we'll

have to do some additional cleaning up. Once we go on the NPL listing, it involves all of Camp Lejeune and not a specific site.

Q. If there is no danger now, and the problem isn't serious, why is Camp Lejeune put on the list?

A. As I mentioned the NPL listing is a priority listing the federal government comes up with to clean up those sites they consider to be the worst sites throughout the nation. Congress has authorized what we call a "Super Fund" act and those funds are for the clean up of hazardous waste sites. Without some method of prioritizing the hazardous waste sites the federal government would have no idea of the sites they should clean up first. So on some points of view, getting put on the NPL list brings the base to the forefront relative to public attention, but on the other hand, it becomes a help to us because we are eligible for the Super Fund money to enable us to get the clean up process started in a more timely manner.

Q. If I'm concerned about this problem, who should I contact for more information?

A. If you have any concern whatsoever, or any additional information that you want concerning the extent of contamination or what we're planning on doing you should call the Joint Public Affairs Office, at 451-5100. Call them any time during the day or night and we'll get an answer back to you personally.

Q. When will the clean up begin?

A. The cleanup will probably not start for a while. We're currently in the second phase in the process of going through and looking at some remedial action that we can take. Then there's a certain time frame that we have to negotiate with the state of North Carolina relative to what procedures we are going to use and of course the time to get these cleanups will be dependent upon what the procedures we use and the availability of funding. I would anticipate sometime within the next two to three years some type of a process will be developed in which we'll start the clean up action. Right now we've just stopped using those wells. We have put down monitor wells to monitor migration of any of the contaminants to ensure we are keeping it contained until such time as when we can get a clean-up process initiated.

Q. Will Camp Lejeune be in charge of clean-up or will state and federal EPA officials contract it out?

A. Camp Lejeune will be responsible for that. We will work through our engineers at the Naval Facilities Engineering Command in Norfolk, Va., and it will be in conjunction with the federal and state EPA. We have to work hand-in-hand. Some of the funding will come through the Navy, some will come through the Super Fund that's authorized by Congress.

Lejeune potential waste cleanup site

By TOM MATHER

Staff Writer

The U.S. Environmental Protection Agency is considering adding about six North Carolina sites, including Camp Lejeune Marine Corps base in Onslow County, to its priorities list for cleaning up hazardous wastes, EPA officials said Friday.

"Camp Lejeune is currently being considered for the NPL [national priorities list]," said Trudi J. Fancher, an NPL coordinator with the EPA in Washington.

"There are approximately a half-dozen [North Carolina] sites being considered right now," she

said. "I can't be more specific than that," she said.

The EPA expects to propose about 200 new sites to the "Superfund" priorities list in April, Ms. Fancher said. Currently, the EPA has approved or proposed 951 Superfund sites, including 11 in North Carolina.

Such listing makes privately owned sites eligible for cleanup money from an \$8.5 billion fund established by the federal Superfund Amendments and Reauthorization Act of 1986, Ms. Fancher said by telephone. But sites on federal land, such as Camp Le-

See EPA, page 2C

EPA may clean up site at Lejeune

jeune, are not eligible for Superfund money.

"The agency which is responsible for the site provides the funds," she said of cleanup efforts for federal lands. "The NPL serves primarily to inform the public about potential problem for the site."

Before sites can be added to the priorities list, Ms. Fancher said, the EPA officially must propose them for listing and then hold public hearings. Those hearings probably will not be held until late spring or summer.

Camp Lejeune uses and produces large quantities of hazardous materials and wastes, according to Major Stuart W. Wagner, joint public affairs director for the base.

"Although no hazardous waste is permanently stored aboard base, past hazardous waste disposal relied on burial," Wagner said in a written statement. "This disposal method was acceptable at the time, but was subsequently found to potentially cause long-term problems through release of hazardous material into the soil and ground water."

"Camp Lejeune realizes that the high amounts of hazardous material used aboard base presents the potential for damage to the environment, and vigorously pursues hazardous waste planning and training."

In a 1983 study of past waste disposal practices, the base identified 76 potentially contaminated areas, 22 of which warranted further investigation, he said. Most of the current study has focused on the Hadnot Point industrial area of the base, where officials found chemical contamination in eight of 35 wells in 1985, he said.

Wells and disposal sites should not pose health hazards to people living or working on or near the base as long as they drink water from approved sources, officials said. People should not to drink water out of streams or from unchecked wells on the base.

The base is working with the EPA to develop a cleanup plan for the sites, but officials said they do not know how much it will cost yet. The cleanup will be paid for by the Marines and an environmental restoration fund established by Congress for federal lands.

Camp Lejeune has set up a 24-hour phone line for people with questions or comments about the waste sites. The number is 451-5100.

EPA may clean up airport, base sites

By Janet Olson
Staff Writer

A pit at the New Hanover County Airport and an area at Camp Lejeune Marine Corps Base are among 229 sites that the Environmental Protection Agency proposed Tuesday to add to the Superfund priority list for toxic waste cleanups.

Nine of the sites are in North Carolina, including four in the southeastern part of the state.

Designation for the "National Priority List" means the site is eligible for 90 percent federal funding of an EPA-supervised cleanup, unless a federal agency owns the site. Federal agencies are responsible for cleaning up their sites using their own money.

Despite the chance for federal funding, officials in New Hanover County are wary about getting involved in a Superfund cleanup of years' worth of potentially hazardous black gunk left over from fire training exercises in a pit at the airport. If the EPA gets involved, county officials say, the cleanup could cost much more than if the county handled the job itself.

Even with 90 percent of the cleanup covered by the Superfund, an EPA-supervised project could cost the county more than \$1 million — much more than the \$300,000 that private contractors have estimated, said Ervin Dehn, New Hanover County Airport engineer.

The EPA hires from a limited list of contractors to clean up toxic waste sites, which adds to the cost, Dehn said.

"They might bring a contractor all the way down from Massachusetts to do the cleanup, and you've got to pay all the transportation costs," he said.

The EPA's Superfund cleanup process also is lengthy, taking anywhere from three to five years, said Michael Henderson, a spokesman for the EPA Superfund program in Atlanta.

The Air Force created the burn pit in the 1960s as a place to train firefighters, Dehn said. Later the pit became a training site for the county's volunteer fire departments.

The Army Corps of Engineers is investigating the site and the airport's history to establish whether the federal government is responsible for some of the waste, Dehn said. If the military contributed to the problem, he said, the site might qualify for a different federal cleanup program.

"Right now, the EPA is operating under the assumption that the county owns the airport and the county is at fault," he said.

Tuesday's EPA announcement brings the Superfund priority list to 1,177 sites, of which 378 have been proposed and 799 have been formally placed on the list.

Camp Lejeune was proposed for the list because contaminated groundwater was detected in the industrial area of the base. Although no hazardous waste is stored permanently at the base now, base officials say, some waste had been buried there and could contaminate soil and groundwater.

The other Southeastern North Carolina sites added to the EPA's list Tuesday are four septic service pits in northwestern Brunswick County and an area around a Jacksonville dry cleaning business.

The EPA already used some Superfund money several years ago for an emergency cleanup of the Brunswick County site in Maco, Henderson said. The agency removed about 3 million tons of topsoil contaminated with oils that had been illegally dumped into four unlined septic pits, he said. If the site is placed on the Superfund list, he said, the EPA will study whether the chemicals contaminated any private wells.

The Jacksonville site is around ABC One Hour Cleaners at 2127 Lejeune Blvd. A chemical used in dry cleaning fluid leaked from a storage tank behind the business and contaminated three nearby wells, Henderson said.

Base, cleaners placed on list for Superfund

By RICHARD F. SMITH
Daily News Staff

Camp Lejeune's industrial area and a Jacksonville dry cleaner are among 229 sites the U.S. Environmental Protection Agency has proposed to add to the Superfund priority list for cleanup of toxic wastes, according to a base spokesman.

"The EPA proposed Tuesday to add us to the list" but there is no estimate of how soon a cleanup of groundwater contaminated by chlorinated solvents in the industrial area can start or how much it will cost, said 1st Lt. Frank Shaw of the base Joint Public Affairs Office.

The Superfund normally finances 90 percent of cleanup costs on civilian land, but federal agencies must use their own money for such efforts on U.S. property.

"We get the money from the Department of the Navy, from the Defense Environmental Restoration Account," Shaw said.

"There is no danger of any contamination in the drinking water on or off-base and all contaminated groundwater wells have been sealed off," said Col. Thomas J. Dalzell, assistant chief of staff for facilities at Marine Corps Base.

"Basically, the (EPA) National Priorities List prioritizes the areas of concern the federal government feels need to be looked at first and makes these areas eligible for federal funds," Dalzell said.

"The base meets and exceeds all treatment standards required by the EPA and pursues a continuous water-testing program," the colonel stated.

The Jacksonville dry cleaner affected by the proposal is ABC One Hour Cleaners at 2127 Lejeune Blvd.

A chemical used in dry cleaning leaked from a tank behind the cleaners during 1985 and contaminated three wells, including two wells at base housing in Tarawa Terrace, according to EPA and Lejeune officials. Those wells are now closed.

EPA administrators propose to prioritize the Lejeune cleanup as a result of a 1983 study to identify, evaluate, control and correct groundwater pollution on base, particularly in the industrial area in

Hadnot Point.

Toxic chemicals were discovered in 1985 in eight of 35 wells at Hadnot Point. Those wells are also shut down.

In 1985, industrial area wells showed traces of trichloroethylene, dichloroethylene and tetrachloroethylene.

Dalzell said in February of this year that most of the pollution was caused by motor pools at Hadnot Point.

"At that time, oils, greases, solvents, gasoline and cleaning fluids and other types of chemical compounds that were used in our everyday processes were just being dumped in the ground or dumped in sewers or things like that; we really were not aware back in the '60s and '70s of the effects on groundwater contamination," Dalzell said.

Following placement of Lejeune on the priorities list, base officials will have six months to start a remedial investigation/feasibility study in consultation with the EPA and state agencies. Time to complete that review is negotiable and must include public participation.

Within 180 days after completion of that stage, Lejeune must reach agreement with EPA and state officials for completion of all necessary corrective actions.

Trichloroethylene, or TCE, was commonly used during the 1970s as a chlorinated solvent for degreasing aircraft and has also been found in dump sites at Cherry Point air station in Havelock — but not in drinking water there — and in three wells on or near El Toro Marine air station in Orange County, Calif.

Dichloroethylene and tetrachloroethylene also are toxic chlorinated solvents. They are found in many types of cleaning products.

Lejeune was cited by state environmental agencies during 1985 for violating groundwater standards.

