SPRING VALLEY—TOXIC WASTE CONTAMINATION IN THE NATION'S CAPITAL

HEARING

BEFORE THE

SUBCOMMITTEE ON THE DISTRICT OF COLUMBIA

OF THE

COMMITTEE ON GOVERNMENT REFORM

HOUSE OF REPRESENTATIVES

ONE HUNDRED SEVENTH CONGRESS

FIRST SESSION

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SPRING VALLEY—TOXIC WASTE CONTAMINATION IN THE NATION'S CAPITAL

FRIDAY, JULY 27, 2001

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON THE DISTRICT OF COLUMBIA,
COMMITTEE ON GOVERNMENT REFORM,
Washington, DC.

The subcommittee met, pursuant to notice, at 10:03 a.m., in room 2154, Rayburn House Office Building, Hon. Constance A. Morella (chairwoman of the subcommittee) presiding.

Present: Representatives Morella, Platts, Norton, and Watson.

Staff present: Russell Smith, staff director; Heea Vazirani-Fales, deputy staff director; Robert White, communications director; Matthew Batt, legislative assistant; Shalley Kim, staff assistant; Howard Dennis, professional staff for representative davis; Jon Bouker, minority counsel; and Jean Gosa, minority assistant clerk.

Mrs. MORELLA. Good morning. I'm going to call to order the Subcommittee on the District of Columbia for its hearing on toxic waste contamination in the Nation's Capital.

It is a pleasure to welcome you all, witnesses and interested parties, to the sixth hearing of the Subcommittee on the District of Columbia in this 107th Congress.

I want to recognize members of the subcommittee. We have, of course, the ranking member, who has been so valuable, the foundation of this subcommittee, Congresswoman Eleanor Holmes Norton. Later we expect that we will have Mr. Platts of Pennsylvania, who will be joining us, and probably Mr. Tom Davis of Virginia. And we have a new member from California, Congresswoman Diane Watson, who replaced Julian Dixon, who was somebody who served very valiantly on the District of Columbia Subcommittee.

I want to make special mention of our witnesses. They're here because of their expertise and knowledge regarding the identification or remediation of contaminated sites in Spring Valley, or they are here because they have been affected in some way by the burial of those dangerous chemical weapons. There are many others who fall into the latter category. I regret that we can't hear from all of them. If, however, there are some who want to submit testimony, the record will be open for 5 legislative days.

I want to remind witnesses that the rules of the Committee on Government Reform require that all witnesses be administered an oath prior to testifying, and I want to encourage our opening statements, because of the number of people that we have testifying in this important hearing, ask them if they would kindly confine their statements to 5 minutes or so and that their entire statements will

be placed into the record. That will give us more opportunity for dialog with the witnesses.

The entire prepared statements will be in the record. We'll hold the record, again, for 5 legislative days.

Now I'd like to make some opening comments. In 1918, shortly after the United States entered World War I, the U.S. Army accomplished a chemical weapons testing station in upper Northwest D.C. In a neighborhood now known as Spring Valley. The Army leased the land from the American University and nine other property owners.

The American University experimental station soon became the world's second largest chemical weapons facility, behind only a similar outpost in Aberdeen, MD. At its peak, 1,900 military and civilian employees worked there, and untold numbers of experimental chemical weapons were exploded over its hundreds of acres.

More than 80 years later, we're still struggling to determine the precise extent of the environmental and possibly human damage caused by the Army at its American University facility. Despite several cleanup efforts and more than one declaration that the area was safe, the Army Corps of Engineers is still locating buried munitions and discovering worrisome levels of arsenic and other chemicals in the soil. Residents with serious illnesses are left wondering if prolonged exposure to these chemicals is to blame. Parents are worried their young children might be the next ones to turn up sick.

The background of this case, including some aspects that are just now becoming known publicly, is long and complicated, but the important points are this: The U.S. Army twice examined the Spring Valley area, once in 1986 at the request of American University, and once beginning in 1993 after munitions were found by a construction crew. The first time, it decided against substantial evidence suggesting otherwise that archival materials did not support further investigation. It was seemingly joined in this conclusion by American University.

The second time the Army Corps of Engineers spent 2 years identifying and removing munitions and conducting soil samples. It ultimately declared the area safe, only to be proved wrong after the D.C. Government challenged its findings. The result, of course, is that for the past 2 years, the Corps has been back at Spring Valley extracting chemical weapons and performing more soil tests.

This shouldn't be taken to suggest that the U.S. Army is the only party at fault. While we are still learning all the facts, it's apparent that at best, the Army, American University, the Environmental Protection Agency and the District government and perhaps others may have failed to take aggressive action to learn the true nature of buried munitions at Spring Valley. At worst, there was a conspiracy of silence that jeopardized public health, threatened the houses of hundreds of families and eroded people's trust in government.

This situation raises many troubling questions, and among them, do we have a feasible plan for righting the wrongs at Spring Valley? Is it proper for the Army Corps to remain in charge of this cleanup operation, or is some kind of independent oversight warranted? And are there other Spring Valleys throughout—lurking

beneath the surface of our Nation's Capital or some other unsuspecting community?

Today's hearing will focus on many different aspects of the Spring Valley situation, but our goal is simple. We want answers, accountability and action. We want answers from the Army Corps of Engineers, from the Environmental Protection Agency, from American University, from anyone who knew or should have known of the dangerous chemicals that lay just below the Earth's surface.

Why did it take so long for this hazard to come to light? How could it have been prevented or the risk to human health at least mitigated? We demand accountability.

I find it difficult to believe that once the AU testing station closed in or about 1921, no one in a position of power gave it a second thought, and after a few years, no one, we've been told, even remembered that chemical weapons testing had been conducted there. This is quite amazing, given that American University later hosted military operations during World War II, and according to documents that my staff collected, the university discovered an unexploded bomb on its campus back in 1953 or 1954 during construction of its TV tower. Despite that, it's at least evident that the Army, the American University, the EPA and others had a good idea of the magnitude of the contamination no later than 1986, following the university's research of the public archives, and yet nothing was done.

These are the answers we seek.

Finally, we require action. The Army Corps, working with the city, the residents and other parties, has pledged to test every property in Spring Valley, all 1,200 of them, for arsenic and other chemicals and then followup with necessary remediation. This subcommittee is very interested to hear how this process is progressing; and from the preliminary information that we have, however, I must say I'm not happy with the pace of this testing. It needed to be done yesterday.

I want to conclude with a question posed by a Spring Valley resident named Ed Stephens: "When will we ever be sure this place is totally clear of munitions?" Unfortunately, as of today, July 27, 2001, the U.S. Government does not have an answer for him. It is especially unfortunate, because Mr. Stephens asked this question, according to a Washington Post article, on January 6, 1993, 1 day after he and 24 other families were forced to evacuate their homes because munitions were found nearby. And after all this time, the people of Spring Valley deserve an answer.

I shall now recognize the distinguished ranking member of the subcommittee, Congresswoman Eleanor Holmes Norton, for her opening statement.

[The prepared statement of Hon. Constance A. Morella follows:]

CONSTANCE A. MORELLA
8TH DISTRICT, MARYLAND

COMMITTEE ON GOVERNMENT REFORM
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2228 RAYBURN HOUSE OFFICE BUILDING
WASHINGTON, DC 20515
(202) 225-5341
FAX: (202) 225-1389

www.house.gov/morella

51 MONROE STREET
SUITE 507
ROCKVILLE, MD 20850
(301) 424-3501
FAX: (301) 424-5992

CHAIRWOMAN CONSTANCE A. MORELLA
HOUSE OVERSIGHT SUBCOMMITTEE ON THE DISTRICT OF COLUMBIA

OPENING STATEMENT
"SPRING VALLEY: TOXIC WASTE CONTAMINATION
IN THE NATION'S CAPITAL"

JULY 27, 2001

In 1918, shortly after the U.S. entered World War I, the U.S. Army established a chemical weapons testing station in upper Northwest D.C., in a neighborhood now known as Spring Valley. The Army leased the land from American University and nine other property owners.

The American University Experimental Station soon became the world's second-largest chemical weapons facility, behind only a similar outpost in Aberdeen, Maryland. At its peak, 1,900 military and civilian employees worked there, and untold numbers of experimental chemical weapons were exploded over its hundreds of acres.

More than 80 years later, we are still struggling to determine the precise extent of the environmental – and possibly human – damage caused by the Army at its American University facility. Despite several clean-up efforts, and more than one declaration that the area was safe, the Army Corps of Engineers is still locating buried munitions and discovering worrisome levels of arsenic and other chemicals in the soil. Residents with serious illnesses are left wondering if prolonged exposure to these chemicals is to blame. Parents are worried their young children might be next ones to turn up sick.

The background of this case, including some aspects that are just now becoming known publicly, is long and complicated. But the important points are this:

The U.S. Army twice examined the Spring Valley area, once in 1986 at the request of American University, and once beginning in 1993 after munitions were found by a construction crew. The first time, it decided – against substantial evidence suggesting otherwise – that archival materials did not support further investigation. It was seemingly joined in this conclusion by American University.

The second time, the Army Corps of Engineers spent two years identifying and removing munitions and conducting soil samples. It ultimately declared the area safe – only to be proved wrong after the D.C. government challenged its findings. The result, of course, is that for the past two years, the Corps has been back at Spring Valley, extracting chemical weapons and performing more soil tests.

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This should not be taken to suggest that the U.S. Army is the only party at fault. While we are still learning all the facts, it appears that – at best -- the Army, American University, the Environmental Protection Agency, the District government and perhaps others, failed to take aggressive action to learn the true nature of buried munitions at Spring Valley.

At worst, there was a conspiracy of silence that jeopardized public health, threatened the houses of hundreds of families, and eroded people's trust in government.

This situation raises many troubling questions, among them: Do we have a feasible plan for righting the wrongs at Spring Valley? Is it proper for the Army Corps to remain in charge of this clean-up operation, or is some kind of independent oversight warranted? And, are there any other Spring Valleys out there, lurking beneath the surface of our nation's capital or some other unsuspecting community?

Today's hearing will focus on many different aspects of the Spring Valley situation, but our goal is simple: We want Answers, Accountability and Action.

We want answers – from the Army Corps of Engineers; from the Environmental Protection Agency; from American University; from anyone who knew or should have known of the dangerous chemicals that lay just below the Earth's surface. Why did it take so long for this hazard to come to light? How could it have been prevented, or the risk to human health at least mitigated?

We demand accountability. I find it difficult to believe that once the A.U. testing station closed, in or about 1921, no one in a position of power gave it a second thought. After a few years, no one, we have been told, even remembered that chemical weapons testing had been conducted there.

This is quite amazing, given that American University later hosted military operations during World War II, and, according to documents my staff collected, the University discovered an unexploded bomb on its campus back in 1953 or 1954, during construction of its TV tower.

Despite that, it is at least evident that the Army, American University, the EPA and others had a good idea of the magnitude of the contamination no later than 1986, following the University's research of the public archives. And yet, nothing was done. This must be answered for.

Finally, we require action. The Army Corps, working with the city, the residents and other parties, has pledged to test every property in Spring Valley – all 1,200 of them – for arsenic and other chemicals, and then follow up with necessary remediation. This subcommittee is very interested to hear how this process is progressing. From the preliminary information I have, however, I must say I am not happy with the pace of this testing. It needed to be done yesterday.

