

January 6, 1993

WWI Munitions Unearthed At D.C. Construction Site

Martin Weil, Santiago O'Donnell, Washington Post Staff Writers

Three houses were evacuated in the Spring Valley area of upper Northwest Washington yesterday and part of the neighborhood was cordoned off late last night after excavation work unearthed a cache of munitions dating to World War I.

Explosives found in a trench in the 5100 block of 52nd Court NW included four unexploded mortar rounds, as well as three rounds for a 75mm artillery piece, authorities said.

Officials said that the area was secure last night and that the zone in which damage from a blast could occur had been evacuated.

But they also raised the possibility that more munitions might be buried there. They said that they expect to begin disposal of the ordnance this morning and that additional evacuations might be required.

In addition to police and fire officials, military explosives experts and bomb disposal units were called to the site after ordnance first turned up about 1:40 p.m., according to Battalion Chief Theodore O. Holmes, a D.C. fire department spokesman. No injuries or detonations were reported.

The site is in an area where the W.C. & A.N. Miller Development Co. is building luxury houses on what had been one of the largest undeveloped tracts in the city.

The neighborhood, which is also referred to as Westmoreland Heights, lies within a triangle formed by Massachusetts Avenue, Dalecarlia Parkway and Van Ness Street.

A backhoe was digging a trench for a sewer line in front of a recently constructed house when the munitions were discovered.

It was not clear when or why the explosives were buried there, but a spokesman for an Army explosives unit said the spot might have been used years ago as a munitions scrapheap.

"If they did stumble on an old burial site that nobody charted, [there is] no telling how big that site might be," said a spokesman for the Army ordnance disposal team from the Aberdeen Proving Ground in Maryland.

Jim Allingham, spokesman for the Army explosives unit that was flown to Washington by helicopter from Aberdeen, said the four World War I-era mortar rounds found at the site all had fuses in them.

"Any time you've got a fuse in it, you're dealing with a hot potato," Allingham said.

Also found, according to Allingham, was a 105mm round, which was broken, lacked a fuse and was apparently "not operational."

He said the three 75mm rounds also were described as lacking fuses. He said that it was unclear whether those rounds still contained explosives but that even if they did, they were unlikely to detonate without fuses.

Nonexplosive material at the site included equipment for transporting munitions and Livens projectors, which are used for firing munitions similar to mortar rounds, Allingham said. He also said that "the explosives in any of the munitions may have lost their potency with age."

Officials said part of their work today would be to try to reconstruct the history of the site and search for records that might show whether any additional materials are buried there.

January 8, 2001 Monday

Excavation By Military Forces Some AU Closings; Buildings, Homes to Be Emptied For Dig; Neighbors Concerned

Amy Argetsinger and Steve Vogel, Washington Post Staff Writers

George Arnold, the longtime archivist for American University, was home reading the newspaper one morning seven years ago when he saw an article about a strange discovery made at a construction site the day before.

A backhoe operator digging a new sewer line in upper Northwest had uncovered a cache of live explosives -- four unexploded mortar rounds and three rounds of uncertain volatility meant for a 75mm artillery piece. The stuff looked old. And no one seemed to know what it was doing there.

The story made no mention of American University, and the site described lay half a mile beyond campus. Nonetheless, Arnold rushed to work that January morning and started calling key people in the university administration.

"I knew what it meant," he says now of the discovery, "because I knew what happened here in World War I."

What happened at American University nearly 80 years earlier, when the U.S. Army tested horrific chemical weapons such as mustard gas on the then-rural campus, is once again forcing the university to probe the murky corners of its history and the soil it was built upon.

Indeed, excavation work beginning today will require AU to evacuate its admissions office, performing arts center and employee day-care center for several days. It also sharpens the focus of some angry community members: Spring Valley neighbors whose homes were built atop AU's testing grounds and whose health and property values could be affected by what lies buried there.

Since 1993, the U.S. Army Corps of Engineers has made several forays into the tree-lined neighborhood to excavate and remove munitions and other detritus of the experiments. Tests of soil in the area have found pockets with elevated levels of arsenic, a component of some of the poisonous gases tested there.

Now the District is launching a survey of Spring Valley residents to assess whether health problems might be related to toxins from buried munitions.

Some neighbors question the university's role: bringing the hazard to the quiet valley without alerting residents who moved in later.

AU officials, though, say they, too, are hapless bystanders whose forebears had no way to foresee the legacy of their 1917 decisions.

"We're all in this together," said David Taylor, chief of staff to President Benjamin Ladner. "It's not our munitions that were buried here; it's the Army's."

Army and university officials said the long-buried weaponry has never posed a significant danger or health risk to the university's 10,000 students -- most of whom will still be out on winter break during this week's cleanup.