Tests of 22 suspected hazardous-waste pollution sites at Lejeune have detected heavy metals, organic chemicals and pesticides, but concentrations are not high enough to endanger humans, base officials said in December 1985.

City & Coast

1C

and lends Hardison a helping hand. 3C



Staff photo by Joe Swift

or's here

sand and surf at Fort Fisher. The children and their parents took a day trip to the beach Tuesday from their home in Fayetteville.

5, and brother Adam, 3, frolic in the

EPA may clean up airport, base sites

By Janet Olson
Staff Writer

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Nine of the sites are in North Carolina, including four in the southeastern part of the state.

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The Jacksonville site is around ABC One Hour Cleaners at 2127 Lejeune Blvd. A chemical used in dry cleaning fluid leaked from a storage tank and the business and contaminated three nearby wells, Henderson said.

Battleship reunion well attended

Rubin

Crewmen of the USS North Carolina swapped war stories and remembered fallen comrades during the opening ceremonies of the annual reunion.

A crowd in the past five years of shipmates and members of their families gathered under the hot afternoon sun for the battleship memorials.

William Mann, secretary of the USS North Carolina Fleet Reunion, read the names of the 10th North Carolina crewmen who died during the war.

Those who are gathered here for the reunion prayed for our fallen shipmates, who now serve on the supreme commandments of the sea.

In his keynote address, Mayor Don Betz recalled the immensity of the USS North Carolina battleship, the USS North Carolina, the USS North Carolina, the USS North Carolina.

He was totally amazed by the magnitude of this ship, he said.

Who arrived wearing a flight suit but took his jacket off, he said, did have one thing in common — that they were veterans in civilian clothes.

"We were doing 26 knots or better, yet the ship was nothing but smoke and flame," Sivilli said.

On Sept. 15, 1942, the USS North Carolina was torpedoed by a Japanese submarine. The attack killed five crewmen, injured 23 and put a 30-foot-wide hole in the ship's hull.

"I really joined to see the world, not to fight the war."

Mike Horton, former crew member

didn't realize what he was getting into.

"I really joined to see the world, not to fight the war," he said.

The USS North Carolina, the first of a series of 10 battleships ordered by the Navy before the U.S. entry into World War II, initially was dispatched to back up the British fleet in the North Atlantic. It joined the Pacific fleet in June 1942.

"When we got in there, it raised morale tremendously," said Mario Sivilli, a radio operator aboard the ship and now the vice president of the North Carolina Battleship Association.

The USS North Carolina joined a task force of other ships for what was to be the first offensive battle of the Pacific theater, the invasion of Guadalcanal, during which the battleship pounded the island with its heavy guns.

In the following Battle of the Eastern Solomons, on Aug. 24, 1942, the USS North Carolina's anti-aircraft guns were shooting so furiously against a Japanese force of 80 planes that a nearby ship asked whether it was on fire.

"We were doing 26 knots or better, yet the ship was nothing but smoke and flame," Sivilli said.

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Staff photo by Gray Honeycutt

Marines from Camp Lejeune contributed a color guard and a 21-gun salute for the opening ceremonies of the 26th annual reunion of former crewmen of the USS North Carolina Tuesday afternoon. Mayor Don Betz was the keynote speaker.

EPA proposes cleanups at 2 Jacksonville sites

JACKSONVILLE — Camp Lejeune's industrial area and a Jacksonville dry cleaner are among 229 sites the U.S. Environmental Protection Agency proposes to put high on its list of places for cleanup of toxic wastes, according to a base spokesman.

The EPA had no estimate Tuesday of how soon cleaning up groundwater contaminated by chlorinated solvents in the industrial area could start or how much it would cost, said 1st Lt. Frank Shaw of the base Joint Public Affairs Office.

An EPA fund normally finances 90 percent of cleanup costs on civilian land, but federal agencies must pay to clean up their own property.

Base officials study cleanup of fuel leaks

By RICHARD F. SMITH
Daily News Staff

Camp Lejeune officials are proceeding with plans to clean up gasoline leaks at the bulk fuel storage facility in Hadnot Point, which was closed in June after the problem was confirmed.

An engineering study for removal of leaked gasoline products is nearly complete, said 1st Lt. Cathy Engels of the Lejeune Joint Public Affairs Office.

Monitoring tests confirmed existence of the problem in April. Leaks from an underground tank system were confined to an area two square blocks around the fuel farm.

The spill is contained by the section's natural flat terrain and water-table conditions, the lieutenant said. The number of gallons leaked is unknown.

Studies of monitoring wells examined the leaking fuel was gasoline and a preliminary report was made in May to North Carolina environmental officials.

Studies completed in 1986-87 showed fuel compounds were detectable in the groundwater of the industrial area.

As a result, Maj. Gen. J. Edward Cassity, base commander at the time, ordered the fuel farm closed on June 12 of this year.

The facility currently is using fuel bladders instead of tanks, the lieutenant said. Bladders should be replaced by an interim fuel operation by early 1989.

The interim system will include a smaller, above-ground tank system. Maximum use will be made of existing outlying refueling areas at Courthouse Bay and Camp Geiger.

Cleanup is expected to start after final design of a fuel-recovery system. Recovered gasoline products are expected to be recycled for use on base.

A contract bid will be announced in coming months to begin construction and operation of the fuel-recovery effort. No timetable for the cleanup will be available until the engineering report is finished and approved.

The study report on the fuel leak was prepared by engineers from the Naval Facilities Engineering Com-

mand in Norfolk, Va.

The final draft was published with monitoring data and cleanup recommendations. It was approved by Lejeune officials and sent to Norfolk in September.

Lejeune personnel will continue to monitor all groundwater wells for possible pollution. Drinking water at Lejeune is continually analyzed with the water meeting all treatment standards required by the U.S. Environmental Protection Agency, the spokeswoman said.

Wells and disposal sites do not pose any danger to persons living or working at or near the base as long as they drink water from approved sources. People should not drink water out of streams or from wells that are not monitored.

There is no hazard of pollution in drinking water on or off base. All contaminated groundwater wells have been sealed, according to the lieutenant.

The base has started a 24-hour telephone line for persons with questions or comments about the problem. The number is 451-5100.

The engineering report and planned cleanup are part of Lejeune's continuing effort to identify, evaluate, control and correct past deficient waste-disposal sites and practices involving groundwater pollution.

The base and ABC One Hour Cleaners of Jacksonville were among 229 sites nationwide that the EPA has proposed for the Superfund national priorities list for cleanup of past inadequate waste-disposal areas.

The Superfund normally finances 90 percent of cleanup costs on civilian land, but federal agencies must use their own money for such efforts on U.S. property.

The cleanup at Lejeune is being funded by the Navy's Defense Environmental Restoration Account.

A chemical used in dry cleaning leaked from a tank behind ABC cleaners at 2127 Lejeune Blvd. during 1985 and contaminated three wells, including two wells at base housing in Tarawa Terrace, according to EPA and Lejeune officials. Those wells are now closed.

Marines take issue with articles on toxic waste at OC bases

Return with us now to an early summer day, say June 26, when a Register Close-up section focused on chemical contamination at the county's two Marine bases, in El Toro and Tustin.

The stories weren't subtle, and the headlines reflected the heavy hit. Examples: "MILITARY WASTE" (not only in all-caps but in the color red), "PAST CHEMICAL DUMPING HAUNTS CONTAMINATED MARINE BASES," "Pollution producers: 'No industry can compare.'"

The discouraging words rolled on and on, as is usual in Close-up, but the beginning of a story on the section's first page pretty well summed up the indictment:

"Although the Marine Corps has improved its handling of hazardous materials in the past few years, it still is slow to comply with environmental laws, has refused to pay local fees, contributes substantially to the area's smog and produces more toxic waste than any other source in the county."

That characterization understandably wasn't especially popular with local Marine Corps folks. Shortly after the articles appeared, Maj. Stan Gouid, public affairs officer for the 3rd Marine Aircraft Wing and MCAS El Toro, called to challenge some of the story statements. I asked that the objections be put in writing. After some delay, he and Navy Ensign Michael Rehor, environmental director of the Facilities Management Department at El Toro MCAS, delivered responses to statements they considered inaccurate and/or unfair. (I further delayed the matter through one of my vacations, then the involved Metro section people took even more time to file responses to the Marine objections; hence, this extremely tardy report. Finally, the Marines suggested dropping the whole thing because of the time lapse, but I didn't agree since they acknowledged that the challenges remained the same.)

A letter accompanying the Marine list referred to "numerous inaccuracies and misleading inferences [in the stories] concerning the hazardous waste and environmental clean-up situation" at the two Marine bases. It also stated that "The Department of Defense and the Marine Corps have been very open about the environmental

and hazardous waste problems at the two air stations and are working very diligently to correct them."

The stories were written by Register staffer Maria Cone and edited by Jane Bornemeier, assistant Metro editor.

Because of space considerations, not all of the Marines' objections can be included here. I have selected for discussion the ones I feel are the most important.

Oh, yes, I must note, in this discussion involving the Marine Corps, that eons ago I was an ID tag-carrying member of that armed service, so it's possible that I might have a contaminated view of the matter at hand. Of course, the Corps obviously didn't consider me one of the few good men, since during one of the wars it left me behind to help guard the endangered bars of Oceanside, and indeed I don't feel like a bridge over its troubled waters, if any, but you might want to keep the long-past connection in mind if you bother to struggle through this.

Let's take a look at part of the Marines' itemized list of objections. To allow all sides a voice in the discussion, several elements must be included for each challenged point. I don't know what confusion can be avoided, but let's proceed in this order of listing: The challenged story statement, the Marines' objection, responses from Ms. Cone and Ms. Bornemeier and comments from the ombudsman, when appropriate or when the desire strikes.

One of the main Close-up stories began: "On wind-swept days 20 years ago, the Marines had an innovative way of controlling dust on a sprawling dirt parking lot at El Toro air station.

"They routinely took an assortment of toxic waste — powerful solvents, used motor oil, transmission fluid, even excess jet fuel — and sprayed it on the ground, soaking the soil and misting the air with pollution.

"Even more recently, for 12 years ending in 1981, the Marines in Tustin disposed of toxic trash by loading large drums on the edge of a truck. As the Marines drove along, they opened the drums and let the raw chemicals flow onto the soil, polluting an area the size of a football field.



PAT RILEY
The Ombudsman

"These are only two of the dozens of environmental horror stories returning to haunt the US Marine Corps air stations in El Toro and Tustin."

The Marines had two objections to this beginning. They said the spraying of solvents, motor oil, etc., was not "innovative," that "Spraying used oil and similar materials was a standard procedure accepted nationwide for many years."