I want to conclude with a question posed by a Spring Valley resident named Ed Stephens: "When will we ever be sure this place is totally clear of munitions?" he asked.

Unfortunately, as of today -- July 27, 2001 – the U.S. government does not have answer for him. It is especially unfortunate because Mr. Stevens asked this question, according to a *Washington Post* article, on January 6, 1993, one day after he and 24 other families were forced to evacuate their homes because munitions were found nearby.

After all this time, the people of Spring Valley deserve an answer.

Mrs. NORTON. Thank you very much, Madam Chair. I appreciate that our Chair, Connie Morella, has been willing to schedule this hearing before the August recess, and her willingness to call further hearings on toxic contamination in our Spring Valley community in the future, as appropriate.

When I listed Spring Valley in a letter containing a priority list for hearings at the beginning of the session, I believe that the matter ranked high in the need for oversight to get greater focus on the health effects on residents and to assure a more rapid cleanup so that residents could resume normal lives in their beautiful, tranquil community.

Recently, however, the plot has thickened. An investigation by the Washington Post revealed that the Army and/or Environmental Protection Agency and perhaps others may have suppressed information or, worse, analysis and audits concerning toxic waste may have failed to investigate evidence of risk to residents from toxic residue that they knew of and may have missed the presence of contaminants because of incompetence in at least some of the soil testing that was done.

Understanding who knew what and when, of course, is an indispensable component of our investigation. However, the most important contribution this subcommittee can make at this time is to identify and eliminate health risks to the community and to ensure that the remediation being undertaken now by the Army will remove all remaining toxins from Spring Valley rapidly and professionally.

Part of the problem in Spring Valley has been that the agencies involved have been investigating and monitoring themselves and have been accountable to no one else. It is our obligation to investigate these allegations fairly and openly. However, the ad hoc way in which the facts have tumbled out, I believe, warrants an even deeper investigation than our hearings can provide.

In addition to our own subcommittee work, I'm asking our Chair, Mrs. Morella, to join me in requesting an investigation by the General Accounting Office of exactly what occurred in Spring Valley and other D.C. neighborhoods—who was responsible, what levels of toxicity remain, what would constitute adequate remediation, what the health risks are and to whom, how the health risks may be eliminated permanently, and what violations of law may be raised.

I have gone into the Spring Valley community on several occasions and have always been assured by the Army Corps of Engineers that the matter was close to resolution.

The continuing uncertainty surrounding the entire Spring Valley controversy has been nothing short of cruel. Some residents do not know if illnesses they and their families have acquired are the result of the presence of toxins. Other residents fear that they or their children will become ill. The very least the government must do now is to eliminate as much uncertainty concerning health risks as possible, and in appropriate cases, compensate individual victims.

The community at large is owed a clean bill of health that no one can give at this time, nor am I sure that other neighborhoods in the district are free of toxic munitions and chemicals, particularly given the way we discovered these toxins, by accident, by exca-

vation when people were building homes. The Congress denied District residents their own municipal government for 100 years until 1974. If private parties could be persuaded to allow land to be used for weapons testing, there is no telling what might have occurred in neighborhoods near Federal land when the District of Columbia was little more than a Federal fiefdom.

We need to know if other neighborhoods are contaminated now. Spring Valley is only one of thousands of similar sites across the Nation. The Spring Valley experience has led me to become an original cosponsor of the Ordnance and Explosive Risk Management Act, which requires the Department of Defense to establish a single point of contact for policy and budgeting issues related to former military sites, creates an inventory of explosive risk sites, sets up a separate account for removal and cleanup of munitions, requires enhanced security at military sites and public awareness of the dangers at those sites, and creates an independent oversight panel.

For now, the subcommittee must give the most concentrated focus and attention to Spring Valley and its residents for the assistance we can render them and for what their experience can teach us for the rest of the country.

It would be wrong to rewrite history based on today's science. It is equally wrong to learn by accident of toxic wastes near where people live or work. Today's science must be brought to bear to make up for mistakes the government may not have known it was making after World War I.

Today's mistakes in dealing with these wastes make the government culpable, however. Therefore, let us work together to accelerate remediation through a full and competent cleanup that includes independent verification that both toxic wastes and health risks have been eliminated.

I welcome all of today's witnesses and I look forward to their testimony.

Thank you, Madam Chair.

Mrs. MORELLA. Thank you very much, Congresswoman Norton.

[The prepared statement of Hon. Eleanor Holmes Norton follows:]

ELEANOR HOLMES NORTON
DISTRICT OF COLUMBIA

COMMITTEE ON
TRANSPORTATION AND
INFRASTRUCTURE

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RANKING MINORITY MEMBER,
DISTRICT OF COLUMBIA

CIVIL SERVICE AND
AGENCY ORGANIZATION

Congress of the United States
House of Representatives
Washington, D.C. 20515

Opening Statement of Congresswoman Eleanor Holmes Norton
D.C. Subcommittee Hearing on "Spring Valley -- Toxic Waste Contamination in the Nation's Capital"

July 27, 2001

I appreciate that our chair, Connie Morella, has been willing to schedule this hearing before the August recess and her willingness to call further hearings on toxic contamination in our Spring Valley community in the future as appropriate. When I listed Spring Valley in a letter containing a priority list for hearings at the beginning of the session, I believed that the matter ranked high in the need for oversight to get greater focus on the health effects on residents, and to assure a more rapid clean up so that residents could resume normal lives in their beautiful, tranquil neighborhood.

Recently, however, the plot has thickened. An investigation by the Washington Post revealed that the Army and/or the Environmental Protection Agency (EPA) may have suppressed information, or worse, analyses and audits concerning toxic waste, may have failed to investigate evidence of risks to residents from toxic residue that they knew of, and may have missed the presence of contaminants because of incompetence in at least some of the soil testing that was done. Understanding who knew what and when of course is an indispensable component to our investigation. However, the most important contribution this subcommittee can make at this time is to identify and eliminate health risks to the community and to ensure that the remediation being undertaken now by the Army will remove all remaining toxins from Spring Valley rapidly and professionally.

Part of the problem in Spring Valley has been that the agencies involved have been investigating and monitoring themselves and have been accountable to no one else. It is our obligation to investigate these allegations fairly and openly. However, the ad hoc way in which the facts have tumbled out, I believe, warrants an even deeper investigation than our hearings can provide. Therefore, in addition to our own subcommittee work, I am asking our chair, Ms. Morella, to join me in requesting an investigation by the General Accounting Office (GAO) of exactly what occurred in Spring Valley and other D.C. neighborhoods, who was responsible, what levels of toxicity remain, what would constitute adequate remediation, what the health risks are and to whom, how the health risks may be eliminated, and what violations of law may be raised.

815 15TH STREET, N.W., SUITE 100
WASHINGTON, D.C. 20005-2201
(202) 783-5065
(202) 783-5211 (FAX)

2136 RAYBURN HOUSE OFFICE BUILDING
WASHINGTON, D.C. 20515-5101
(202) 225-8050
(202) 225-3002 (FAX)
(202) 225-7829 (TDD)
www.house.gov/norton

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SUITE 300
WASHINGTON, D.C. 20020-5734
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I have gone into the Spring Valley community on several occasions and have always been assured by the Army Corps of Engineers that the matter was close to resolution. The continuing uncertainty surrounding the entire Spring Valley controversy has been nothing short of cruel. Some residents do not know if illnesses they and their families have acquired are the result of the presence of toxins. Other residents fear that they or their children will become ill. The very least the government must do is to eliminate as much uncertainty concerning health risks as possible and, in appropriate cases, compensate individual victims.

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Spring Valley is only one of the thousands of similar sites across the nation. The Spring Valley experience has led me to become an original cosponsor of the Ordnance and Explosive Risk Management Act, which requires the Department of Defense to establish a single point of contact for policy and budgeting issues related to former military sites; creates an inventory of explosive risk sites; sets up a separate account for removal and clean up of munitions; requires enhanced security at military sites and public awareness of the dangers at those sites; and creates an independent oversight panel. For now our subcommittee must give the most concentrated focus and attention to Spring Valley and its residents for the assistance we can render them and for what their experience can teach us for the rest of the country.

It would be wrong to rewrite history based on today's science. It is equally wrong to learn by accident of toxic wastes near where people live or work. Today's science must be brought to bear to make up for mistakes the government may not have known it was making after World War I. Today's mistakes in dealing with those wastes make the government culpable, however. Therefore let us all work together to accelerate remediation through a full, competent and complete clean up that includes independent verification that both toxic waste and health risks have been eliminated. I welcome all of today's witnesses and look forward to their testimony.

Mrs. MORELLA. I'm now going to ask the first panel to come forward. I note that Dr. Walks has not joined us yet, nor has Mr. Gordon nor Dr. Albright. So Dr. Bailus Walker, Jr., Sarah Stowell Shapley, William Harrop, and Edward J. Miller, Jr.

Before you get comfortable, I'm going to ask you if you would stand so I can administer the oath to you. If you would raise your right hands.

[Witnesses sworn.]

Mrs. MORELLA. The record will note an affirmative response.

Welcome. Thank you for coming. Again, as I had stated initially, if you would be kind enough to confine your testimony to not exceed 5 minutes, knowing that it is—in its entirety, your testimony will be in the record, because we want to have an opportunity to ask some questions and because we have two other panels.

So if you don't mind starting off earlier than you thought you would, Dr. Bailus Walker, chairman of the District of Columbia Mayor's Spring Valley Scientific Advisory Panel, we're delighted to recognize you.

STATEMENTS OF IVAN C.A. WALKS, M.D., CHIEF HEALTH OFFICER OF THE DISTRICT OF COLUMBIA, ACCOMPANIED BY THEODORE J. GORDON, CHIEF OPERATING OFFICER, D.C. DEPARTMENT OF HEALTH; AND DR. RICHARD D. ALBRIGHT, JD, MS, ENVIRONMENTAL SPECIALIST/ORDNANCE & CHEMICAL WEAPONS EXPERT, D.C. DEPARTMENT OF HEALTH; DR. BAILUS WALKER, JR., CHAIRMAN, DISTRICT OF COLUMBIA MAYOR'S SPRING VALLEY SCIENTIFIC ADVISORY PANEL; SARAH STOWELL SHAPLEY, CO-CHAIR, SPRING VALLEY RESTORATION ADVISORY BOARD; WILLIAM C. HARROP, PRESIDENT, SPRING VALLEY-WESLEY HEIGHTS CITIZENS ASSOCIATION; AND EDWARD J. MILLER, JR., PRESIDENT, W.C. AND A.N. MILLER DEVELOPMENT CO.

Mr. BAILUS WALKER. Thank you, Chairwoman Morella and Ranking Member Norton and distinguished Members. I'm Bailus Walker, chairman of the District of Columbia Mayor's Spring Valley Scientific Advisory Panel, and I am professor of environmental occupation medicine at Howard University College of Medicine, and I appreciate the invitation to participate in the subcommittee's effort to determine a range of factors regarding chemical contamination in the Spring Valley community.