For years, many at American were dimly aware that it had served as some kind of military center during the Great War, and this awareness fed a lively variety of campus legends.

Like the one about the McKinley Building, constructed with a hollow, domelike center. "We were all told it was so it would implode," rather than explode, if it accidentally blew up, recalled Gary Weaver, a professor of international communications for 33 years.

Not so, according to university officials. Neither is the fun fact posted on some Internet trivia sites claiming that mustard gas was invented at AU. It's a matter of record that the Germans, who unleashed it on Ypres in 1915, had it first.

What is true is that American University was in desperate straits in 1917. Established on paper in 1891, it didn't have enough money to open until 1914. Even then, it had only about 100 students and only one completed building on its 60 hilltop acres overlooking the city.

When the United States entered the war three years later, the university promptly offered its services to President Woodrow Wilson, and within weeks, the Army showed up. It drafted the civilian scientists and established Camp American University.

"It was a patriotic thing," said archivist Arnold, who believes the government probably compensated the university as well. "And we weren't using much of this anyway."

At least 48 forms of poison gas were tested on the countryside around campus, including mustard and cyanogen chloride, as chemists and engineers sought ways to deploy and defend against the new kind of warfare. Researchers tied dogs and goats to stakes in trenches dug around the area to study which ones died as chemical shells were fired off.

With the war's end in November 1918, operations at Camp AU shut down virtually overnight. Accounts in student newspapers from the time describe soldiers disposing of weaponry by means that today would be regarded as an environmental catastrophe.

Seventeen temporary buildings were deemed so "saturated with war gas and other dangerous chemicals" that their lumber could not be salvaged. So they were burned in a "suffocating" cloud of smoke.

Leftover explosives and poison gas were buried "far back on the University acres, [in] a pit deeper than the one into which Joseph was cast," according to a newspaper.

Life at the struggling little university resumed. Developers turned the farmland around the campus into an affluent neighborhood, now home to more than 13,000 people. Camp AU, meanwhile, fell into the mists of memory until the 1993 discovery.

For two years after that find, the Corps of Engineers was an almost daily presence in Spring Valley, where it mapped 600 acres, sampled soil, swept for metal and ultimately excavated material from 11 sites. In 1995, it ruled the area to be free of chemical munitions.

But the hazardous waste branch of the city health department raised questions about the cleanup and prodded the Corps of Engineers to go back for another look in 1998. The new investigation centered on the 4800 block of Glenbrook Road, along AU's southern perimeter.

Hardest hit, it turned out, were the yard of the South Korean ambassador and the yard of another home next to the ambassador's residence that also adjoins the campus. A lengthy operation at the South Korean compound found two chemical burial pits, glass and metal scraps and dangerous levels of arsenic in the soil. The cleanup of both properties continues to this day.

Members of the community -- many of whom had long grown used to the sight of Corps of Engineers trucks and workers in spacesuit-like gear -- were roused last month by a Washingtonian article that recounted much of the cleanup history. It included anecdotes about neighborhood dogs coming down with mysterious ailments and the cancer deaths of former Glenbrook Road residents.

City officials said in late December that they will survey the neighborhood for signs of cancer clusters or other illnesses that could be connected to toxins.

The article also re-aired allegations that the Army and AU had suspected the presence of buried munitions long before 1993. In 1986, AU asked the Army for information about any underground hazards that might impede construction of a new sports complex. The Army gave AU the all-clear, though an Environmental Protection Agency review pointed to questionable areas.

"They probably have not done the best job [communicating with neighbors] because they are scared of liability issues," said Ginny Durrin, a neighbor who is making a documentary about the Spring Valley cleanup.

University officials deny that they withheld pertinent information from neighbors. Taylor noted that the neighborhood's history was well known and all records were public. The EPA report, he said, did not say what, if anything, might be buried.

"The conclusion was that unless we find anything, proceed. The only way we could decide if we have a problem is if we uncovered anything," he said.

The reaction on campus has been largely muted. Weaver, the longtime professor, said the potential biohazard has mostly been the subject of jokes among staff.

Ken Biberaj, student body president, said that students were jolted by news reports but that most concerns have vanished.

A few years ago, several professors asked the university to investigate what appeared to be an unusual number of cancer cases among faculty members. The resulting study found no occurrences larger than in the general population.

Mary W. Gray, a longtime statistics professor, remembers quibbling with the study's methodology but dropping her concerns when no more cases cropped up. When she heard reports of arsenic contamination, though, she thought back to her earlier fears.

"I don't know what to think about the fact I've been sitting on top of something for 35 years," she said. Still, she does not fault the university. "You don't want to panic people," she said.