Also according to the Marines, "While the article correctly pointed out past waste-disposal procedures that today are unacceptable, the words 'horror,' 'haunt,' and 'dozens' add to an emotional slant that is not justified. The past practices exist no longer, the cleanup is being planned, and there are no immediate health hazards."

Ms. Cone responded that "Using today's standards, spraying hazardous waste as a method of dust control is considered highly unorthodox, inappropriate, unhealthful and unsafe." We said in the fifth paragraph of the story that the practice once was considered acceptable and legal, and has since stopped at the Marine base. We reiterated that in the 13th and 27th paragraphs. About the "horror," she said, "Environmental officials agree that past practices are horror stories, and they are extremely concerned about health hazards, since three Irvine-area agricultural water wells have been contaminated."

Editor Bornemeier said: "While spraying of toxic waste was not illegal, it was not widely practiced in this country — ever, except by the Marine Corps." And, regarding the "horror stories" usage, she maintained that "The Corps has chosen to quibble with three words out of thousands in this project. Taken in context, I believe the words are justified."

Ombud comment: I don't suppose folks in most areas had access to jet fuel, but the spraying of such materials as used motor oil to keep the dust down was hardly innovative 20 years ago. I guess only those of us who are older remember, and if it was so dangerous I don't see how we lived through it. And horror stories? Well, among the defini-

tions of horror in my dictionary are "shuddering fear and disgust; terror and repugnance." I think the term was a bit exaggerated in the story usage. I don't doubt that environmental officials agree that past practices are horror stories. There are good career reasons for detecting a toxin under every rock or in every fish. But if the officials referred to past situations as horror stories, maybe they should have been quoted. As it was, the Register said it.

■ Story statement: "... the US Environmental Protection Agency believes the contamination at the El Toro base ranks with some of the nation's most infamous toxic hot spots! Love Canal in New York, Times Beach in Missouri, the Stringfellow Acid Pits near Riverside."

Marines: "True only in that MCAS El Toro might share a list of approximately 1,200 sites with these infamous spots. MCAS El Toro is neither abandoned nor poisoning any workers or residents."

Ms. Cone: "The paragraph is correct. The base has been nominated to the Superfund list [EPA's priorities for clean-up] and it is considered just as hazardous as

Please see OMBUDSMAN/11

OMBUDSMAN Marine Corps responds Close-up look at toxic waste at 2 OC air stations :

FROM 10
those other sites, and more hazardous than some."

Ms. Bornemeier: "I find it interesting the Marines now dispute the comparison with Times Beach and other hazardous sites, when even their own commander, Brig. Gen. David Shuter, said in the story: 'I don't like being compared to the McColl dump or Times Beach, but if that's how we stack up, so be it.'"

Ombud: Terry Wilson, spokesman for the EPA regional office in San Francisco, agreed with Ms. Cone that the statement is correct in that, as he put it, "All [sites on the list] have been identified as the most hazardous waste sites that need to be cleaned up."

However, Mr. Wilson explained, there is a "hazard ranking system" which, on a point basis, places various sites in one of 16 groups according to the degree of hazard. The ranking system is, at least to me, extremely complicated. EPA scientists look at various criteria, including the danger of specific chemicals, their potential to spread, to contaminate drinking water, etc., then add up the score for group placement. Fifty sites are in Group 1, at the top of the hazard ranking system. Stringfellow is number 32 in that group. Love Canal is number 141 in Group 3. Interestingly, both Times Beach and El Toro MCAS are in Group 8; Times Beach is number 387 in that group, but we don't know where El Toro falls because federal facilities are not numbered, according to Mr. Wilson.

I frankly cannot make much sense of the system. Let me know if you can. Residents were relocated from both the Times Beach and Love Canal areas, though they're in groups 8 and 3. No one has been relocated from Stringfellow

(though it is using a new water supply), but it's in the top group.

El Toro isn't actually on the Superfund list yet; it's on the proposed list, but Mr. Wilson said it's extremely rare for a site proposed for the regular list not to make it.

An EPA environmental scientist in Washington told me she wouldn't consider the El Toro site as hazardous as the others named in the story. Opinions apparently differ.

■ Story: "A survey of the 6,200 acres of Marine Corps property, performed by military consultants, shows few areas at the air station are tainted by chemicals."

Marines: "Even if all suspected areas, that the article mentioned, were 100 percent contaminated, this would amount to 1.7 percent of the total acreage at MCAS El Toro, and 0.6 percent of the total at MCAS Tustin."

Ms. Cone: "The story is correct. A map of the bases provided by a March 1988 consultant report shows few areas are uncontaminated. I never said in the story that every acre was contaminated, only that most portions of the base are contaminated, which is supported by the maps we printed."

Ms. Bornemeier: "The listing does not say all sites contain all chemicals."

Ombud: We're talking "areas" and "acreage." Take your pick.

■ Story: "As many as 14 dump sites at El Toro — two as large as 20 acres apiece — and 11 areas at Tustin are contaminated with hazardous materials, including PCB-laden electrical transformers, low-level radioactive materials, buried drums of explosives and thousands of gallons of volatile jet fuel, acids and waste oils, according to a March report by military consultants."

Marines: "Only one site at El Toro or Tustin is suspected of containing very small amounts of radioactive material or explosives. There is only one potential site which may be contaminated with less than 60 gallons of PCB fluid."

Ms. Cone: "The sentence is correct, all according to the Marine Corps' own March 1988 report. Fourteen sites at El Toro and 11 at Tustin are contaminated with some type of hazardous waste. The story said all the sites contained hazardous waste. I did not say all sites contained radioactive materials or PCBs."

Ombud: The story simply didn't make the picture clear.

■ The story said a degreasing solvent called trichloroethylene (TCE) has infiltrated three agricultural wells used to irrigate Irvine Co. crops and that "Officials fear the chemicals are migrating west toward other wells that supply 70 percent of the drinking water for Santa Ana, Costa Mesa and Tustin residents. The source of the TCE spill is unproved, but water-quality officials say they are convinced it comes from one of many abandoned dumps at the El Toro air station."

Marines: "Being 'convinced' is simply a convenience for water-quality officials, since other equally valid explanations would be difficult to track down or would have no clean-up funds. The fact that an auto raceway existed for many years in close proximity, using similar degreasers with similar disposal methods, is easy to ignore now that it no longer exists. The fact that concentrations are higher further away from the air station could easily indicate that a source or dump site off base was the culprit. It is important to note that we are spending \$1.2 million in a scien-

C *Daily News*
Thursday, January 12, 1989

Local



Miscellany

Drums discovered

Several barrels of an unknown substance have been discovered recently at Camp Lejeune, according to the base Joint Public Affairs

Office.

A civilian employee operating a forklift on a storage lot Jan. 4 unearthed two 55-gallon drums, a base spokesman said. The drums were found in Lot 203 near the in-

tersection of Wallace Creek and Holcomb Blvd.

Efforts to clean up the site on Monday revealed several other barrels. One of the barrels was marked

"DDT," the spokesman said.

A plan to cease digging was made by base officials until a sampling of the materials can be conducted and a plan of action for cleanup can be formulated.

CAMP LEJEUNE



GLOBE

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Disposal site found

A civilian employee operating a forklift in a storage lot on Jan. 4 inadvertently unearthed two 55-gallon drums that were apparently buried over a long period of time.

The forklift operator struck one of the buried drums while working in Lot -203 near the intersection of Wallace Creek and Holcomb Boulevard, which is maintained by the Defense Reutilization Marketing Office. When kerosene-like odors were noticed at the scene, the Base Spill Response Team was notified and arrived at the lot to investigate.

Initial investigation pointed to a routine fuel spill and a decision was made to dig up the barrels early this week and the site was cordoned off and covered with plastic.

On Jan. 9, efforts to clean up the site revealed several other barrels, one of which was marked "DDT." DRMO and Natural Resources officials decided to cease digging until sampling of the material could be conducted and a plan of action could be formulated for clean-up.

The area in question has already been identified as one of numerous past disposal sites under the Installation Restoration Program. The Installation Restoration Program initiated a comprehensive investigation of all past disposal sites in 1983 and, beginning this year, is developing a comprehensive plan for its clean-up in cooperation with the state and the EPA.

The base has taken all steps to ensure that the site poses no immediate safety risk to its operators by locating, documenting and removing anything deemed hazardous to continued operation in the area in question. Long-term removal and clean-up will be initiated in accordance with the remedial action plan as established by EPA guidelines.

There is no contamination or threat of contamination to the ground water supply or personnel working in the area.

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PUBLICATION

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STATE

CAMP LETFELWE, NC

Site of suspected toxic material cleaned up at Lejeune

By Jack Murphy
Star-News Correspondent

CAMP LEJEUNE — Military and civilian specialists are working to clean up an area where several 55-gallon drums of possibly toxic materials were discovered buried. Base officials said Wednesday that the drums posed no threat to groundwater supplies or to people working in the area.

A civilian worker operating a forklift inadvertently unearthed two 55-gallon drums on Jan. 4 at Lot 203, off Holcomb Boulevard near Wallace Creek.

The worker noticed a kerosene-like odor, and the base Spill Response Team was called to the lot. The team cordoned off the area, covered it with plastic and then began

digging up the barrels earlier this week.

On Monday, the cleanup workers found several more barrels, including one marked "DDT." Digging was stopped until the base officials and representatives of the N.C. Department of Natural Resources and Community Development could analyze the contents of the barrels and form a cleanup plan.

The lot is operated by the Defense Re-utilization Marketing Office, which disposes of surplus military material.

It is one of a group of old disposal sites on the base that is targeted for long-term cleanup under a plan being developed by the base, state agencies and the federal Environmental Protection Agency.

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Efforts to clean up the site on Monday revealed several other barrels. One of the barrels was marked

"DDT," the spokesman said.

A plan to cease digging was made by base officials until a sampling of the materials can be conducted and a plan of action for cleanup can be formulated.

Lot closed; soil tested

JACKSONVILLE — Camp Lejeune officials said Wednesday that Lot 203, operated by the base Defense Reutilization and Marketing Office, has been closed until recent soil samples can be analyzed to determine whether the area is unsafe for employees and contractors working there.

Base officials said Jan. 11 that several 55-gallon drums were discovered buried at the site but that the drums posed no threat to groundwater supplies or to people working at the lot.

A civilian forklift operator inadvertently unearthed two 55-gallon drums Jan. 4 at the lot off Holcomb Boulevard near Wallace Creek. On Jan. 9, cleanup crews found several more barrels including one marked "DDT."

According to base officials the lot is one of a group of old disposal sites targeted for long-term cleanup under a plan developed by the base, state agencies and the federal Environmental Protection Agency.