My comments will focus on findings, recommendations of the scientific advisory panel, which was appointed by the Mayor earlier this year in response to environmental and health concerns of the Spring Valley residents. And the panel was chosen for their technical expertise in toxicology and epidemiology, environmental occupation health sciences and soil analysis; and the panel included two residents from the Spring Valley community who are knowledgeable of the community. The Mayor charged the panel to review the processes and procedures under way regarding the identified and measured contaminants in the Spring Valley neighborhood, and the Mayor also charged us to assure that the best available scientific knowledge is applied in seeking answers to the residents' questions.

Madam Chairman, the full text of my report is attached and I ask that it be inserted into the record.

Mrs. MORELLA. Without objection.

Mr. BAILUS WALKER. And I will simply summarize our——

Mrs. MORELLA. Without objection, so ordered.

Mr. BAILUS WALKER. Thank you

Which is a reflection of the panel's concern.

First of all, I think the panel agreed with the approach that the Corps of Engineers was using to evaluate the soil. That plan was presented to the advisory panel in considerable detail, and it was our view, based on the expertise of our soil scientists, that this was a sound approach. The panel recommended also that the District of Columbia develop a very comprehensive plan; and I think earlier the District was just responding to complaints and concerns, and there was no clear-cut plan. And so our panel recommended that the District develop a comprehensive plan which would really enhance efforts to try to get an answer to some of the concerns raised by the community.

We also recommended that the District government use the soil sampling results from the Corps of Engineers as the basis for determining what additional human testing should be done. In other words, in areas or in neighborhoods on properties where there were high concentrations of arsenic or whatever contaminant, that would signal to the District of Columbia that should be testing about monitoring of the individuals who live on those hot spots.

We also recommended that the District of Columbia do another analysis of cancer trends. The presentation that was made to a panel lacked what we thought was a good comparison group. The comparison group was chosen from the census tracts next to Spring Valley, and we suggested that from a sound epidemiological standpoint, the control group should be outside of that area and under the same socioeconomic profile as the Spring Valley community.

We also recommended that the three agencies, District of Columbia, Corps of Engineers and EPA, really develop a plan for communicating the results of the environmental analysis as well as the health analysis, a plan so that the public—the community residents fully understood the scientific issues, as well as the data that was being collected. In other words, a kind of risk communication process should be developed.

Madam Chairman, those are the principal recommendations of our committee, and as I indicated, my full statement is attached. I would conclude that there is a need for a full health risk assessment of the potential exposure contaminants—of the residents to the contaminants in that community. We felt that there was a need for more data before we could draw any sound conclusion with respect to health and environmental issues.

That concludes my testimony, Madam Chairman. I invite any questions that you may have.

Mrs. MORELLA. Thank you, Dr. Walker. We will address questions to you at the end of the first panel.

[The prepared statement of Mr. Walker follows:]

Testimony of
Bailus Walker Jr., Ph.D., MPH
Chairman, District of Columbia Mayor's
Spring Valley Scientific Advisory Panel

Hearing on Spring Valley – Toxic Waste Contamination in the Nation's Capitol Subcommittee on the District of Columbia Committee on Government Reform
House of Representative
July 27, 2001
Washington, D.C.

Chairman Morella, Ranking Minority Member Norton, Distinguished Members of the Subcommittee

I am Bailus Walker Jr., Chairman of the District of Columbia Mayor's Spring Valley Scientific Advisory Panel.

I am a professor of environmental and occupational medicine, Howard University College of Medicine.

I appreciate the invitation to participate in the Subcommittee's effort to determine a range of factors regarding the chemical contamination of the Spring Valley Community. My comments will focus on the findings and recommendations of the Scientific Advisory Panel.

The D.C. Mayor, Anthony Williams, appointed the Panel earlier this year in response to the growing health and environment concerns of the Spring Valley residents.

The panel members were chosen for their technical expertise in toxicology, epidemiology, environmental and occupational health sciences, and soil sampling and analysis. The Panel also includes two residents of Spring Valley who are thoroughly knowledgeable about community attitudes and concerns, as well as the historical dimensions of the contamination problem.

Mayor Williams charged the Panel (paraphrasing) to review processes and procedures underway regarding the identified and measured contaminants in the Spring Valley neighborhood. The Mayor's Order also charged the Panel with assuring that the best available scientific knowledge is applied in seeking answers to the residents' questions.

The full text of our first report is attached. I asked that it be inserted into the record. So, I will simply summarize our recommendations, which reflect the Panel's concerns.

The Panel generally agreed with the soil sampling/testing plan proposed by the U.S. Army Corps of Engineers ----- a plan which is now being implemented.

The Panel recommends that the District of Columbia Department of Health develop a comprehensive plan, the objective of which is to address concerns about exposure to, and health effects of, contaminants in Spring

Valley. Such a plan would outline an orderly process for determining environmental health risks for residents of that community. It would also enhance effort to determine what data ----- scientific and otherwise ----- are needed to respond to residents' concerns.

The Panel recommends that the District of Columbia Department of Health utilize the results of the soil sampling, being conducted by the U.S. Army Corps of Engineers, as an indicator of places in Spring Valley where additional testing of humans should be conducted.

In other words, where high concentrations of arsenic or other contaminants are found in soil sites, individuals residing in close proximity to those sites should be tested.

The Panel recommends that the District of Columbia Department of Health redesign its study of cancer trends in the Spring Valley neighborhoods. Cancer appears to be among the health effects of greatest concern to residents of that area.

The available human data in the literature on the health effects of inorganic arsenic ----- the chemical which has thus far received the most attention in Spring Valley ----- is sufficient to conclude that chronic ingestion of inorganic arsenic causes bladder and lung cancer, as well as skin

cancer. With minor exceptions, human studies for cancer are based on populations exposed to arsenic concentrations in drinking water.

For the District's analysis of cancer trends, a more appropriate "control group" ----- those persons who could be classified as "unexposed" to the contaminants identified in Spring Valley soils ----- should be selected for comparison.

It should be noted that developmental and reproductive effects resulting from chronic ingestion of inorganic arsenic have not been demonstrated in humans ----- a concern raised by some residents.

Finally, the Panel recommends that the three agencies ----- D.C. Department of Health, U.S. Army Corps of Engineers, and EPA ----- develop a well thoughtout plan for communicating health and environmental risks ----- based on available data (soil sampling results, health monitoring information) ----- to Spring Valley residents.

It is the Panel's view that the data collected should be thoroughly discussed ----- interpreted, translated ----- with community members to ensure their understanding of real or potential health risks.

Conclusions

In summary, the Panel concludes that more data are needed for a full assessment of health risk of potential exposure to the contaminants in Spring Valley.

I invite any questions you may have concerning the report or work of the panel.

Thanks again for the invitation to participate in this hearing.

GOVERNMENT OF THE DISTRICT OF COLUMBIA
MAYOR'S HEALTH POLICY COUNCIL
Spring Valley Scientific Advisory Panel

Anthony A. Williams
Mayor

Bailus Walker, Jr., Ph.D., MPH
Chairman

REPORT OF THE DISTRICT OF COLUMBIA MAYOR'S SPRING VALLEY SCIENTIFIC ADVISORY PANEL

REPORT OF THE DISTRICT OF COLUMBIA MAYOR'S SPRING VALLEY SCIENTIFIC ADVISORY PANEL

INTRODUCTION

Under the provisions of Mayor's Order 2001-32 (March 1, 2001), the District of Columbia Mayor's Spring Valley Scientific Advisory Panel (the Panel) held its first advisory meeting on April 25, 2001. The meeting's agenda is attached along with a summary of the presentations to the Panel. The full text of the all presentations, including visual aids (slides, PowerPoint visuals) are available at the Office of the Panel's Executive Director located at 51 N Street, NE, 3rd Floor, Washington, DC 20001. Following the presentations and discussion among the presenters and Panel members, the Panel met in Executive Session (Panel members only). The Panel's conclusions and recommendations follow.

RECOMMENDATION ONE

A Plan

The District of Columbia's Department of Health should develop a comprehensive plan, the objective of which is to address concerns about the exposure to and the health effects of contaminants in the Spring Valley Community. This plan should delineate the roles and responsibilities of the multiple agencies involved in the project. For instance, the U.S. Army Corps of Engineers is pursuing work to determine potential exposure (soil sampling).

An appropriate reference frame for the plan is illustrated in the figure presented by Dr. Susan Metcalf of the Agency for Toxic Substances and Disease Registry (see attached). That figure is the "standard model" for relating environmental contamination with clinical disease. It is also found in numerous environmental medicine/health and/or toxicology textbooks and other related references.

Using that model, the District of Columbia's Department of Health along with its federal agency partners should determine how much, and what types of data are available or can be obtained for each entity or block in the model.

The Panel recognizes that it may not be practical to obtain all the data necessary to give precise answers to specific questions, which may be raised by the community members or other interested parties. For instance, assessing chemical mixtures. In reality, numerous chemicals are often present in environmental media such as soil or food resulting in concomitant exposure of humans either concurrently or sequentially to multiple chemicals. It is highly unlikely to be sufficient data for a precise or near-precise assessment of chemical mixture. There will be numerous other areas for which data are not available, and cannot be readily obtained. Indeed there is no "magic" in the scientific process, and science cannot give simple answers to complicated questions as quickly as may be

desirable. The Panel is of the view that the agencies should clearly define in a coherent fashion, the minimum data set needed to draw reasonably sound conclusions about the environmental health conditions in Spring Valley, recognizing uncertainties often inherent in the scientific process.

RECOMMENDATION TWO

Soil Sampling Analysis

The Panel recommends that the U.S. Army Corps of Engineers clearly articulate its strategy with respect to other contaminants – which contaminants may be present, and how these chemicals are being investigated. If it is established that the strategy is not comprehensive, the U.S. Army Corps of Engineers should develop another strategy based on further recommendation from the Panel.

The Panel is in general agreement with the soil sampling/testing plan proposed by the U.S. Army Corps of Engineers. Data obtained from this analytical process will provide information on "potential exposure" rather than "actual exposure" to the contaminants in the Spring Valley Community.

The Panel emphasizes that environmental measurements of air, water, soil or food represent potential exposures. Individuals residing in Spring Valley are likely to have significantly different actual exposures, depending on a number of factors such as occupation, proximity to the source of contamination, indoor pollution sources, and activity pattern (e.g., time spent indoors versus out). Therefore, although the potential for exposure may be the relatively similar, not all potentially exposed persons will experience the same actual exposure throughout in Spring Valley community. It is becoming increasingly apparent that a person's activity pattern is an important determinant of environmental exposure to most pollutants/contaminants.

RECOMMENDATION THREE

Chemical Characterization

The Panel recommends that the U.S. Army Corps of Engineers identify the chemical form or speciation of arsenic and other metals found in the soil analysis. Chemical form or speciation of the metal can be an important factor, not only for pulmonary and gastrointestinal absorption, but also in terms of distribution throughout the body and toxic effects.

Arsenic is particularly difficult to characterize as a single element because its chemistry is so complex, and there are many different arsenic compounds. It may be trivalent or pentavalent and is widely distributed in nature.

Airborne arsenic is largely trivalent, but deposition in airways and absorption from the lungs is dependent on the particle size and the chemical form. It has been known for some years

that trivalent compounds of arsenic are the principal toxic forms.