The latest operation will concentrate on an arsenic-contaminated lab disposal area discovered along the campus's southwest side by a city health department worker in 1999. The Corps of Engineers will use a mechanical excavator to dig four feet deep within a circle radiating about 200 feet, said Maj. Brian Plaisted, the site commander. Spotters will watch for intact bottles or other objects and place them in protective containers for testing.

Army and city officials disagree on what they expect to find. Army officials say they are not convinced that the disposal area was tied to chemical weapons testing, noting that some debris seems to date only to the 1970s. They also say they don't expect to find poison gas agents. City health officials, though, say their tests have found evidence of Lewisite, a chemical weapon made of arsenic.

The Corps of Engineers decided to evacuate nearby buildings during the four-day dig, including homes and the university's admissions and performing arts centers. The evacuations will let the engineers work faster, Plaisted said, since they will not have to stop every time they find potentially hazardous materials.

University officials decided that for parents' peace of mind, they would evacuate the nearby Child Development Center, a day-care program for children of AU staff, although it was not directly in the way.

Preliminary tests on the soil of the center's playground found elevated levels of arsenic, though still below EPA limits. Nervous parents showed up for a meeting with Corps of Engineers officials, but none have removed their children from the program, center director Verna Green said. The playground remains open to children but has been covered with wood chips.

Otherwise, the Spring Valley cleanup has triggered few disruptions in the university's daily operations. The biggest change, perhaps, is the decision to move orientation for prospective students to another side of campus.

Tom Meyers, vice president for enrollment services, said the Corps of Engineers' equipment has simply taken up too much parking space outside the admissions office.

He played down the impact of the cleanup on American University's attempts to recruit prospective students, saying he has received calls or letters from only five or six concerned families.

"There are so many people here sampling the air and water every day," Meyers said, "I just don't see it as a huge risk."

January 27, 2001

Arsenic, Illnesses Worry D.C.; Unusual Ailments Near Tainted Sites

Steve Vogel, Washington Post Staff Writer

New findings of arsenic, combined with several cases of unusual illnesses on one street, have caused concern among city and federal officials that there might be an environmental problem of growing magnitude in the Spring Valley neighborhood of Northwest Washington, where chemical weapons were tested by the Army more than 80 years ago.

Six new sites with elevated arsenic levels have been found on the campus of American University, in addition to those already disclosed at the school's child development center. Although officials say the levels found at the new locations are not a significant health threat based on what is known now, more comprehensive soil tests will be done.

Officials also have learned that within the past five years, two men who lived on Spring Valley's Sedgwick Street, in houses built over a trench used for the weapons tests, died of multiple myeloma, a bone-marrow cancer that strikes about five people per 100,000. They are also studying three other illnesses in three adjacent houses atop or near the site of the former trench.

The Army Corps of Engineers has agreed that soil tests it did in 1993 along Sedgwick Street, which found only moderate levels of arsenic, may not have been done at the proper depth, and it will return in April to conduct new tests.

Senior officials with the federal Environmental Protection Agency and the D.C. Department of Health caution that no link has been established between the illnesses and the weapons test sites, and they believe most of the neighborhood where 13,000 people live is probably free of serious contamination.

But taken together, the developments suggest to some officials that eight years after the Army began an emergency cleanup of Spring Valley and five years after declaring victory, resolution is further away than ever.

The ranking member of the House Committee on Energy and Commerce, Rep. John D. Dingell (D-Mich.), sent a letter Thursday to the district commander of the Army Corps expressing that sentiment.

The arsenic contamination, Dingell wrote, "leads me to question whether the Army Corps yet understands the full scope of this problem or whether it has determined what resources it will ultimately need to address all areas of contamination and potential danger to the residents of Spring Valley and the American University community."

Arsenic, a byproduct of some of the chemicals tested in Spring Valley, is the only significant health threat to emerge, according to officials from the EPA and the federal Agency for Toxic Substances and Disease Registry (ATSDR). Ingesting arsenic -- through groundwater, for example, or by swallowing dirt, as children do -- increases the risk of cancers of the skin, bladder, kidney, liver and lung and prostate, health experts say, although it has not been linked to multiple myeloma.

"Based on the available information in the literature, it's not likely," said Selene Chou, an expert on arsenic with ATSDR. But a government official who spoke on condition of anonymity said that "any bone-marrow problem can be arsenic-related."

As first reported by Washingtonian magazine, officials have learned of two cases of aplastic anemia over the past three decades that involved residents of adjacent houses on Sedgwick Street. Aplastic anemia is a rare and extremely serious disorder that affects one in 400,000 people and involves an unexplained failure of the bone marrow to produce blood cells.

Aplastic anemia has been linked to environmental toxins, including arsenic. "When you have two cases next door to each other, that's like having two Powerball winners next to each other," the official said.