Emergency landing made

An AH-1T Cobra helicopter from Marine Light Attack Helicopter Squadron 167 made a precautionary landing about 10:15 p.m. Wednesday at Oak Grove because of engine problems, according to a spokesman at New River air station.

Because it is such a light helicopter, air station officials decided to transport it back to New River rather than repair it in the field, the spokesman said.

Soil samples examined

The Defense Reutilization Marketing Office at Lot 203 at Camp Lejeune has been closed until further notice, according to the base Joint Public Affairs Office.

The office will remain closed until soil samples taken recently can be analyzed to determine whether the lot is safe for employees and contractors working there.

In January, an employee operating a forklift unearthed two 55-gallon drums of an unknown substance, although one drum was marked "DDT."

The soil will be tested to ensure there are no harmful contaminants present, according to the Public Affairs Office.

Preventive measures

Though there has been no reported cases of contaminated fruits, the Camp Lejeune commissaries have removed certain fruits from their shelves.

All red, white and black grapes, plums, peaches and nectarines were removed Monday, March 13 as a precautionary measure.

Any patron having purchased any of these items from one of the commissaries, prior to Monday, are asked to return them for a refund.

→ As a preventive measure, the Defense Reutilization Marketing Office at Lot -203 will close until soil samples recently taken can be analyzed to determine whether the lot is safe for employees and contractors working there.

The soil will be tested to ensure there are no harmful contaminants that could be a safety risk to employees and contractors.

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THE GLOBE

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STATE

CAMP LEJEUNE, NC

Agreement on Lejeune waste sites likely soon

By Jack Murphy
Star-News Correspondent

JACKSONVILLE — Camp Lejeune officials are close to completing an agreement to clean up old hazardous waste sites on the base that are listed on a national priority list of the U.S. Environmental Protection Agency.

Base officials are scheduled to meet Sept. 7 and 8 in Atlanta with representatives of the EPA, the state of North Carolina and the Navy to complete a draft of a Federal Facilities Agreement, which will outline how the base will clean up the sites, along with schedules and priorities for the work.

Lejeune was placed on the EPA's National Priorities List in mid-June 1988, after the hazardous waste sites were identified. The base was given a six-month negotiable period to begin a feasibility study for cleanup.

Such sites qualify for cleanup funded by what is commonly known as the Superfund. In the case of military installations, however, the cleanup funds come from the Defense Environmental Restoration Account established by Congress for Department of Defense hazardous waste sites.

A preliminary study completed in 1983 identified 76 potentially contaminated base sites and indicated 22 warranted further investigation, although the study concluded that none posed an immediate hazard to human health or the environment.

The investigation focused on the Hadnot Point Industrial Area, where eight of 35 wells showed traces of chemical contamination in 1985. The wells were closed.

Base officials said no single source had been found for the chemicals, all used primarily as solvents and degreasers.

Lejeune uses and produces large quantities of hazardous materials and waste products, and although no hazardous waste is permanently stored on base, waste was buried on the base in the past.

Lejeune officials said that when the final draft is completed following the conference in Atlanta, a copy will be made available to the public, which will have 45 days to comment.

CAMP LEJEUNE

Base preparing agreement

Camp Lejeune and federal officials are in the final stages of negotiating a draft Federal Facilities Agreement that will outline the base's approach to the cleanup of old hazardous waste sites, according to the Lejeune Joint Public Affairs Office.

The FFA will specify the schedule and milestones for the removal of 22 past hazardous waste sites aboard the base. The sites were identified in 1983 as part of the Navy's Installation Restoration Program.

Negotiations will occur on Sept. 7 and 8 in Atlanta and will involve officials from the state of North Carolina, the U.S. Environmental Protection Agency, the Navy and Lejeune.

The resulting document will be released for public comment when negotiations are complete and a final draft is prepared.

Public notification of the document's availability will be made by the EPA.

The EPA will accept comments from the public for a period of 45 days after the announcement of availability.

At the conclusion of the comment period, all parties will review and discuss all comments before finalizing the FFA.

City: Jacksonville, NC
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Date: Sunday, 20 Aug 89
Page: 1C

Agreement on Lejeune waste sites likely soon

By Jack Murphy
Star-News Correspondent

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Page: 3C

Base officials are negotiating waste cleanup

Meeting held with the EPA

BY RICHARD F. SMITH
DAILY NEWS STAFF

Three Camp Lejeune officials were in Atlanta last week to meet with personnel of the U.S. Environmental Protection Agency.

The base and federal workers are in the final stages of negotiating a draft Federal Facilities Agreement that will outline Lejeune's approach to cleanup of old hazardous waste sites on base, according to the Lejeune Joint Public Affairs Office.

The meetings were held at the EPA's regional headquarters.

Attending from Lejeune were Stephany Del Re, an environmental specialist with Marine Corps Base, and Lt. Col. Joe Wellington and Capt. Steve Hinkle of the base Staff Judge Advocate's office.

The FFA will specify the schedule and milestones for removal of 22 past hazardous waste sites aboard the base. The sites were identified in 1983 as part of the Navy's Installation Restoration Program.

Negotiations also involved officials from the state of North Carolina and the Navy.

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CITY, STATE JACKSONVILLE N.C.

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Base administrators are continuing an effort to identify, evaluate, control and correct past deficient waste-disposal sites and practices involving groundwater pollution.

The base and ABC One Hour Cleaners in Jacksonville were among 229 sites nationwide that the EPA has proposed for cleanup of past inadequate waste-disposal areas.

The EPA's Superfund normally finances 90 percent of cleanup costs on civilian land, but federal agencies must use their own money for such efforts on U.S. property.

The cleanup at Lejeune is being funded by the Navy's Defense Environmental Restoration Account.

A chemical used in dry cleaning leaked from a tank behind ABC cleaners at 2127 Lejeune Blvd. during 1985 and contaminated three wells, including two wells at base housing in Tarawa Terrace, according to EPA and Lejeune officials. Those wells are now closed.

Lejeune personnel continue to monitor all groundwater wells for possible pollution. Drinking water at Lejeune is continually analyzed with the water meeting all treatment standards required by the EPA.

Wells and disposal sites do not pose any danger to persons living or working at or near the base as long as they drink water from approved sources. People should not drink water out of streams or from wells that are not monitored.

There is no hazard of pollution in drinking water on or off base. All contaminated groundwater wells have been sealed, according to Lejeune spokesmen.

Hadnot fuel farm is first on list of cleanup sites

BY RICHARD F. SMITH
DAILY NEWS STAFF

The Hadnot Point fuel farm will be the first hazardous-waste site at Camp Lejeune to be cleaned up under a new agreement with federal officials, according to a base spokeswoman.

The fuel farm was confirmed as the initial site to be cleaned up during meetings on Sept. 7 and 8 between base officials and U.S. Environmental Protection Agency personnel at EPA regional headquarters in Atlanta.

Lejeune officials attending the meeting were Lt. Col. Joe Wellington and Capt. Steve Hinkle of the Staff Judge Advocate's Office and Stephany Del Re, an environmental specialist at Lejeune.

Base personnel "will clean up the most hazardous sites first, the Hadnot Point fuel farm being the most hazardous," said 1st Lt. Colleen [Name] of the Lejeune Joint Public Affairs Office.

The cleanup effort "is now in the design phase and will enter into the construction phase sometime in January 1990. Further studies will

be conducted to define the lower aquifer in the Hadnot Point Industrial Area beginning in October 1989," said a statement from Joint Public Affairs.

"Based upon this characterization, remedial alternatives will be developed to clean up the upper and lower aquifers in the Hadnot Point Industrial Area," said the release.

"It is not technically feasible to estimate completion of the cleanup. The base will be required to treat and monitor the groundwater until EPA/state standards have been met," according to Joint Public Affairs.

Estimated cost of the clean-up will be developed in a feasibility study that will be completed in fiscal year 1990. The U.S. government will pay for the effort to remove the hazardous waste.

Gasoline leaks at the bulk fuel storage facility in Hadnot Point caused the fuel farm tanks to be closed in June 1988.

Monitoring tests confirmed existence of the problem in April 1988. Leaks from an underground tank system were confined to an area two square blocks around the fuel farm.

The spill was contained by the section's natural flat terrain and water-table conditions, according to Joint Public Affairs. The number of gallons spilled was unknown.

Studies of monitoring wells determined the leaking fuel was gasoline and a preliminary report was made in May 1988 to North Carolina environmental officials.

After the leak was discovered, fuel bladders were used instead of tanks.

The study report on the fuel leak was prepared by engineers from the Naval Facilities Engineering Command in Norfolk, Va.

Dump cleanups dragging as EPA adds Lejeune, other sites to list

STAFF AND WIRE REPORT

WASHINGTON, D.C. — The federal government is losing ground in its program to clean up the nation's most dangerous hazardous waste dumps.

In eight years, cleanup work has been completed on only about three dozen sites, and on Thursday the Environmental Protection Agency added 93 new properties in 32 states — including Camp Lejeune and four other sites in North Carolina — that need to be cleared of hazardous waste and debris.

Camp Lejeune and EPA officials recently reached agreement on a cleanup plan, with the Hadnot Point fuel farm set to be the first site addressed. The construction phase is scheduled to begin in January 1990.

The additional sites bring to 1,194 the waste dumps scheduled to be

decontaminated under the Superfund program, which is aimed at dealing with the nation's most hazardous waste problems. EPA officials have said the program likely will cost tens of billions of dollars and take decades.

Other North Carolina sites added to the list are Benfield Industries, Inc., Hazelwood; Geigy Chemical Corp., Aberdeen; JFD Electronics-

Channel Master, Oxford; and National Starch & Chemical Corp., Salisbury.



Solid waste bill discussed

County to help educate about program changes

BY BETH BUFFINGTON
DAILY NEWS STAFF

Education is the key to public acceptance of changes in county solid waste disposal programs, according to state Rep. Robert Grady and Onslow County Board of Commissioners Chairman Barbara Buck.

Grady, R-Onslow, and Mrs. Buck last week asked members of the Clean County Committee's recycling subcommittee to help them educate residents on upcoming changes in the programs.

Grady said people need to know of the changes and understand that the changes are mandated by the state government under Senate Bill 111 — the Solid Waste Disposal Act.

Speaking of solid waste disposal, Grady said it is "a desperate problem that our society's faced with." "I won't say there are no answers, but there are only difficult ones — at least that's what I learned as a member of the subcommittee."

Grady said he was one of seven state House members assigned in subcommittee to draft an acceptable Solid Waste Disposal Management Act.