RECOMMENDATION FOUR

Biomonitoring

The Panel recommends that the District of Columbia's Department of Health utilize the results of the U.S. Army Corps of Engineers proposed soil sampling as an indicator of places (neighborhoods within the Spring Valley Area) where additional biomonitoring should be implemented.

The Panel is fully aware that biomonitoring (hair analyses) has been conducted on a sample of the population at risk. But, the Panel believes that a "complete dataset" should include additional potentially at risk persons, specifically families or individuals residing in close proximity to the so-called "hot spots."

In biomonitoring it should be recognized that arsenic in hair may reflect past exposure, but intrinsic or systematically absorbed arsenic in hair should be distinguished from arsenic that is deposited from external sources, which may be difficult.

This recommendation for additional biomonitoring is not to suggest that every person in close proximity to a "hot spot" be monitored; rather a scientifically appropriate sample of the potentially exposed group should be selected for biomonitoring.

RECOMMENDATION FIVE

Cancer Registry Data

The Panel recommends that the District of Columbia's Department of Health select a different community or census tract for the purpose of comparing cancer incidence and mortality in the Spring Valley Community. The proximity (adjacent census tract) of the "case" to the "control" in the present Cancer Registry analyses makes it difficult to know whether the factor(s) determining the development of cancer is exposure to the soil contaminants being studied or another characteristic associated with living in the Spring Valley area or in the adjacent census tract. This is not to suggest that choosing the "right" control population would imply that the cancer differences are based only on exposure to arsenic.

In other words, it is not unreasonable to hypothesize that persons residing in the census tract that is adjacent to the Spring Valley area may have similar exposure to contaminants being studied. Therefore, the District of Columbia's Department of Health should select another "control" population to ensure that the difference in potential exposure will likely constitute the critical difference and the absence or presence of cancer (in this analyses), and is not likely to be attributable to differences in other factors (e.g., socioeconomic, etc.). The District should make sure to select a control population that is roughly matched with the case population (Spring Valley community) in age, race, and socioeconomic status.

RECOMMENDATION SIX

Risk Communication

The Panel recommends that the District of Columbia's Department of Health, in collaboration with other agencies (e.g., Environmental Protection Agency, U.S. Corps of Engineers) develop a well thought out approach to risk communication – the interpretation and translation of all environmental and health related data collected relevant to the Spring Valley Community. Special attention should be paid to what Spring Valley residents want to know about the detected and measured contaminants and their health effects. Communication is a two-way street. Unless the government agencies know what the Spring Valley residents want and need to know, time and energy may be wasted.

The Panel believes it important that the involved governmental agencies enhance community members understanding of the fundamental principles of toxicology, and environmental risk including concepts of exposure, dose and bioavailability – the ability of a contaminant that enters the body to be liberated from its environmental matrix (e.g., soil, water, tissue) and to enter circulation. Bioavailability varies not only with the chemical itself but also with the matrix (soil, water, and food). For example, the likelihood that a plant will take up a contaminant from the soil is also a function of bioavailability.

CONCLUSION

The Panel concludes that further steps (e.g., data collection, analysis) are necessary to provide sufficient information for a more complete understanding of environmental and health conditions in the Spring Valley community. The additional activities needed are reflected in the recommendations of the Panel.

GOVERNMENT OF THE DISTRICT OF COLUMBIA
MAYOR'S HEALTH POLICY COUNCIL
Spring Valley Scientific Advisory Panel

Anthony A. Williams
Mayor

Bailus Walker, Jr., Ph.D., MPH
Chairman

REPORT OF THE DISTRICT OF COLUMBIA MAYOR'S SPRING VALLEY SCIENTIFIC ADVISORY PANEL
Attachments

DISTRICT OF COLUMBIA
MAYOR'S SPRING VALLEY SCIENTIFIC ADVISORY PANEL
825 North Capitol Street, NE, Washington, DC
Conference Room 4131
Wednesday, April 25, 2001
10:00 a.m. – 2:00 p.m.

* *AGENDA* *

I. Welcome and Call to Order

Bailus Walker, Jr., PhD, MPH, Chairman, Spring Valley Scientific Advisory Panel

II. Presentations

Moderator: *Bailus Walker, Jr., PhD, MPH,* Chairman, Spring Valley Scientific Advisory Panel

History of the Spring Valley Site & USACE's Soil Sampling Strategy
Major Brian Plaisted, Deputy District Engineer for Spring Valley
U.S. Army Corps of Engineers, Baltimore

Agency for Toxic Substances and Disease Registry's Exposure Investigation
Susan Metcalf, MD, MSPH, Chief, Exposure Investigation Section
Agency for Toxic Substances and Disease Registry

American University's Exposure Investigation
Paul Chrostowski, PhD, QEP, FRSH, Principal
CPF Associates, Inc.

Summary of the Health Effects
Lynette Stokes, PhD, MPH, Chief, Bureau of Hazardous Material and Toxic Substances
Department of Health

Descriptive Epidemiological Study of Cancers Associated with Arsenic
Vincent Kofie, PhD, Director of Surveillance and Epidemiology
Department of Health

IV. Executive Session/Panel Member Discussion

V. Adjournment

DISTRICT OF COLUMBIA
MAYOR'S SPRING VALLEY SCIENTIFIC ADVISORY PANEL

Bailus Walker, Jr., PhD., MPH
Professor of Environmental & Occupational Medicine
Howard University College of Medicine
Chairman of the Committee on Toxicology
National Academy of Sciences
Chairman

Deitra H. Lee, JD, MPA
District of Columbia Mayor's
Spring Valley Scientific Advisory Panel
Executive Director

Kenneth P. Cantor, PhD., MPH
›idemiologist and Senior Researcher
Division of Cancer Epidemiology and Genetics
National Cancer Institute

Sidney Green, Jr., PhD.
Graduate Associate Professor of Pharmacology
and Toxicology
College of Medicine
Howard University

***Tee Lamont Guidotti, MD, MPH**
Chair of the Department of Environmental
and Occupational Health
Professor of Occupational Medicine, Epidemiology
and Pulmonary Medicine
School of Public Health and Health Services
George Washington University

Stephen Havas, MD, MPH, MS
Professor of Epidemiology and Preventive Medicine
School of Medicine
University of Maryland

Paul Kostecki, PhD
Research Associate Professor of
Environmental Health and Sciences
Environmental Health and Sciences Department
University of Massachusetts at Amherst

Jeffrey Kraskin, OD
Optometrist and Spring Valley
Community Representative

Rebecca T. Parkin, PhD., MPH
Associate Research Professor of Environmental
and Occupational Health
School of Public Health and Health Services
George Washington University

Jackie Prince Roberts, MES, MPPM
Program Manager for the Environmental
Alliances Program
Environmental Defense

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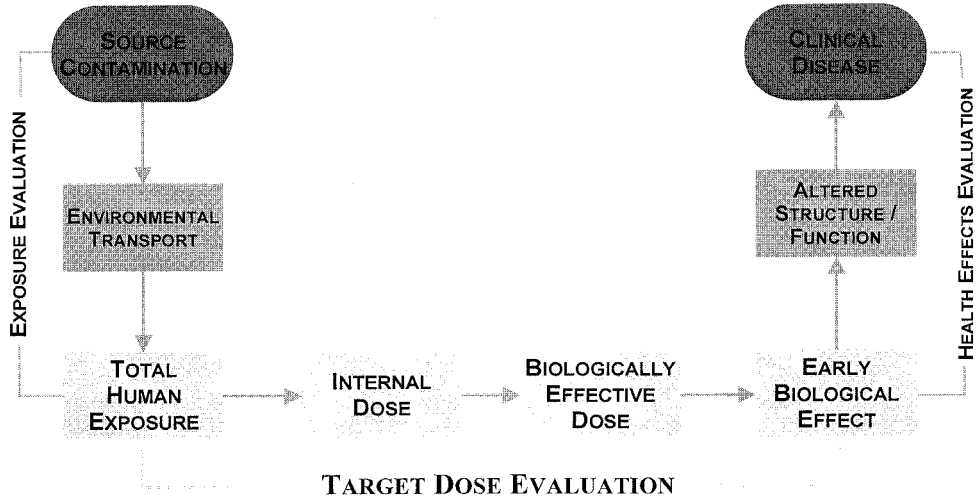
* Panel member did not attend meeting on April 25, 2001

Continuum for Relating Environmental Contamination with Clinical Disease



Mrs. MORELLA. I'm pleased to recognize Ms. Shapley.

Ms. SHAPLEY. Good morning. May I say in opening, thank you, Chairman Morella and our own Delegate Norton, for holding this hearing. I want to acknowledge that Mrs. Norton has visited Spring Valley, and among her innumerable D.C. visits, that is certainly appreciated. And her specifics in the opening statement, I think fall very much in line with some of the points that I am making. So I welcome that in advance.

Let me just say, I am Sarah Stowell Shapley, elected community co-chair of the Spring Valley Restoration Advisory Board for the Army Corps of Engineers cleanup of war-related contamination of our neighborhood. This board is a mechanism authorized by statute for the Defense Department's Formerly Used Defense Sites [FUDS], and has a membership comprising the various stakeholders in the cleanup project.

Besides institutional members representing American University, the local property developer of Spring Valley, the W.C. & A.N. Miller Co., the local elementary public school, Horace Mann, and the D.C. Department of Health in region 3 of the U.S. Environmental Protection Agency, besides these, there are 14 community members who were all residents in the area. I was elected from this group. The Corps project manager, Major Michael Peloquin, is the other cochair.

I should also say that in my non-volunteer life, I am indeed an employee of the U.S. Environmental Protection Agency here in Washington.

I want to emphasize, this is a very recently constituted board. July 10th was our first meeting after having elected a community co-chair. The statutory rules dictate that we speak as individuals, and so I will offer reflections upon concerns and priorities I have heard from both fellow resident board members and other neighbors who have contacted me. My role, in part, is to be an enabler, to reflect views and demands and to reflect upon them so as to enable the community's interest to be served. The basic purpose of the advisory board mechanism for the Corps is to provide it with a means of community review and comment on its proposed actions and plans.

So today I have three basic messages for this D.C. Subcommittee. First, there are 1,200 households coping with the health and safety questions arising from the Army's contamination, and also coping with the potentially declining property values of their homes.

Second, there is mistrust of the Army's ability to be fully forthcoming and actually get the job done, based on their having to reverse their own finding of 1995 that the neighborhood was clear and safe. Lawsuits among the principal parties, the university and the developer and the Army, have only served to reveal a record of non-disclosure and avoidance.

Nonetheless, third message, there is a will to focus forward—that is my motto for the day, focus forward—and a demand to move forward with actually adequate testing and secure cleanup rather than to divert critical resources to rehearse the past.

Let me illustrate the first message about 1,200 homeowners coping. I am especially moved by—and you have alluded to this, and I think anyone concerned with D.C.'s civic health for homeowner-

ship would be, too—those new homeowners who come up to me, wondering if this most important investment in their family life is about to be derailed. Parents wonder if their gardens are safe for their children to play in and if their homegrown vegetables are safe to eat. Homeowners employ garden workers, landscaping and construction firms which, in turn, wonder about the occupational safety of their workers. People have heard of the two cases of aplastic anemia and wonder when a systematic health survey will be conducted. People struggle to understand what to make of all the numbers for test results and risk levels, and mostly people worry, when will it all be over? When will we feel secure again?