The fifth case of illness, which officials learned about recently, involves pernicious anemia. It usually strikes older people, but the Army was contacted by a woman whose pernicious anemia was diagnosed years ago, when she was 19 and living on Sedgwick Street in a house built over the trench. Because she was so young when the illness

was diagnosed, officials suspect she might have been suffering from chronic arsenic poisoning masquerading as pernicious anemia.

Given the reported illnesses, the city has decided to analyze its cancer records for patterns. "Because we're seeing [arsenic] is elevated, we feel it's necessary to review the data," said Lynette Stokes, who heads the Health Department's Bureau of Hazardous Material and Toxic Substances.

Concern over the illnesses "certainly plays a part" in the decision to retest in the vicinity of the former Sedgwick trench, said Maj. Brian Plaisted, the on-site commander for the Army.

Hair samples will be taken next week from children who attend the AU day-care center, where findings at the playground show arsenic at levels much higher than previously known. Samples from the playground averaged 60 parts per million, with a high of 498, well above the EPA limits of 43 ppm.

The six new sites at AU are west of the day-care center and include athletic fields. Though the arsenic readings were below the EPA's soil-removal level, they were above the level at which the Army has agreed to do more tests. That will be done next month.

Sedgwick is not the only street where more soil tests will be conducted. After two years of excavation at the South Korean ambassador's residence on Glenbrook Road in a search for jugs of buried mustard agent, city officials now believe the actual burial site is next door. Although the Army is not as certain of that, it will be digging test pits on the adjacent property next month.

The new soil sampling on Sedgwick Street will be done at five properties atop the former trench, including four of the houses where illnesses have been reported.

"There was some question about the previous sampling," Plaisted said. Earlier testing was done at a depth of several feet but did not include surface sampling. Nor did it test the soil at the bottom of the trench, levels at which city officials say the Army would have been more likely to find contaminants.

In addition to Sedgwick Street and Glenbrook Road, the Army will perform tests at 11 other nearby houses where elevated arsenic levels have been measured and is considering resampling other sites, including a similar trench around 52nd Court and a mustard agent testing area near 49th and Rodman streets.

The corps began cleaning up Spring Valley in 1993, after a contractor digging a trench uncovered buried chemical munitions. Army findings in 1995 and 1996 declared the area safe. But after the city uncovered a photograph showing a World War I soldier burying jugs of mustard agent in a site that had not been investigated, the Army was forced to return.

"This is a tricky site," said Dana Abouelnasr, an official with the Agency for Toxic Substances and Disease Registry. "What's particularly concerning is there's no particular pattern. It's spotty. There are areas of high concentration next to areas of low concentration or no concentration at all."

The trench in what is now the 5000 block of Sedgwick Street was actually two rings, with the outer ring measuring 200 feet in diameter, and was the site of tests involving mustard agent, lewisite, cyanogen chloride, phosgene and other chemicals, Army records show. Shells containing the weapons were detonated from remote locations; when the gas cleared, scientists recorded the effect on animals staked in the trench.

After their father died of multiple myeloma a year ago, and 10 years after their mother died of a lymphoma at age 49, Joe Baker and his three brothers and sisters began wondering about Sedgwick Street.

"If we've been chronically exposed to this for the past 25 years, we need to know about it," said Joe Baker Jr., who grew up in one of the homes on Sedgwick.

In 1996, their neighbor directly across the road, Sherman J. Sexton, also died from multiple myeloma after living in the home 20 years.

"Two people on the same street, right across the street from each other, struck me as really odd," Baker said.

Sexton's widow, Moon-Shia Sexton, who still lives on Sedgwick, is skeptical that ground contamination is responsible. "I cannot say there is a connection," said Sexton, who added that her husband's work as a chemist might be a better explanation.

Some of the highest levels of arsenic -- more than 1,000 parts per million -- have been found in the back yard of what is now the South Korean ambassador's residence on Glenbrook Road, the site the Army concluded was the pit -- labeled "the hole called Hades" in the old photograph -- where jugs of mustard agent were buried.

Nancy Dudley and her two siblings grew up on that property in a home her parents bought in the late 1940s and lived in until 1978. Their mother, Argentina Dudley, died in 1984 of colon cancer; their father, Robert Dudley, died two years later of prostate cancer.

Dudley's mother spent "hours and hours" working in the garden, Nancy Dudley said. "We ate vegetables happily out of a garden that was irrigated with water that was on that property," she said.

Since learning of the site's chemical past in a Washington Post article two years ago, she and her siblings have monitored their health but found no problems.

"We want assurances that they're doing everything possible to protect not only those who are living there now, but those who lived there in the past," Dudley added.

The tests planned for the children using the AU child development center represent the first official attempt to measure any health impact from the chemical warfare tests.

"It's like a microcosm of the entire site," Abouelnasr said. "You have the most vulnerable part of the population exposed on a daily basis."