Effective Oct. 1, the bill will mandate several changes to solid waste disposal programs over a four-year period. Changes include state regulations outlawing disposal of non-biodegradable products, dangerous materials and "space-eating items" in landfills, Grady said.

By 1991, non-biodegradable items like plastic foam cups, containers with detachable rings, plastic bags and polystyrene packing materials will be banned from the landfills, he said. Dangerous materials such as lead-acid batteries and waste oil also will not be allowed in garbage facilities, he added.

Grady said items that take up space in the landfills also will be banned within several years. These items

include scrap tires, yard wastes and "white goods" like old washing machines and other appliances.

The bill also establishes guidelines for local governments. By 1991, local governments must initiate "economically feasible" recycling programs. A year later, all state agencies must initiate recycling and local governments must submit biennial solid waste disposal plans, he said.

Onslow County is fortunate in that its officials have already begun preparing for the regulations, he said. A major task, though, is for the county officials to teach people that the inconveniences of Senate Bill 111 are important in protecting the state's natural resources, Grady said.

"We've got to educate the people because there's going to be a tradeoff or they're going to have to pay for it in the long run," he said.

Mrs. Buck, however, said local officials have had a hard time getting the public to make the necessary trade-offs of giving up convenience for cost.

"Onslow County has been taken kicking and screaming into the solid waste disposal program . . ." Mrs. Buck said. "Believe me, we (county commissioners) have found out that convenience is more important than money in Onslow County when we tried to close several container sites."

Mrs. Buck said county commissioners may have misread the public's changing attitude toward solid waste disposal. In the future, Mrs. Buck said she hopes the public will be more educated and more willing to accept the changes.

Although Senate Bill 111 accomplished many of the subcommittee's goals, Grady said it failed to achieve two items. The bill does not include mandatory recycling of all bottles for a fee, or mandatory use of recyclable paper by state agencies, he said.

For a free copy of the complete Senate Bill 111, individuals can call 1-(919)-733-5648 or write: Printed Bills, North Carolina General Assembly, Raleigh, North Carolina, 27611.

STATE

State submits hazardous-waste plan to EPA

BY RUTH SHEEHAN
DAILY NEWS RALEIGH BUREAU

RALEIGH — Even though the proposed agreement remains unsigned, North Carolina will submit plans for an eight-state hazardous waste agreement to the Environmental Protection Agency today.

"We are going to go ahead with it, regardless of the fact that none of the eight states has signed it," said Dr. Linda Little, executive director of the Governor's Waste Management Board. "We have compiled all our data on the basis of eight-state participation. At this point, we don't even have time to put anything else together."

Agreement remains unsigned despite deadline

The agreement, albeit incomplete, allows North Carolina to meet an EPA-imposed deadline requiring states to prove their capacity to treat and dispose of their hazardous wastes. "This will at least show that North Carolina remains committed to a regional approach," said Don Beason, the governor's legislative liaison.

Although EPA has agreed to waive its deadline for North Carolina and other states working on the compact, it says it will still deny Superfund cleanup money until the

agreement is signed. It will be a month or more before North Carolina feels the pinch of such a move, officials said.

The compact, forged during months of negotiation, has been troubled by dissent in recent months.

Alabama, home to a landfill, has proved firm in its opposition to a compact formed with states that do not have the capacity to handle wastes it needs treated. Little said not much progress has been made in softening Alabama Gov. Guy Hunt's stance on the issue. But Beason said

he is confident that passage of the deadline will speed negotiations.

"Anytime you're negotiating a contract, which this is, somebody's going to hold out as long as possible, hoping they'll get everything they want," he said. "I think once the date has passed, that somebody will eventually give in."

"We're going to stick with the eight-state regional approach and modify it as we need to," said Little. Under the terms of the original agreement, North Carolina would have constructed a 40,000-ton per

year incinerator, one large enough to handle the hazardous wastes generated by Tar Heel and one other state's industries. Under pressure from Alabama, North Carolina has offered to speed construction of the facility — moving the operational date ahead by about 11 months to January 1993; the state also has offered to lease several large private incinerators in the meantime.

But Beason said North Carolina is done compromising: "I'm sure some of the other states felt that we would make big concessions with the threat of EPA sanctions over our head, but they'll see that's not so," he said.

State compact leaves N.C. 'up the creek'

Funds delayed

PHAN
HIGH BUREAU

Half the participants in the eight-state hazardous waste compact have seceded to form a new union. North Carolina is offering to include North Carolina and three other states. Under those states have agreed to treatment facilities. Officials said on Monday that the Environmental Protection Agency deadline for treating hazardous garbage. The press secretary for Gov. Carroll Campbell Tuesday night that the state had signed an agreement with Kentucky, Tennessee and Alabama. This will lead to a more equitable distribution of the hazardous waste," Eskew said. "The states will be eligible to sign the agreement when they get to the table proof of their wastes." In total, two of which are waste landfills, al-

ready meet EPA requirements for the treatment and disposal of the toxic trash. North Carolina, Mississippi, Georgia and Florida, which do not, are "up a creek," said Linda Little, executive director of the Governor's Waste Management Board.

Alabama Gov. Guy Hunt assured the four-state agreement "is in no way intended to permanently exclude or place a burden upon Georgia, North Carolina, Florida and Mississippi."

But Little said the creation of a smaller compact still puts North Carolina in a difficult position.

Incinerator planned

On Tuesday morning the state forwarded to Washington its plans to build an incinerator capable of burning 40,000 tons of hazardous waste per year.

The incinerator was the centerpiece of the state's offer during negotiations with the other states over the past eight months. It is no secret, Little said, that North Carolina's capacity certification was drawn up with hope that the eight southeastern states would resolve

their differences and form a compact.

"Now, unless they (the four states that have formed a separate compact) change their minds, we stand to lose out on \$26 million in Superfund cleanup money," Little said.

North Carolina has applied for such help for the cleanup of two sites — one in Fayetteville and another in Aberdeen.

The governor's legal counsel, Don Beason, took pains to point out that if the EPA approves the funding, it will be withheld until such time as the state comes into compliance with the agency's hazardous waste rules.

"As long as we're making progress, they'll just delay the funds. We won't actually lose them," Beason said.

Sites remain untreated

Little noted that loss of funds is the lesser of the punishments imposed by the EPA deadline. "The greater loss is that caused by two hazardous waste sites that will remain untreated for months or years longer than they need to," she said. "And they don't get any better over time."

EPA officials have already indicated that they will be lenient with North Carolina and those other states which have shown a willingness to form a compact. In fact, the state may be considered "in compliance" because of its continued efforts and an indication from Alabama and South Carolina that Tar Heel trash may still be buried in their landfills.

Beason said North Carolina's position would improve if it speeded the siting and construction of its incinerator. Originally scheduled to be up and running by the end of 1993, the incinerator will now likely be sited by May of 1990 and operational by the end of 1991.

It is somewhere in between those two processes — siting and construction — that Beason believes North Carolina will be admitted into the four-state agreement signed today by its neighbors.

If the state fails to satisfy the other states, or if it decides to abandon the regional agreement for other reasons, North Carolina would be forced to build, not only an incinerator but a metals recovery plant, a landfill and additional aqueous and solvent recovery facilities.

Lejeune waste sites placed on federal list

Hadnot fuel farm spill is first to be cleaned up

BY RICHARD F. SMITH
DAILY NEWS STAFF

Camp Lejeune has been placed on the federal National Priorities List for identification and cleanup of hazardous-waste sites.

The list is used by the U.S. Environmental Protection Agency to deal with old waste sites on federal land under the Comprehensive Environmental Response, Compensation and Liability Act of 1980, usually called the Superfund.

Installations are ranked on the list by the Hazard Ranking System, which assigns values relating to the risk of movement of contaminants through ground water, surface water and air, according to the Lejeune Joint Public Affairs Office.

Studies at Lejeune during 1982 revealed 76 separate sites for past hazardous waste management operations.

Of those, 26 sites warranted more study because they represented a potential threat to health and the environment.

A follow-up probe of these sites in 1984 resulted in the closure of eight drinking wells in the Hadnot Point Industrial Area because of verified contamination from fuel compounds.

Two wells were closed in base housing in Tarawa Terrace because of pollution from an off-base dry cleaner. Other sites are still in the preliminary stages of investigation.

Base spokesmen say there is no immediate health threat from the sites, but base officials instituted safety measures during 1988 to detect any movement of pollutants from the most severely affected sections.

For more information on the program or Lejeune's listing on the NPL, call the NPL hotline at 451-5100.

The Hadnot Point fuel farm will be the first area on base to be cleaned up under a new agreement with federal officials.

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CITY, STATE Jacksonville, NC

Fuel leak clean up

Base officials are nearing completion on an engineering study report for the clean up of fuel leaks discovered at the Camp Lejeune Bulk Fuel Storage Facility at the Hadnot Point Industrial Area.

This report and subsequent clean up are part of the base's ongoing program to identify, evaluate, control and correct past deficient waster disposal sites and practices involving ground water contamination, associated with the placement of Camp Lejeune on the National Priorities List (NPL).

Monitoring well studies have determined the fuel product to be gasoline, and a preliminary report was made to North Carolina in May.

Previous studies in 1986-87, showing these fuel compounds to be detectable in the groundwater of the Hadnot Point Industrial Area, led the Commanding General to make the decision to close the fuel farm on June 12. By early 1989, the fuel farm operation should be replaced by an interim fuel operation in the Industrial Area.

The clean up is expected to begin following final design of a fuel recovery system.

Base officials will continue to monitor all ground water wells for possible contamination. The drinking water at Camp Lejeune is continually tested with the base meeting all treatment standards required by the EPA.

Wells and disposal sites do not pose health hazards to people living or working on or near the base as long as they drink water from approved sources. People should not drink water out of streams or from unchecked wells on the base.

There is no danger of any contamination in the drinking water on or off base, and all contaminated ground water wells have been sealed.

Camp Lejeune has set up a 24-hour phone line for people with questions or comments about the sites. The number is 451-5100.

PUBLICATION

The GLOBE

PAGE

3A

DATE

27 Oct 89

CITY

STATE

CAMP LEJEUNE, NC

CAMP LEJEUNE

Study allows lot reopening

Findings of a site-safety report on possible health risks to workers at the Defense Reutilization and Marketing Office's Lot 203 have led Camp Lejeune officials to temporarily reopen the lot today because no apparent risk to human health was found.

The decision is based on results from a number of soil-gas tests conducted in February and this month, according to the base Joint Public Affairs Office.

Results indicated no health-threatening soil contamination exists, said Lejeune spokesmen.

Lot 203 is maintained by the DRMO as a site for surplus government property.

It was closed in March when two 55-gallon drums, one labeled DDT, were unearthed while an employee was relocating metal bunk beds.