The second message of mistrust about full disclosure is manifest in the community board members' decision, as detailed in the meeting of July 10th, to write the Secretary of the Army to request that two things be provided to the community forthwith: A full set of documentation on the Army's dealing with the site, as well as the EPA's and the D.C. Health Department's; and second, a ranking point of contact in the Department of the Army who can respond authoritatively to the community's inquiries.

Those are fairly specific things, and I'm sure you'll followup.

The third message on the imperative to move forward with actually adequate testing and secure cleanup may be exemplified by the agenda now developing among community members. Expanded testing is seen as a probable need—expansion in spatial terms, as in adjacent property to major points of interest, and in chemical terms, as in applying the longer list of chemical by-products to a wider scope of properties.

While there is provision for expanded followup in the sampling protocol, there is a perception of reluctance—no clear schedule and a great anxiety as to whether adequate funds are available to get the whole job done. Perhaps most troubling is the whole question of munitions and related chemical material remaining in the ground and the questionable detection testing methods used to date.

There is a newer methodological exercise under way, we understand, at the Army's Research Center in Huntsville, AL, but I think there is a growing sense that what is needed is a re-survey of the whole area and certainly of those high-use areas within Spring Valley. Such a survey should also collate all the evidence of disposal material—maps, lab records and transfer records.

Finally, I want to convey in very strong terms the need for you and the Congress, if we may ask, to support a health survey. Dr. Walker has alluded to this. This has been recommended formally by the D.C. Health Department and its Science Advisory Panel. Your help, as I see it, is to sort out the government parties who can authorize this study, who can pay for it—what is the budget required.

The final priority I want to raise with this D.C. Subcommittee is one that may even necessitate congressional statutory action. It concerns the question of the government's providing final certification of clearance of hazard to each of the 1,200 property owners, a clearance that would run with the land.

There are two aspects to this question: insurance for liability of the investigative work of the government contractor, which is

deemed inadequate; and a certification from the U.S. Government that would convey with the deed to the property and that would have firm financial backing in the event that the representation and warranty of the U.S. Government proved incorrect.

There are, as I understand it, statutory or regulatory limits on the feasible amount of liability insurance that fall woefully short for a population of 1,200 properties; and at this time, we have no idea whether the U.S. Government will certify a final clearance of each property that meets the rigorous standard required in real estate for certification of future safety of property.

Finally, I wish to address an implication of an option I understand you are considering, namely, to institute an independent control. I'm quoting from the Washington Post editorial, but obviously you have raised this in your opening remarks.

I would ask two things of you as you consider this option: one, that you involve the community in your consultations; and two, that you ensure that any new structure for the project include a mechanism such as the presently constituted community advisory board. All of us are volunteers who have invested too much, have so demonstrated their commitment to community welfare and are, frankly, I think, too beneficial to the whole undertaking to be ignored and set aside at this stage. I believe you have a great resource in us in evaluating the best way forward, and I hope you will use it.

Thank you for the opportunity to present my perspective.

Mrs. MORELLA. Thank you very much, Ms. Shapley.

[The prepared statement of Ms. Shapley follows:]

House Hearing: July 27, 2001 - Spring Valley, Toxic Waste Contamination

Good morning. I am Sarah Stowell Shapley, elected Community Co-Chair of the Spring Valley Restoration Advisory Board for the Army Corps of Engineers' clean-up of war-related contamination of our neighborhood. This board is a mechanism authorized by statute for the Defense Department's "Formerly Used Defense Sites" and has a membership comprising the various "stake-holders" in the clean-up project. Besides institutional members representing the American University, the local property developer of Spring Valley, the WC & AN Miller Company, the local elementary public school, Horace Mann, and the DC Department of Health and Region III of the US Environmental Protection Agency, there are fourteen (14) community members who are all residents in the area. I was elected from this group. The Corps' project manager, Major Michael Peloquin, is other co-chair. I should also say that in my non-volunteer life I am employed at the US EPA.

This is a very recently constituted board. July 10th was our first meeting after having elected a Community Co-Chair. The statutory rules dictate that we speak as individuals, and so I will offer reflections upon the concerns and priorities I have heard from both fellow resident board members and other neighbors who have contacted me. My role, in part, is to be an enabler, to reflect views and demands and to reflect upon them so as to enable the community's interest to be served. The basic purpose of the advisory board mechanism for the Corps is to provide it with a means of community review and comment on its proposed actions and plans.

So today I have three basic messages for this DC Subcommittee. First, there are 1,200 households coping with the health and safety questions arising from the Army's contamination and also coping with the potentially declining property values of their homes. Second, there is mistrust of the Army's ability to be fully forthcoming and actually get the job done based on their having to reverse their own finding of 1995 that the neighborhood was clear and safe. Lawsuits among the principal parties, the university and the developer and the Army, have only served to reveal a record of non-disclosure and avoidance. Nonetheless, there is a will to focus forward and a demand to move forward with actually adequate testing and secure clean-up, rather than to divert critical resources to rehearse the past.

Let me illustrate the first message about 1,200 homeowners coping. I am especially moved by, and I think anyone concerned with DC's civic health through more home ownership would be too, the new home owners who have come up to me wondering if this most important first investment in their family life is about to be derailed. Parents wonder if their gardens are safe for their children to play in and if their home-grown vegetables are safe to eat. Homeowners employ garden workers, landscaping and construction firms which, in turn, wonder about the occupational safety of their workers. People have heard of the two cases of aplastic anemia and wonder when a systematic health survey will be conducted. People struggle to understand what to make of all the numbers - for test results and risk levels. And, mostly, people worry: When will it all be over? When will we feel secure again?

The second message of mistrust about full disclosure is manifest in the community board members' decision, as detailed in the meeting of July 10th, to write the Secretary of the Army to

request that two things be provided to the community forthwith: a full set of documentation on the Army's dealing with the site, as well as the EPA's and the DC Health Department's; and a ranking point of contact in the Department of the Army who can respond authoritatively to the community's inquiries.

The third message on the imperative to move forward with actually adequate testing and secure clean-up may be exemplified by the agenda now developing among community members. Expanded testing is seen as a probable need, expansion in spatial terms, as in adjacent properties to major "points of interest", and in chemical terms, as in applying the longer list of chemical by-products to a wider scope of properties. While there is provision for expanded follow-up in the sampling protocol, there is a perception of reluctance, no clear schedule, and great anxiety as to whether adequate funds are available to get the whole job done. Perhaps most troubling is the whole question of munitions and related chemical material remaining in ground and the questionable detection testing method used to date. There is a newer methodological exercise underway, we understand, at the Army's research center in Huntsville, Alabama; but I think there is a growing sense that what is needed is a re-survey of the whole area and certainly of those high-use areas within Spring Valley. Such a survey should also collate all the evidence of disposal of materiel, (maps, lab records, and transfer records). Finally, I want to convey in very strong terms the need for you to support a health survey. This has been recommended by the DC Health Department and its Science Advisory Panel. Your help is needed to sort out the government parties: Who can authorize the study? Who can pay for it? What is the budget required?

The final priority I want to raise with this DC Subcommittee is one that may even necessitate Congressional statutory action. It concerns the question of the government's providing final certification of clearance of hazard to each of the 1,200 property owners that would run with the land. There are two aspects to this question: insurance for liability of the investigative work of the government contractor, which is deemed inadequate; and a certification from the US government that would convey with the deed to the property and that would have firm financial backing in the event that the representation and warranty of the US government proved incorrect. There are, as I understand it, statutory or regulatory limits on the feasible amount of liability insurance that fall woefully short for a population of 1,200 properties. And, at this time we have no idea whether the US government will certify "final clearance" of each property that meets the rigorous standard required in real estate for a certification of future safety for a property.

Finally, I wish to address an implication of an option that I understand the DC Subcommittee may consider, namely, to institute an "independent control" -- to quote the Sunday Washington Post editorial. I would ask two things of you as you consider this: one, that you involve the community in your consultations; and two, that you ensure that any new structure for the project include a mechanism, such as the presently constituted community board. All of us are volunteers who have invested too much, have so demonstrated their commitment to community welfare, and are, frankly, too beneficial to the whole undertaking to be ignored or set aside at this stage. I believe you have a great resource in us in evaluating the best way forward, and I hope you will use it. Thank you for the opportunity to present my perspective.

Mrs. MORELLA. And before I recognize Mr. Harrop and Mr. Miller, let me point out our new member of the subcommittee, Todd Platts from Pennsylvania, and recognize him for any opening comment.

Mr. PLATTS. Thank you, Madam Chairman. I just appreciate you and Eleanor Norton holding this hearing and allowing what I believe will be a very productive discussion to occur on a very important issue, and I appreciate those who are here on the first panel and the panels to follow for their taking the time to show their knowledge and wisdom with us on this important issue.

Thank you.

Mrs. MORELLA. Thank you. Thank you.

And now, Mr. William Harrop, who is president of the Spring Valley-Wesley Heights Citizens Association.

Mr. HARROP. Thank you very much, Madam Chairman.

The Spring Valley-Wesley Heights Citizens Association was created in the last century to promote the welfare of our two adjoining northwest Washington communities. I've been present since February 1997. We thank the committee for holding this public hearing to explore the contamination of our neighborhood by military toxic chemicals.

Our members have several principal worries and fears. All of these are aggravated by a sense of uncertainty. We have learned that several times the Army Corps of Engineers and the Environmental Protection Agency decided to withhold and not act upon information that proved highly relevant to our welfare. The American University appears on some occasions to have been complicit. This has created an uneasy mistrust complicating the relationship between the Army, EPA, and American University with Spring Valley residents.

The health of our families is, of course, our first concern. People worry that their children have for many years played and dug in the dirt, that gardening may have been a risky hobby. Rumors are rife about risk of cancer and other fatal diseases but nobody really knows. The Spring Valley area needs and deserves a comprehensive medical monitoring program to determine the level of harm that has been caused by the contaminants in our neighborhood.

It is our understanding that the Comprehensive Environmental Response Compensation and Liability Act of 1980, the Superfund, contains provisions to allow for extensive public health studies. Superfund designates the Agency for Toxic Substances and Disease Registry as the lead agency. We ask your help in getting a comprehensive medical monitoring program under way immediately. We are very puzzled as to why this has not already occurred.

Citizens' investment in their homes is the major asset of many people. On anecdotal evidence, residents believe there is already an accelerating turnover of properties caused by fear of contamination. They believe they should be protected from losses attributable to the presence of military toxins. The Federal Government seems unwilling or legally unable to indemnify homeowners against such loss.

The D.C. Department of Health has formally warned citizens to minimize exposure to soil, to wear protective masks in the presence of dust and not to eat homegrown vegetables. The identification of

concentrations of hazardous materials and the cleanup of such areas will not be completed for many months, probably not for many years. Meanwhile, citizens are puzzled and concerned that District authorities permit widespread construction, earth disturbance and excavation to spread on nearly every street in Spring Valley. New projects have begun in recent weeks. Either there is danger to the public from toxic deposits at locations not yet pinpointed, or there is not.

We are particularly disturbed that, on July 19th, the D.C. Zoning Commission, against the recommendations of two neighborhood advisory commissions and six neighborhood associations, approved American University's 10-year expansion plan. This is a green light for extensive excavation and earth movement at specific campus locations prior to the identification and cleanup of chemical contamination.

The primary purpose of the Superfund program enacted by Congress in 1980 is to identify contaminated sites so that a proper remedial investigation and evaluation can be conducted. The evaluation process and the process for selecting a remedy appropriate to address the risks discovered is contained in the National Contingency Plan. To ensure that all sites are properly and promptly identified, Superfund Section 103 requires that those who, "own or operate," such sites report them to EPA. This reporting obligation became effective in late 1980 when Superfund became law. It applies to both the United States and to American University.

Based on their involvement in the chemical weapons program conducted at AU, both the United States and AU had sufficient knowledge of the presence of contamination to require that the Spring Valley site be identified to EPA in 1980 or 1981. It is certainly possible that the United States and American University should be given the benefit of the doubt as to whether reporting was required as of the early 1980's. However, there is no excuse for their failure to file the required report in 1986 when both AU and the United States received information from the analysis of aerial photography and a search of the records that contamination was likely present in Spring Valley.

It appears that, in 1986, the United States and American University jointly decided to ignore the contamination and the potential harm it was causing instead of making the required Superfund report.

If either had made a timely report, the national contingency plan provisions for a thorough investigation and appropriate remedial action in consultation with the community would long since have been implemented. Despite this background, the allocation of historical blame is not of great interest to residents of Spring Valley. We want to see the work of identifying toxic materials and undertaking a full cleanup completed as rapidly as is consonant with care and professionalism. Citizens want assurance that the problem is behind us.

However, the fact remains that no agency has implemented and completed all of the evaluation steps specified by the National Contingency Plan. We ask that the subcommittee make certain that adequate resources be allocated to complete this work expeditiously.

We ask that the subcommittee look into the question of indemnification of property owners. We ask that the subcommittee query the District about its authorization of continuing earth disturbance in potentially contaminated areas. We ask that the subcommittee press for an immediate and responsible medical survey.

We do not believe that new bureaucratic layers or supervisory commissions would serve a useful purpose. The Restoration Advisory Board can be a citizen watchdog on our behalf. We ask that you maintain a continuing interest in our complicated problems and that you leave open the possibility of further hearings if circumstances warrant it.

Thank you very much for holding this hearing.

Mrs. MORELLA. Thank you very much, Mr. Harrop.

[The prepared statement of Mr. Harrop follows:]

SPRING VALLEY-WESLEY HEIGHTS
CITIZENS ASSOCIATION
3615 - 49TH STREET N.W.
WASHINGTON D.C. 20016-3214
TEL (202) 966-1071 FAX (202) 966-6271

July 25, 2001

Honorable Constance Morella
Chair, District of Columbia Subcommittee
Committee on Government Reform
United States House of Representatives

Dear Ms. Morella:

This letter is for the record of your hearing of July 27 regarding the contamination of Spring Valley by military chemicals. I will outline for the Subcommittee some of the concerns of the residents of Spring Valley, who are represented by our Association. We very much appreciate your holding a hearing to explore this very unusual problem in our community. You know the extensive history of the affair from other witnesses, and I will not rehearse it.

Uncertainty and Mistrust

Our members have several principal worries and fears, all exacerbated by a sense of uncertainty. We have learned that on several occasions the Army Corps of Engineers and the Environmental Protection Agency (EPA) decided to withhold and not act upon information that proved highly relevant to our welfare. American University (AU) appears on some occasions to have been as much in the dark as private citizens, and at other times to have been complicit. This has created an uneasy mistrust, complicating the relationship between the army, EPA and AU, on the one hand, and Spring Valley residents on the other. While residents are grateful to the DC Government for inducing the return of the Corps of Engineers in 1999 to complete a job only partially accomplished earlier, there is anxiety at the failure of District authorities, as I will explain, to contain potentially dangerous excavation and earth disturbance.

Health

The health of our families is of course the first concern. People worry that their children have for years played and dug in the dirt, that gardening may have been a risky hobby. Here uncertainty is great. Rumors are rife about unusual incidence of cancer and other fatal diseases, but nobody really knows. This is not a good situation. The completion as soon as possible of a professional and thorough historical medical survey to establish the facts is an urgent need. Why this work is so delayed is a mystery to the citizens affected, and we hope that the Congress can obtain action.

Property Values

Citizens' investment in their homes, expensive in this area, represents the major asset of many people. On anecdotal evidence, residents believe there is already an accelerating turnover of properties caused by fear of contamination, and they believe they should be protected from losses attributable to the presence of military toxins. The federal government is apparently unwilling or

legally unable to indemnify homeowners against such loss. The army has not agreed to provide each Spring Valley property owner, at the conclusion of cleanup operations, with a certification—one the United States will stand behind—that the property is free of contaminants.

Continued Excavation in Spring Valley

The DC Department of Health has formally warned citizens to minimize exposure to soil, to wear protective masks in the presence of dust, and not to eat homegrown vegetables. The identification of concentrations of hazardous materials, and the cleanup of such areas, will not be completed for many months, perhaps years. Meanwhile, citizens are puzzled and concerned that District authorities permit widespread construction, earth disturbance and excavation to proceed on nearly every street in Spring Valley. Some new projects have begun in the past few weeks. Either there is danger to the public from toxic deposits in locations not yet pinpointed or there is not.

Particularly disturbing is that on July 19 the DC Zoning Commission, against the recommendations of two Neighborhood Advisory Commissions and six neighborhood associations, approved American University's ten-year expansion plan, a green light for extensive excavation and earth movement in specific campus locations prior to the identification and remediation of chemical contamination.

Importance of Accelerated Remedial Action

The allocation of historical blame for the current state of affairs is not of great interest to the residents of Spring Valley. Sensitivity to public concerns on the part of the Corps of Engineers and EPA is much improved. We want to see the work of identifying toxic materials and undertaking a full cleanup completed as rapidly as possible consonant with care and professionalism. Citizens want assurance that the problem is behind us.

We ask that the Subcommittee make certain that adequate resources have been and in future will be allocated to complete this work expeditiously. We ask that the Subcommittee look into the question of idemnification of property owners. We ask that the Subcommittee query the District about its authorization of continuing earth disturbance in potentially contaminated areas. We ask that the Subcommittee press for an immediate and responsible medical survey.

We do not believe that new bureaucratic layers or supervisory commissions would serve a useful purpose. The Restoration Advisory Board should be able to provide a serviceable watchdog structure, supplemented by the ability of citizens to appeal back to your Subcommittee if matters go awry. We ask that you maintain a continuing interest in our complicated problems, perhaps leaving open a possibility of further hearings if circumstances warrant.

Respectfully,

//S//
William C. Harrop
President

Mrs. MORELLA. I would now like to recognize Edward J. Miller, Jr., who is the president of W.C. & A.N. Miller Development Co. Welcome.

Mr. MILLER. Thank you.

Mrs. MORELLA. You press the buzzer. There you go.

Mr. MILLER. Good morning, and thank you for the opportunity to testify on this important matter. My name is Edward J. Miller Jr. and I'm the president of W.C. & A.N. Miller Co. My family has been building in the Spring Valley community for three generations, and I'm very proud of the role we have played in its development.

The Miller Co. is a third-generation, family owned real estate business which was started by my grandfather and great-uncle in 1912. We've been building our customers homes in Spring Valley for more than 70 years. When my grandfather and great-uncle purchased this property in 1926, it was a farm.

My family and I are extremely proud to be part of this community; not only do we work here, but my family and friends live here. My mother lives on 52nd street. My sister, brother-in-law, five nieces and nephews, live on Warren Street.

On January 5, 1993, I received a phone call that changed the future of our company. I soon learned that an unexpected find on 52nd Court was a pit of high explosive and chemical munitions. To say the least, I was shocked. We had no idea that anything like this was lurking beneath the surface of our property or elsewhere in Spring Valley.

By 1995, at the conclusion of the investigation, I felt that our community and our lives were back to normal, based in part on the Corps's statement that no further action was required. Prior to January 1993, the Miller Co. had no knowledge about the Army's burial of chemical munitions or war-related soil contamination in Spring Valley. There were no warnings in the deeds, no science, flags, markers or other warning devices. We had no anecdotal information about the Army's disregard for the future inhabitants of this beautiful neighborhood.

Shortly after the discovery of the munitions pit, it was revealed that the Army, EPA and American University had possession of an undisclosed report from 1986, documenting the area's use as a chemical weapons testing ground. That report concluded that additional munitions might be buried in the area. For the record, the Miller Co. never had any knowledge about this internal report until after January 5, 1993.

The Army's failure to warn the Miller Co. about the buried munitions caused us substantial harm and expense. During the investigation, we devoted substantial resources to ensure that the people of this community were safe. When we asked the Army to reimburse us for these costs, as they were doing for others in the community, we were informed that we would have to file a claim under the Federal Tort Claims Act. For this reason, we filed a lawsuit against the government in 1995. The ultimate settlement barely covered our costs.

The company's lack of knowledge about the area's historical use was documented in an affidavit prepared by my late father, who was born in 1925 and grew up in nearby Wesley Heights and

Spring Valley. As a child, he played in the neighborhood, rode his pony around World War II victory barns near where the munitions were discovered.

He also described the many famous people for whom he built homes in the neighborhood, including Vice President Lyndon Johnson, Richard Nixon and Supreme Court Justice Black. The Miller Co.'s chief architect for 60 years, Ed Spano, also raised his family within 300 feet of the original discovery in 1993. None of them ever mentioned any knowledge about the Army's activities.

The U.S. District Court has twice ruled that the government was liable for failing to warn the Miller Co. and the community about buried munitions.

But that is the past. I believe that the Spring Valley community, working closely with the D.C. government and Federal agencies, has provided a level of oversight that has resulted and will continue to result in an open and communicative process that will achieve the highest standard of care for the health and safety of the residents of Spring Valley.

It is undeniable that mistakes were made. Nevertheless, I believe that the Army generally did a good job. The remaining concerns appear limited and isolated, and I believe working together as we have successfully in the past, we can again get through this as well.

The Spring Valley neighborhood remains one of the most desirable communities in the country. According to real estate data from MRIS, over the past 5 years, home sales in Spring Valley have averaged 51 homes per year, with an average increase in sales price for the same period of over 114 percent.

In closing, I challenge the Army, the EPA and the District government to commit the appropriate resources to identify and remediate any residual risks to our community. At the end of the day, the community needs to have complete confidence that no further action is required.

Thank you for the opportunity to address you today.

Mrs. MORELLA. Thank you very much, Mr. Miller.