Base personnel plan to reopen the site long enough to retrieve the surplus property stored there.

The site will again be closed so a full remedial investigation of subsurface and groundwater contamination can be conducted.

Storage lot reopens briefly

CAMP LEJEUNE — The Defense Reutilization and Marketing Office's Lot 203 was reopened Wednesday and will remain open long enough for the office's workers to recover surplus property stored there, base officials said.

The storage lot, off Holcomb Boulevard near Wallace Creek, was closed in March after a number of 55-gallon drums — including one marked "DDT" — were found buried there.

Base officials said the decision to reopen the lot temporarily was based on the results of soil tests showing no shallow contamination exists that could threaten the

health or safety of workers at the site.

Following the removal of the stored property, the lot will be closed again to test for subsurface and groundwater contamination.

Cleanup efforts receive boost

Cherry Point negotiates pact on hazardous waste pact

BY RICHARD F. SMITH
DAILY NEWS STAFF

HAVELOCK — Efforts to clean up hazardous-waste sites at Cherry Point air station have received a boost by the signing of the Navy's first Resource Conservation Recovery Act consent order.

Environmental and legal personnel from the Marine air station negotiated the pact with U.S. Environmental Protection Agency officials in Atlanta.

Under the agreement, sites at Cherry Point that are suspected to be former hazardous waste disposal areas will be studied, sampled and remedied under strict time limits, according to the Cherry Point Joint Public Affairs Office.

The consent order includes sites previously included in a voluntary Navy/Marine Corps-sponsored remediation program started in 1984.

Thirteen sites containing hazardous material have been identified at Cherry Point.

Of these, four have been designated as the most sig-

nificant areas requiring cleanup. The effort to remove hazardous substances from those sections will begin this month.

Studies on overcoming pollution at the other sites are scheduled to begin in 1990.

All site studies to date have been reviewed by a Technical Review Committee comprised of Cherry Point personnel, federal and state regulatory officials and local representatives.

Military officials have said that most of the waste sites involve petroleum products like oil and motor fuels or such substances as paint thinner.

The areas were identified under the Department of Defense's Installation Restoration Program, a survey of hazardous-waste depositories up to 30 years old on U.S. military installations.

At Cherry Point and Pope and Seymour Johnson Air Force bases, "The vast majority of things we've found are old burn pits and old landfills. But, they're not easy problems to solve," said Air Force Col. Warren Hull.

PUBLICATION DAILY NEWS

PAGE 2C

CITY/STATE JACKSONVILLE, N.C.

DATE 10 DEC 89

CAMP LEJEUNE

Fuel spill cleanup begins

An effort to clean up a fuel spill was begun this morning at Camp Geiger, according to the base Joint Public Affairs Office.

On Wednesday, an undetermined amount of old fuel was discovered in a ditch. The source of the fuel has not yet been identified.

An initial investigation by the state Environmental Management Division's Wilmington office indicated the fuel could have been dumped and is probably not from the Camp Geiger fuel farm.

An absorbant boom was placed in the ditch as a precautionary measure prior to today's excavation and clean up. The incident is under investigation by Camp Lejeune's Environmental Management Division.

NEWSPAPER: The Daily News DATE: 900419 PAGE: 1B

CITY, STATE: Jacksonville, NC

Fuel fouls Geiger ditch

JACKSONVILLE — Camp Lejeune planned cleanup operations Thursday at Camp Geiger, where an undetermined amount of fuel was discovered Wednesday in a ditch, a base spokesman said.

Staff Sgt. Rick Lynch said the source of the fuel had not been identified. He said that an initial investigation by the N.C. Division of Environmental Management indicated the fuel could have been dumped and probably is not from the Geiger fuel farm.

He said that an absorbent mat had been placed in the ditch as a precautionary measure and that the incident is being investigated by Lejeune's Environmental Management Division.

NEWSPAPER: The Morning Star DATE: 900420 PAGE: 2C
CITY, STATE: Wilmington, NC

L. White

Base is seeking waste comments

Hazardous material sites involved

BY RICHARD F. SMITH
DAILY NEWS STAFF

Camp Lejeune officials are seeking input from area residents on and off-base for a Community Relations Plan that will address public concern about hazardous waste sites on base.

A total of 48 interviews will be conducted with "a spectrum of individuals — city and county officials, local business people, civic group representatives and environmental groups," said Maj. Stuart Wagner, director of Lejeune's Joint Public Affairs Office.

Wagner said interviews will begin Monday and conclude by the end of the month.

"We want an across-the-board sample of community leaders and those people interested in the process" of cleaning up the sites, Wagner said.

"We'll take the feedback and concerns of the people we've talked to and put those into the Community Relations Plan. It's our way of going out into the com-

munity to talk about the problem and how we'll clean it up," the major said.

"We've caused the problem and we're going to clean it up. The community should be able to voice their concerns," Wagner said.

The sites pose no danger to base residents or the water table, he said.

The base has set up an environmental hotline at 451-5100.

Interviews will be conducted by Wagner or 1st Lt. Ken White, also of Joint Public Affairs.

A technical representative from Lejeune's Environmental Management Department will also attend the interviews.

Lejeune was added to the National Priorities List for clean up of hazardous waste on Oct. 4, 1989. That action was taken by the U.S. Environmental Protection Agency.

The listing has made the base eligible for federal funding for

SEE WASTE/2A

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remediation of past hazardous waste sites identified since 1982 under the Navy's Installation Restoration Program.

The Community Relations Plan is part of the IRP.

Extensive environmental studies at Lejeune and New River air station have located 26 sites that require further study because of past hazardous waste disposal practices.

Of these, five sites have been identified for immediate study due to the potential threat they pose to health and the environment.

They include two past landfills, a fuel-storage facility, a past waste storage lot and the groundwater tables beneath a section of the base's industrial area.

The five priority sites are:

Mercury contamination in an area of New River air station. There is also possible groundwater pollution at that site.

A chemical landfill at Lejeune's Rifle Range. The former disposal area is contaminated with organics, metals, pesticides, polychlorinated biphenyls and tetrachloroethylene.

Lots 201 and 203 off Holcomb

Boulevard at Lejeune. Buried barrels containing traces of DDT were uncovered in 1988. Localized soil contamination was also found.

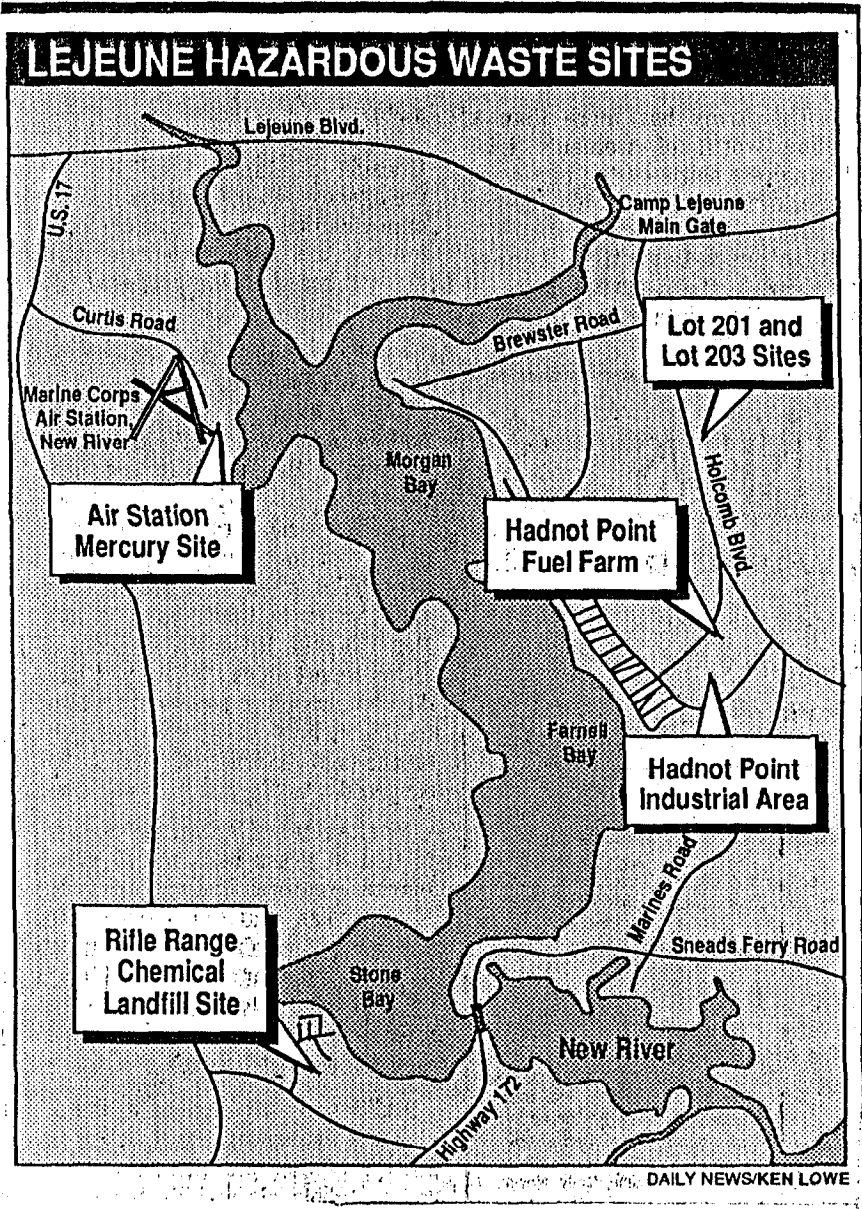
Fuel leakage at Hadnot Point Fuel Farm that has polluted the soil and ground water.

Organic contamination by tetrachloroethylene in the soil and ground water in the Hadnot Point Industrial Area.

Preliminary site investigations have been completed on these five sections and in-depth site studies and development of cleanup solutions will begin before the end of the year, according to a statement released by Wagner.

Testing performed to date shows that none of this contamination represents an immediate threat to public health or the environment.

Although much testing and study remains to be done, Lejeune and the Marine Corps are fully committed to a cleanup program for these sites and correction of past disposal practices which may be a threat to health and the environment, as required by law, according to the statement.



CAMP LEJEUNE

Funds received for fuel cleanup

As the result of a fuel oil spill discovered at Camp Geiger on April 18, the Installation Restoration Program will receive \$100,000 to conduct a full site assessment to determine remedial actions necessary.

The money will come from emergency Defense Environmental Restoration Account funds of the Department of the Navy.