[The prepared statement of Mr. Miller follows:]

TESTIMONY OF EDWARD J. MILLER, JR.
PRESIDENT/CEO OF THE W.C. & A.N. MILLER COMPANIES

GOOD MORNING, AND THANK YOU FOR THE OPPORTUNITY TO TESTIFY ON A VERY IMPORTANT MATTER THAT IS TAKING PLACE IN THE SPRING VALLEY COMMUNITY. MY NAME IS EDWARD J. MILLER, JR., AND I AM THE PRESIDENT AND CEO OF THE W.C. & A.N. MILLER COMPANIES. MY FAMILY HAS BEEN BUILDING IN THE SPRING VALLEY COMMUNITY FOR THREE GENERATIONS, AND I AM VERY PROUD OF THE ROLE WE HAVE PLAYED IN ITS DEVELOPMENT. THE PEOPLE WHO LIVE AND WORK IN SPRING VALLEY ARE MORE THAN CUSTOMERS AND EMPLOYEES; THEY ARE MY FRIENDS, MY FAMILY, MY COLLEAGUES, AND MY BUSINESS ASSOCIATES. THE MILLER COMPANY IS FULLY COMMITTED TO THIS CLEANUP EFFORT IN SPRING VALLEY BECAUSE WE ARE CONCERNED ABOUT THE SAFETY AND WELL BEING OF OUR FRIENDS, FAMILY, COLLEAGUES AND, YES, OUR CUSTOMERS.

THE MILLER COMPANIES IS A THIRD GENERATION, FAMILY OWNED, REAL ESTATE BUSINESS WITH EXPERTISE IN THE PLANNING AND DEVELOPMENT OF COMMUNITIES, CONSTRUCTION OF NEW HOMES, BROKERAGE SALES, COMMERCIAL PROPERTY MANAGEMENT, COMMERCIAL PROPERTY INVESTMENT, AND LAND INVESTMENT. THE COMPANY, WHICH WAS STARTED BY MY GRANDFATHER, ALLISON N.

MILLER, AND MY GREAT UNCLE, WILLIAM C. MILLER, IN 1912, WAS INCORPORATED IN 1926.

THE MILLER COMPANIES HAS BEEN BUILDING OUR CUSTOMERS HOMES IN THE SPRING VALLEY COMMUNITY IN NORTHWEST WASHINGTON, D.C., FOR MORE THAN SEVENTY YEARS. WHEN MY GRANDFATHER AND GREAT UNCLE PURCHASED APPROXIMATELY 300 ACRES OF LAND IN NORTHWEST WASHINGTON, D.C., IN 1926, THIS LAND WAS FARMLAND. MY ANCESTORS WERE VERY INTERESTED IN BUILDING ONE OF THE FIRST PLANNED COMMUNITIES IN THIS AREA. THE NEIGHBORHOOD NOW KNOWN AS SPRING VALLEY OFFERED SOME OF THE FEW UNDEVELOPED TRACTS OF LAND IN WASHINGTON, D.C. LARGE ENOUGH TO TURN INTO A PLANNED COMMUNITY.

THE MILLER COMPANIES' INTEREST IN CREATING COMMUNITIES, RATHER THAN SIMPLY BUILDING HOMES, HAS BEEN WELL DOCUMENTED OVER THE YEARS. THE COMPANY'S *LEAVES* PUBLICATION HAS DOCUMENTED THE COMMUNITY CENTER, COMMUNITY BUS, CHRISTMAS TREE LIGHTINGS, AND FOURTH OF JULY CELEBRATIONS SPONSORED BY THE COMPANY OVER THE YEARS.

OUR BUSINESS IS ONE OF PEOPLE AND COMMUNITY, AND THAT IS WHY WE ARE STILL ACTIVELY INVOLVED IN THE SPRING VALLEY COMMUNITY AND PLAN TO CONTINUE OUR INVOLVEMENT IN THIS COMMUNITY FOR AT LEAST THE NEXT 70 YEARS. MY FAMILY AND I ARE EXTREMELY PROUD TO BE PART OF THIS COMMUNITY. NOT ONLY DO WE WORK HERE, BUT MY FAMILY AND FRIENDS LIVE HERE. MY MOTHER LIVES ON 52nd STREET, AND MY SISTER, BROTHER-IN-LAW, AND FIVE NIECES AND NEPHEWS LIVE ON WARREN STREET. ONE OF MY NEPHEWS GOES TO HORACE MANN ELEMENTARY SCHOOL, AS DID MY FATHER.

ON JANUARY 5, 1993, WHILE IN A MEETING WITH MY COUSIN, WHO WAS IN CHARGE OF THE HOMES GROUP AND OUR SPRING VALLEY PROJECT MANAGER, I RECEIVED A PHONE CALL THAT CHANGED THE FUTURE OF OUR COMPANY. WITHIN A FEW HOURS OF THAT CALL, I LEARNED THAT AN UNEXPECTED FIND ON 52ND COURT WAS A PIT OF HIGH EXPLOSIVE AND CHEMICAL MUNITIONS. I WAS SHOCKED. I COULD NOT BELIEVE IT. WE HAD NO IDEA THAT ANYTHING LIKE THIS WAS LURKING BENEATH THE SURFACE OF OUR PROPERTY OR THAT BURIED MUNITIONS OR SOIL CONTAMINATION COULD BE PRESENT IN OTHER PARTS OF SPRING VALLEY. IT WAS A TOUGH TIME FOR OUR COMPANY AND THE COMMUNITY, BUT WE GOT THROUGH IT. BY 1995, AT THE CONCLUSION OF THE PHASE II INVESTIGATION, I WAS FEELING REASSURED THAT OUR

COMMUNITY AND OUR LIVES WERE SEEMINGLY BACK TO NORMAL. THIS FEELING WAS BASED UPON THE CORPS' STATEMENT THAT "NO FURTHER ACTION" WAS REQUIRED.

PRIOR TO JANUARY 5, 1993, THE MILLER COMPANIES HAD NO KNOWLEDGE ABOUT THE ARMY'S BURIAL OF CHEMICAL MUNITIONS OR RELATED SOIL CONTAMINATION IN SPRING VALLEY. THERE WERE NO WARNINGS IN THE DEEDS, AND NO SIGNS, FLAGS, MARKERS, OR OTHER WARNING DEVICES ON THE SURVEYS OR THE PROPERTIES THEMSELVES. THE MILLER COMPANIES HAD NO ANECDOTAL INFORMATION ABOUT THE ARMY'S DISREGARD FOR THE FUTURE INHABITANTS OF WHAT WAS TO BECOME A BEAUTIFUL NEIGHBORHOOD—A DISREGARD DEMONSTRATED BY THE ARMY'S THOUGHTLESS DUMPING OF MUNITIONS IN THE GROUND AT THE END OF WORLD WAR I, AND ITS FAILURE TO WARN OF THIS DUMPING, DESPITE REPEATED OPPORTUNITIES TO DO SO IN THE YEARS THAT FOLLOWED.

SHORTLY AFTER THE DISCOVERY OF THE MUNITIONS PIT, IT WAS REVEALED THAT THE ARMY, EPA AND AMERICAN UNIVERSITY HAD POSSESSION OF AN UNDISCLOSED REPORT FROM 1986 DOCUMENTING THE AREA'S USE AS A CHEMICAL WEAPONS TESTING GROUND. THAT REPORT CONCLUDED THAT ADDITIONAL MUNITIONS MIGHT BE BURIED

IN THE AREA. UNFORTUNATELY, THE MILLER COMPANIES AND THE RESIDENTS OF SPRING VALLEY NEVER KNEW ABOUT THIS REPORT, AND DID NOT EVEN RECEIVE A COPY TO REVIEW, UNTIL AFTER THE MUNITIONS PIT WAS DISCOVERED ON JANUARY 5, 1993. FOR THE RECORD, THE MILLER COMPANIES NEVER HAD ANY KNOWLEDGE ABOUT THIS INTERNAL REPORT UNTIL AFTER JANUARY 5, 1993.

THE ARMY'S FAILURE TO WARN THE MILLER COMPANIES ABOUT THE BURIED MUNITIONS CAUSED THE COMPANY SUBSTANTIAL HARM AND EXPENSE. AS I HAVE MENTIONED, SPRING VALLEY IS THE HEART OF THE MILLER COMPANIES. THE MILLER COMPANIES CARES ABOUT THE SAFETY AND WELL BEING OF THE RESIDENTS, EMPLOYEES, TENANTS, AND VISITORS WHO VISIT, LIVE, AND WORK IN SPRING VALLEY. AS THE PHASE I EMERGENCY AND TWO YEAR PHASE II INVESTIGATION UNFOLDED, THE MILLER COMPANIES DEVOTED SUBSTANTIAL RESOURCES TO ENSURE THAT THE PEOPLE OF THIS COMMUNITY WERE SAFE. THE MILLER COMPANIES ALSO SUFFERED LOST AND DELAYED HOME SALES BECAUSE OF THE UNCERTAINTY CAUSED BY THE ARMY'S PHASE I INVESTIGATION. WE ASKED THE ARMY TO REIMBURSE US FOR THESE COSTS AS THEY WERE DOING FOR OTHERS IN THE COMMUNITY, BUT WE WERE INFORMED THAT THE ONLY WAY WE COULD RECOUP THESE COSTS WOULD BE TO FILE A CLAIM UNDER THE FEDERAL TORT

CLAIMS ACT. FOR THIS REASON, THE MILLER COMPANIES FILED A LAWSUIT AGAINST THE GOVERNMENT IN 1995. THE ULTIMATE SETTLEMENT BARELY COVERED THE MILLER COMPANIES' COSTS.

THE COMPANY'S LACK OF KNOWLEDGE ABOUT THE AREA'S HISTORICAL USE WAS DOCUMENTED IN AN AFFIDAVIT PREPARED BY MY LATE FATHER. MY FATHER WAS BORN IN 1925 AND GREW UP IN NEARBY WESLEY HEIGHTS AND SPRING VALLEY. HE WAS ALSO BOTH THE PRESIDENT AND THE CEO OF THE MILLER COMPANIES. THE AFFIDAVIT WAS PREPARED AS PART OF THE MILLER COMPANIES' LAWSUIT AGAINST THE GOVERNMENT.

MY FATHER DESCRIBED HOW HE HAD PLAYED IN THE NEIGHBORHOOD AS A CHILD AND HOW THE PROPERTY HAD BEEN USED OVER THE YEARS. THE AREA WHERE THE MUNITIONS WERE FOUND HAD BEEN USED FOR VICTORY GARDENS DURING WORLD WAR II AND WAS NEAR THE AREA WHERE MY FATHER KEPT HIS PONY. HE DESCRIBED THE MANY FAMOUS PEOPLE FOR WHOM HE HAD BUILT HOMES IN THE NEIGHBORHOOD, INCLUDING VICE PRESIDENT LYNDON JOHNSON, RICHARD NIXON AND SUPREME COURT JUSTICE BLACK. THE MILLER COMPANIES' CHIEF ARCHITECT FOR 60 YEARS, ED SPANO, ALSO RAISED HIS FAMILY WITHIN 300 FEET OF THE ORIGINAL DISCOVERY IN 1993. NONE OF THEM EVER

MENTIONED ANY KNOWLEDGE ABOUT THE 1917 ACTIVITIES OF THE ARMY.

MY FATHER WROTE IN HIS AFFIDAVIT: "HOW COULD MY FATHER AND UNCLE BE EXPECTED TO HAVE KNOWN ABOUT THE BURIED MUNITIONS WHEN ALL OF THESE OTHER AFFECTED PEOPLE DID NOT KNOW? MY FATHER AND UNCLE WERE REPUTABLE BUSINESSMEN WHO CARED ABOUT THE COMMUNITY THEY HAD BUILT. IF THEY HAD HAD ANY INKLING ABOUT THE BURIED MUNITIONS, THEY WOULD NOT HAVE ALLOWED FAMILY MEMBERS, EMPLOYEES, AND RESIDENTS TO BE EXPOSED TO THIS HIDDEN DANGER." WE HAVE SUBMITTED A COMPLETE COPY OF MY FATHER'S DECLARATION FOR THE RECORD.