Field work will begin in about three weeks, according to a release from the Camp Lejeune Joint Public Affairs Office. Monitoring wells will be installed to determine the presence or absence of "selected contaminants in the ground water in the vicinity of suspected old underground diesel tanks at Geiger," according to the release.

In addition to the wells, ground water samples, soil, sediment and surface water samples will be analyzed, according to the release.

A risk assessment and feasibility study will also be prepared to determine the need, if any, for additional cleanup.

ording to a hospital spokesman.

NEW RIVER AIR STATION

Raw sewage spill is reported

Approximately 7,500 gallons of raw sewage spilled Sunday at a lift station behind the enlisted housing area at the New River air station, according to a spokesman for the air station Joint Public Affairs Office.

The sewage spilled into a storm drain that emptied into Brinson Creek, which empties into the New River, according to the spokesman.

The spill was caused by a mechanical failure of pump motors at the lift station. Lift stations are collection points that send sewage on to the treatment plant.

Camp Lejeune officials have flushed the storm drain with chlorine and placed granulated HTH chemicals on the ground in efforts to help dilute the spill.

The incident is under review to determine the cause of the mechanical failure of the motor.

ONSLOW COUNTY

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LOCAL/REGIONAL

Study looks at groundwater

Survey to show effects on wells

BY RICHARD F. SMITH
MILITARY NEWS STAFF

Preliminary results of a groundwater study at Camp Lejeune indicate there is little protection from surface contamination in some areas for the aquifer that supplies drinking water to wells.

The primary supply source for the base is the Castle Hayne aquifer, a sand and limestone aquifer lying between 50 and 300 feet below the land surface.

An aquifer is an underground layer of porous rock or sand containing water into which wells can be drilled.

"We have not detected any contamination of drinking water wells recently," said Stephany Del Re,

manager of the base Installation Restoration Program.

The study is being done by U.S. Geological Survey personnel in cooperation with the Marine Corps.

Initial study results show there are few clay beds in some sections between the land surface and the production zones of the aquifer, offering scant protection from pollution from the surface.

The study will provide a detailed description of the groundwater resources of the base that will guide future development, according to Douglas A. Harned of the U.S. Geological Survey. He is the senior author of the report.

The objective is to provide a detailed description of the base's groundwater resources for use in constructing a flow model that can be used to indicate effects on groundwater flow if some water-supply wells are shut down or new

wells are added to the system.

A network of six water-level observation wells has been established at Lejeune by the U.S. Geological Survey for use in testing the accuracy of the groundwater flow model. Those wells are not for drinking water.

Lejeune has been placed on the federal National Priorities List for identification and cleanup of hazardous waste sites.

Groundwater monitoring wells around NPL sites have detected levels of hydrocarbons, organics and metals. Those wells are not used for drinking water, Ms. Del Re said.

Installations are ranked on the list by the Hazard Ranking System, which assigns values relating to the risk of movement of contaminants through ground water, surface water and air.

Entered from 8 a.m. to 5 p.m.

Contaminated waste sites may lead to EPA National Priorities Listing

As a result of a 1983 study program to identify, evaluate, control and correct past deficient waste disposal sites and practices involving ground water contamination here, the Environmental Protection Agency is likely to place Camp Lejeune on the National Priorities List in late February.

The NPL establishes priorities for the EPA's use of Superfund monies to clean up hazardous waste sites in the United States.

Camp Lejeune uses and produces large quantities of hazardous materials and their products. Although no hazardous waste is permanently stored aboard base, most hazardous waste disposal relied on burial.

This disposal method was acceptable at the time, but was subsequently found to potentially cause long-term problems through release of hazardous material into the soil and ground water. Camp Lejeune realizes that the high amounts of hazardous material used aboard base presents the potential for damage to the environment, and vigorously pursues hazardous waste planning and training. The base has been recognized as a Model Installation, and will use the same commitment to excellence to deal with the ground water contamination, and will work with the EPA to clean the sites as rapidly as possible.

The initial steps to clean up the sites involve the Installation Restoration (IR) Program, a three-phase nationwide process to identify past hazardous waste sites and take necessary cleanup action.

The first phase is a Preliminary Assessment/Site Inspection (PA/SI), and was completed in April 1983 for Camp Lejeune. The study identified 76 potentially contaminated sites, and concluded that while none of the sites pose an immediate threat to human health or the environment, 22 sites warranted further investigation.

The area primarily under study at Camp Lejeune is the Hadnot Point

industrial area. In 1985, traces of trichloroethylene, dichloroethylene and tetrachloroethylene were found in 8 of 35 wells in this area. The affected wells were immediately closed, and have remained closed since. No single contamination point has been identified as the source of contamination for the wells, and no contamination has been detected by periodic tests of drinking water aboard base.

The chemicals found are used primar-

ily as solvents and degreasers.

Following the placement of Camp Lejeune on the NPL, the Base has six months to initiate Remedial Investigation/Feasibility Study (RI/FS) action in consultation with EPA and appropriate state authorities. Time to complete the RI/FS is negotiable and must include public participation.

Within 180 days after completion of the RI/FS, Camp Lejeune must reach an

agreement with EPA and state authorities for the completion of all necessary remedial actions at Camp Lejeune. Substantial continuous physical on-site remedial action must take place no later than 15 months after completion of the RI/FS.

Camp Lejeune continuously pursues a vigorous program of hazardous waste training, handling and management that includes annual courses of instruction for

those dealing with hazardous waste. In addition, the base has minimized the use of hazardous materials by substituting non-hazardous substances for vehicle maintenance and parts cleaning.

The base has established a 24-hour Hotline for questions and comments concerning the National Priorities Listing. The number is 451-5100.

Chemicals discovered in Lejeune water wells

By RICHARD F. SMITH
Daily News Staff

A Navy study of industrial contamination has found volatile chemicals in 10 deep-water wells at Camp Lejeune, causing Tarawa Terrace residents to face restrictions on water use while a new line is built.

Substances found in the wells were described today as "volatile organic chemicals" by Gunnery Sgt. John Simmons of Lejeune's Joint Public Affairs Office.

He said he had no information on whether the well water is dangerous to humans.

"According to the memo from the chief of staff, facilities, no federal or state regulations mandate an unacceptable level of these organic chemicals in drinking water," Simmons said.

"The wells were ordered closed pending further study and analysis under the Navy Assessment and Control of Installation Pollutants Program," the spokesman said.

"Ten deep-water wells aboard base have been taken off-line since December as a result of a Navy-wide study of industrial contamination aboard Navy and Marine Corps installations," Simmons said.

"Eight of the closed wells are in the Hadnot Point water-supply system, which services the main-side area of the base. The other two wells are in Tarawa Terrace," he said.

"The well closures have not created any water-supply problems for Hadnot Point, but the Tarawa Terrace system can barely meet current demand for finished water.

"As a result, the commanding general (Maj. Gen. Louis H. Buehl III) has imposed some water restrictions on Tarawa Terrace residents," Simmons said.

"A recent bulletin sent to Tarawa Terrace housing residents urged them to conserve water in the following ways: water lawns Monday through Thursday from 6 a.m. to 9 a.m. only, do not wash cars, do not let the water run while brushing your teeth or washing dishes and only flush toilets for sanitary purposes," Simmons said.

Impact statement ready by summ^{Daily News 27 May '90}

BY RICHARD F. SMITH
DAILY NEWS STAFF

The Final Environmental Impact Statement on proposed expansion of Camp Lejeune near Holly Ridge is now expected to be submitted to Marine headquarters by mid-summer.

Base spokesmen earlier estimated the FEIS would be sent to head-

Report on area of base expansion

quarters in March, then changed the possible submission date to April.

The March estimate "was a self-imposed goal" from base officials, said Maj. Stuart Wagner, director of the Lejeune Joint Public Affairs Office.

"We're still reviewing the docu-

ment and looking at questions and we'll continue to do that until we're satisfied that it's complete and thorough," Wagner said.

"Contents of the FEIS will be made public after Headquarters, Marine Corps, reviews it. If they decide to go forward with the pro-

posal, we'll make the FEIS and there is a 30- to 45-day period," Wagner said.

No public hearings are on the FEIS, he said. Seven meetings were held earlier in draft proposal.

Wagner was asked how many will address the

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■ IMPACT/ FROM 1B

wetlands in the tract proposed for expansion.

Federal law restricts developments in wetlands, a regulation that doomed several alternative sites to the proposed outlying Harrier jet facility at Oak Grove airfield in Jones County. The Marine Corps has abandoned that expansion project.

Lejeune's "Draft Environmental Impact Statement addressed the wetlands issue and I don't see any change in that," Wagner said.

"The Sandy Run area has 36 acres of wetlands. Our policy is no net loss (of wetlands). We plan to fill in 36 acres of wetlands and to mitigate that by creating 36 acres of wetlands somewhere else on base. If you fill in an acre, you have to create an

acre," Wagner said.

No location for the new wetlands has been determined.

After the FEIS is reviewed at Marine headquarters, it will be sent to Secretary of the Navy H. Lawrence Garrett III.

It will then be placed on the Federal Register.

Copies will be sent to all persons who have requested them and will be available at the Onslow County Library in Jacksonville, base libraries and the Lejeune Joint Public Affairs Office.

Marine planners say they need more training space for new weapons systems.

Officials prepare for hazardous site cleanup

BY RICHARD F. SMITH
DAILY NEWS STAFF

A multimillion-dollar effort to clean up hazardous-waste sites at Camp Lejeune and New River air station will start before Oct. 1, said a Lejeune spokesman.

Officials from Lejeune, the Navy, the U.S. Environmental Protection Agency and the state of North Carolina will meet Wednesday at Lejeune to sign a Federal Facility Agreement outlining the responsibilities of the parties in the cleanup of 23 hazardous-waste sites at both bases.

The agreement commits all parties to a timely cleanup of those sites, which were listed on the

EPA's National Priorities List on Oct. 4, 1989.

"Initiation of cleanup actions will begin this fiscal year with construction of a fuel-recovery system for the Hadnot Point fuel farm" at Lejeune, said spokesman Capt. Ken White. Leaks polluted ground water and soil in that area.

"In addition, the base has initiated the remedial investigation/feasibility study for the Hadnot Point Industrial Area. That's to examine the extent of ground-water contamination that's been identified there," White said.

"An RI/FS for the chemical dump at the Rifle Range and the air station Mercury site will be started in

late fiscal year 1991 or early fiscal year 1992," the captain said.

"For the Tarawa Terrace and a couple of other sites — the JP5 and rapid-refueling sites (at New River) — construction contracts for recovery systems will be awarded in fiscal year 1991" which ends Sept. 30, White said.

The time frame for removal of pollutants "is dependent on the extent of contamination found in the RI/FS stage," he said.

"All the available (removal) technologies will be evaluated after the RI/FS work is done. They'll identify what technologies will be effective in dealing with the problems at a particular site. Those

technologies will be made public for review" and comment by area residents, White said.

Without speculating on the exact project cost, "The Installation Restoration Program will be a multimillion-dollar effort," White said.

The cost will be paid from the Defense Environmental Restoration Account, "the Department of Defense's Superfund program," White said.

Environmental studies at Lejeune and New River have located 26 sites that require further study because of past hazardous-waste-disposal practices.

SEE WASTE/2B

WASTE FROM 1B

Of those, five have been identified for immediate study because of the potential threat they pose to health and the environment.

The five priority sites are:

■ Mercury contamination in an area of New River air station. There is also possible ground water pollution at that site.

■ A chemical landfill at the Rifle Range. The former disposal area is

contaminated with organics, metals, pesticides, cancer-causing polychlorinated biphenyls and tetrachloroethylene, a toxic chlorinated solvent found in many types of cleaning products.

■ Lots 201 and 203 off Holcomb Boulevard at Lejeune. Buried barrels containing traces of DDT were uncovered in 1988. Localized soil contamination was also found.

■ Fuel leakage at the Hadnot Point fuel farm that has polluted soil and ground water.

■ Organic contamination by tetrachloroethylene in the soil and ground water in the Hadnot Point Industrial Area.

Testing performed in 1989 and 1990 showed that none of the contamination represents an immediate threat to public health or the environment.

State, EPA confirm milestone agreement with Camp Lejeune

Globe
2/14/11

and photo by
E. CHARLES

The first Federal Facilities Agreement between the state of North Carolina, the U.S. Environmental Protection Agency and a Department of Defense installation in the state was signed Feb. 13, here.

The agreement, a cooperative effort between the agencies and Camp Lejeune, will oversee environmental restoration and protection at previously identified hazardous

waste sites at Camp Lejeune and New River.

"The Federal Facilities Agreement ratifies our commitment to clean up hazardous waste sites at Camp Lejeune and MCAS New River," BGen. Michael P. Downs, CG, MCB, told a group of military, city, state and federal officials gathered at the Paradise Point Officers Club.

The signing of the agreement officially

SEE PACT, PAGE 13A



Jacqueline Schafer, assistant secretary of the Navy (installations and environment), passes the document outlining the new Federal Facilities Agreement to Greer Tidwell, regional administrator, Environmental Protection Agency, region IV.

PACT, FROM PAGE 1A

begins restoration and protection efforts, however, according to the general, "We have been actively engaged in this cleanup process for over 1 1/2 years."

The officials who signed the agreement were Jacqueline Schafer, assistant secretary of the Navy (installations and environment); Greer Tidwell, regional administrator, EPA region IV; and Edyth McKinney, assistant secretary for environmental protection, N.C. Department of Environment, Health and Natural Resources.

"The purpose of the agreement addresses the actual and potential releases of hazardous waste in accordance with the Superfund Law," Schafer said.

The Superfund is a U.S. government fund created for the cleanup of sites at which toxic waste, potentially hazardous to health or the environment, has been dumped. The monies used for restoration under Superfund come from surcharges placed on all chemicals produced by major chemical companies in this

The new agreement is intended to improve communications between state and federal regulatory agencies and the base; outline mutual obligations; establish timelines for cleanup processes; and stipulated penalties for non-compliance; and encourage public involvement in the process.

The base will also conduct remedial investigations, feasibility studies and comprehensive response and corrective actions toward environmental restoration at 23 sites.

Schafer told the audience that much of the hazardous waste found on base consists of chemicals commonly found at industrial and repair facilities. Some of the chemicals found here include jet fuel, cleaning solvents, diesel fuel, PCBs,

and some heavy metal deposits.

The agreement also signifies Camp Lejeune's willingness to cooperate with state and federal agencies, according to North Carolina's McKinney. Camp Lejeune wanted to "see these problems resolved."

The EPA's Tidwell alluded to this as well. "It's proof-positive that the military facilities are as concerned about environmental restoration as many of the people who are members of the conservation groups around the country."

Examples of Camp Lejeune's environmental commitment is evident in its recycling programs and restricted lands to protect wetlands and wildlife. The base has recycled 87,000 gallons of oil with a net profit of over \$300,000 since the recycling program started. It has also dedicated 20 percent of its land to exclusive wildlife habitation. These areas are restricted from military training.

McKinney also noted that the state and Camp Lejeune have formed a "partnership in this environmental venture together ... The military base here is concerned about being good neighbors with the community and working together with it," she said.

That relationship is based on a 50-year commitment, according to Schafer. "True to Marine Corps tradition, it is taking responsibility on all fronts," she said. "From cleaning up hazardous waste sites to preventing pollution and protecting natural resources and supporting Operation Desert Storm, [the base] is moving ahead to accomplish all its responsibilities."

However, Camp Lejeune's responsibilities toward environmental restoration won't come quickly or cheaply, according to Schafer. "It will take 10s of millions of dollars over possibly 10 years."

Marines sign waste cleanup pact

BY RICHARD F. SMITH
DAILY NEWS STAFF

The effort to clean up hazardous-waste sites at Camp Lejeune and New River air station moved ahead Wednesday with the signing of a Federal Facility Agreement on removal of the contaminants.

The pact was signed by Jacqueline E. Schafer, assistant secretary of the Navy for installations and environment; Greer C. Tidwell, regional administrator for region

Hazardous

four of the Environmental Protection Agency and Edythe McKinney, assistant secretary for environmental protection for the N.C. Department of Environment, Health and Natural Resources.

The signing took place at the Lejeune Officers Club. Brig. Gen. Michael P. Downs, commanding

sites targeted for project

general of Lejeune, served as host.

The agreement outlines the responsibilities of the three parties in the cleanup of 23 hazardous-waste sites at Lejeune and New River.

After speeches and the signing, Ms. Schafer joked to Downs, "It's a coincidence that it's Ash Wednesday. It's not considered penance,

general, for your (the base's) past sins." The remark drew laughter from the audience.

Ms. Schafer said the pact was the first signed in North Carolina for any federal agency.

She quoted a speech by Secretary of Defense Dick Cheney given last September before a defense and en-

vironmental forum in Washington, D.C.

Cheney discussed the mission of the U.S. armed forces, but added, "That mission is no excuse for ignoring the environment. Defense and the environment is not an either/or proposition. To chose between them is impossible."

Marines and base civilian employees "are working here to

SEE WASTE/2B

protect and restore the environment of Camp Lejeune and Marine Corps Air Station, New River," Ms. Schafer said.

The pact establishes a framework for preservation of environmental quality at Lejeune and New River, she said.

The agreement "does provide a mechanism for solving technical differences as we move forward," Ms. Schafer said.

"We will all depend on committed

environmental professionals to ensure steady progress," she said.

Problems caused by pollution in the past "will take time and effort to solve. Although the process never seems to move as quickly as we like, we're off to an active start," Ms. Schafer told the audience.

In past years, hazardous substances dumped at Lejeune and the air station included polychlorinated biphenyls, degreasers, solvents and heavy

metals, she said.

Now, "Our bases recognize our responsibility not only to the environment, but to our community neighbors," Ms. Schafer said.

Nearly 20 percent of Lejeune is subject to restrictions protecting wetlands and red-cockaded woodpeckers, she said.

She said the Navy, the state and the EPA are "a winning team to get the job done."

Waste pact signed/ 1B



DAILY NEWS/DON BRYAN

State and federal officials on Wednesday at Camp Lejeune signed an agreement outlining plans for cleaning up 23 hazardous-waste sites at area military bases.

DAILY NEWS - JACKSONVILLE, NC
2/14/91 LOCAL NEWS

Community Affairs
Globe

OUR ENVIRONMENT

By Cpl. D.A. Drake

Base assesses waste sites

Camp Lejeune made the National Priority List of the U.S. Environmental Protection Agency in October 1989.

This wasn't good news for Camp Lejeune. However, since then people here are already mapping out ways to clean up hazardous waste sites and assess other sites that could contain hazardous waste.

In an attempt to provide information to people about an upcoming assessment, an open house was held at the Tarawa Terrace Community Center.

Attendance at the two sessions was not great, but the information was. Stephanie Del Re, installation restoration manager, was present to answer questions about the five sites to be assessed.

These sites are to be tested for possible hazardous waste disposal. Site assessments are done on sites that have not been fully identified as being hazardous.

One such site is a landfill located in Tarawa Terrace east of the sewage treatment plant between Tarawa Boulevard and Northeast Creek. "There has been no sampling to date at the TT site. Because it is close to public housing, we feel responsible enough to check to make sure no hazardous waste was dumped or buried there.

"There is no known knowledge of any hazardous waste at this site. However, because it was a dump we felt we should assess it," Del Re said.

The landfill was closed in 1972. The materials said to have been dumped there before its closing were construction debris, sewage treatment plant filter agents and household trash.

The other sites are the old Piney Green Road volatile organic contaminants area here, the Crash crew burn pit at MCAS New River, an acre of land at the Paradise Point golf course and an old creosote plant on Holcomb Boulevard.

Beginning June 10 the five sites will undergo assessments to determine if hazardous waste materials are present. An assessment team will take samples of ground water, surface water, soil and sediment to analyze for contamination.

Before the teams arrive, signs will be placed around the sites to keep people out of the area.

Since it is not known whether hazardous waste is present in any of these areas, protective gear, coveralls, protective boots, safety goggles and headgear will be worn.

If hazardous waste is found, law requires that cleanup operations take place within 15 months after assessment is completed.

A major concern is how all of this affects people who live or work in these areas.

It is known that there has been some ground water contamination. In 1985 three supply water wells were shut down due to contamination. However, this doesn't pose an immediate threat to humans or wildlife at this time because base water is tested and treated for contaminants.

Testing is scheduled to last until the end of July, and it takes about four months for the report on the findings to be completed, according to Del Re.

Globe

Environmental cleanup Open House to be held

An environmental cleanup Open House will be held at the Tarawa Terrace Community Center April 30. There will be two sessions: 1-3 p.m. and 7-9 p.m.

Information at both sessions will address upcoming activities concerning the inspection and possible cleanup of suspected hazardous waste sites on Camp Lejeune at the following locations: Tarawa Terrace Dump, Crash Crew Burn Pit, Piney Green Road VOC Area, Paradise Point Golf Course and Old Creosote Plant.

Officials from the base will be on hand to explain the base's investigative efforts of the potential hazardous waste sites identified under the Federal Facilities Agreement. These sites have been identified by the EPA as needing further investigation to determine if they are hazardous.

The public is encouraged to attend.