THE U.S. DISTRICT COURT FOR THE DISTRICT OF COLUMBIA HAS TWICE RULED THAT THE GOVERNMENT WAS LIABLE FOR FAILING TO WARN THE MILLER COMPANIES AND THE COMMUNITY ABOUT THE BURIED MUNITIONS. THE COURT'S OPINIONS CONFIRM THE MILLER COMPANIES' POSITION THAT IT HAD NO KNOWLEDGE ABOUT THE BURIED MUNITIONS AND MY FATHER'S TESTIMONY. WE HAVE PROVIDED COPIES OF THE TWO COURT DECISIONS TO THE COMMITTEE.

BUT THAT IS THE PAST. I BELIEVE THAT THE SPRING VALLEY COMMUNITY, WORKING CLOSELY WITH THE D.C. GOVERNMENT AND THE APPROPRIATE FEDERAL AGENCIES, HAS PROVIDED A LEVEL OF OVERSIGHT THAT HAS RESULTED, AND WILL CONTINUE TO RESULT IN AN OPEN AND COMMUNICATIVE PROCESS THAT WILL ACHIEVE THE HIGHEST STANDARD OF CARE FOR THE HEALTH AND SAFETY OF THE RESIDENTS OF SPRING VALLEY. IT IS UNDENIABLE THAT MISTAKES WERE MADE AND THAT THE CONCLUSION IN 1995 THAT "NO FURTHER ACTION" WAS NEEDED WAS PREMATURE. NEVERTHELESS, I BELIEVE THAT THE ARMY GENERALLY DID A GOOD JOB DURING THE PHASE I AND PHASE II INVESTIGATIONS. THE REMAINING CONCERNS APPEAR LIMITED AND ISOLATED, ALTHOUGH SERIOUS IN NATURE. THE MILLER COMPANIES BELIEVES THAT THE INVESTIGATION AND ANY REQUIRED REMEDIATION SHOULD BE ACCOMPLISHED IN AN EXPEDITIOUS, COMPLETE, ACCURATE, AND SAFE MANNER.

WITHOUT UNDERESTIMATING THE CHALLENGES AND CONCERNS THAT REMAIN AHEAD, I WANT TO ASSURE THIS COMMITTEE AND THE RESIDENTS OF WASHINGTON, D.C., THAT THE SPRING VALLEY NEIGHBORHOOD REMAINS ONE OF THE MOST DESIRABLE AND SOUGHT AFTER COMMUNITIES IN THE COUNTRY. ACCORDING TO DATA FROM THE MULTIPLE REGIONAL INFORMATION SYSTEM (MRIS) OVER THE PAST

FIVE YEARS, HOME SALES IN SPRING VALLEY HAVE AVERAGED 51 HOMES PER YEAR WITH AN AVERAGE INCREASE IN SALES PRICE OF 114%. EVEN IN THE PAST SIXTY DAYS, ONE OF YOUR COLLEAGUES HAS PURCHASED A HOME IN SPRING VALLEY.

IN CLOSING, ON BEHALF OF ALL OF THE RESIDENTS OF SPRING VALLEY, I CHALLENGE THE ARMY, EPA, AND THE D.C. GOVERNMENT TO COMMIT THE APPROPRIATE EFFORT AND RESOURCES TO IDENTIFY AND REMEDIATE ANY RESIDUAL RISKS TO THE HEALTH AND SAFETY OF OUR COMMUNITY. AT THE END OF THE DAY, THE COMMUNITY NEEDS TO HAVE COMPLETE CONFIDENCE THAT NO FURTHER ACTION IS REQUIRED.

THANK YOU FOR THE OPPORTUNITY TO ADDRESS YOU TODAY.

WAS1 #994848 v5

DECLARATION OF EDWARD J. MILLER

I, Edward J. Miller, under penalty of perjury, do hereby declare and state as follows:

1. I am over 18 years of age, a citizen of the United States residing in the District of Columbia, and am competent to testify to the facts set forth herein, which are based upon my personal knowledge.

2. My father was Allison N. Miller, one of the founders of the W.C. & A.N. Miller Development Companies. I was born in Washington, D.C. and lived at 4338 Cathedral Street, N.W., from 1925 until 1954. At that time, I moved to 3919 47th Street and then to 4030 50th Street. I later moved to Maryland. At the present time, I live in Spring Valley at 5133 52nd Street, N.W., Washington, D.C.

3. The W.C. & A.N. Development Company, which later became known as the W.C. & A.N. Miller Companies, was incorporated in 1926. I have been employed by the Miller Companies since 1947. I have served as Vice President of Construction, President, and Chairman of the Board and CEO, the position that I currently hold. The Miller Companies is a third generation, closely held, family real estate business with expertise in the planning and development of communities, construction of new homes, brokerage sales, commercial property management, commercial property investment, and land investment.

4. My father, Allison N. Miller, and my uncle, W.C. Miller, started the business in 1912 and built houses in Cleveland Park and on scattered lots in the city (Attachment 1).

5. In and around 1920 they purchased the land now known as Wesley Heights; they went on to purchase the land now known as Spring Valley in 1926. (Id.; Attachment 2).

6. Wesley Heights and Spring Valley were modeled on planned communities in Shaker Heights (Attachment 1). The Wesley Heights section was bounded by Nebraska Avenue to the north, Garfield Street to the south, New Mexico Avenue to the east, and Foxhall Road to the west. The Spring Valley section was bounded by Massachusetts Avenue to the north, Little Falls Road (now known as Loughboro Road) to the south, American University to the east, and Dalecarlia Reservoir to the west. These lands were some of the few undeveloped tracts of land in Washington, D.C., large enough to develop into planned communities.

7. My father and uncle first began to develop Wesley Heights in the early 1920's as a community of substantial homes with spacious gardens (Attachment 3). They acquired a partially platted and graded subdivision there (Attachment 1).

8. Later, my father and uncle began to assemble acreage in Spring Valley and to develop it into the "Garden Spot of Washington" (Attachment 4). Spring Valley was relatively inaccessible when this acreage was assembled. However, the growing availability of the automobile made this area increasingly more accessible to affluent Washingtonians.

9. As a boy, I was very much aware of my father and uncle's efforts to build a planned community in northwest Washington, D.C. My father and uncle took pride in their craftsmanship and in the communities they created. "Miller-built" meant ultra-refinement in character, utility in arrangement, and super quality in construction (Attachment 5). The Miller Companies won numerous awards for its quality homes during the development of Spring Valley and Wesley Heights (Attachment 6).

10. Over the next sixty-seven years, the Miller Companies gradually developed the acreage it had acquired in Spring Valley in the late 1920's and 1930's. The area known as Spring Valley West (where the munitions were discovered on 52nd Court in 1993) was the last section to be developed because of its hilly terrain, which made it the least cost effective acreage to develop (Attachment 7).

11. My uncle passed away in 1939, and my father passed away in 1951. It would have been logical for them to warn me, as a future officer of the company, that we needed to follow special precautions when digging in certain portions of the property. They never hinted that they had any such concerns. In fact, based upon the numerous conversations that I had with my father and uncle over the years, as well as the records I had access to, first as President and now as Chairman of the Board, I had no reason to believe that my father and uncle were ever aware that the Army had used the properties in Spring Valley for research or testing purposes, never mind that the Army had left deadly munitions there in the ground. There was no notice in the deeds, and no signs, flags, markers, or other warning devices.

12. I played throughout the area as a child and began digging in the area when I was 15, when I helped the company dig footings and build bridges. I have no recollection of my father or my uncle ever warning me, my brothers, my sisters, my cousins or anyone else not to dig in the dirt or not to play in specific areas because the Army had been there before.

13. To substantiate the Companies' lack of knowledge about the Army's activities during World War I, I would like to point out the following facts:

a. During World War II the site where the munitions were found was used for victory gardens. Residents of the

community and employees of the Miller Companies dug in the dirt where the munitions were later discovered.

b. During World War II, Mt. Vernon Seminary was forced to move to the former Garfinckle's building on Massachusetts Avenue so that the Navy could use its facilities on Nebraska Ave. Mt. Vernon Seminary used a portion of the Spring Valley property as a hockey field for its students, having to clear and grade the field not far from the munitions burial site.

c. Numerous community activities were carried out on the grounds over the years, including the Spring Valley horse show. My uncle had a riding stable on the property and I kept my pony there.

d. When Lyndon Johnson was Vice President of the United States, he lived in a house within 800 feet of the munitions pit. His senior aide, Bobby Baker, lived even closer to the pit. Supreme Court Justice Black lived in the neighborhood. Senator Richard Nixon also had me build him a house on 48th and Tilden, again not far from the munitions pit.

e. Throughout the years, numerous high-ranking government officials, including Senators, Congressmen, Supreme Court Justices, Cabinet officials, ambassadors, and others have lived in the Spring Valley community.

f. The Miller Companies' chief architect, Ed Spano, who was employed by the Miller Companies from the very earliest days of the business, built his house and raised his family within 300 feet of the munitions pit.

g. Over the years, American University has built numerous buildings on its campus, and the Methodist Seminary built a school on the former Experiment Station site, all without any apparent concern over digging in the ground.

14. How could my father and uncle be expected to have known about the buried munitions when all of these other affected people did not know? My father and uncle were reputable businessmen who cared about the community they had built. If they had had any inkling about the buried munitions, they would not have allowed family members, employees, and residents to be exposed to this hidden danger. To imply that they participated in a cover-up is an insult to me and my family and to the memories of my father and uncle.

15. When I was President of the Miller Companies, from 1972 to 1988, developers did not typically conduct any type of environmental investigation of property they were acquiring or financing. The same was true when my father and uncle were in

charge of the Companies. It was not until the late 1980's that environmental due diligence investigations became common.

16. I was not aware until after January 5, 1993, that the American University had discovered a bomb on its campus during the 1950's that may have been attributable to the Army's activities there during World War I. Likewise, I was not aware that American University and the Army had conducted a study in 1986 into the possibility that munitions might have been buried on the American University campus or adjacent properties, until this study was released following the discovery of munitions on 52nd Court in January of 1993.

17. The first time that I had any knowledge that the Army had used any portions of the area now known as Spring Valley as a munitions burial ground during World War I was when one of the Companies' employees unearthed unusual objects on January 5, 1993, and these objects were later determined to be World War I era chemical and high explosive munitions.

I declare under penalty of perjury that the foregoing is true and correct. Executed on August 7th, 1996.

Respectfully submitted,

Edward J. Miller

Edward J. Miller
Chairman of the Board and CEO
W.C. & A.N. Miller Companies

WAS-185237

JUL 24 2001

Law Offices
HOLLAND & KNIGHT LLP

2099 Pennsylvania Avenue, N.W.
Suite 100
Washington, D.C. 20006-6801

202-955-3000
FAX 202-955-5564
www.hklaw.com

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*Representative Offices

July 24, 2001

AMY L. EDWARDS
202-457-5917

Internet Address:
aedwards@hklaw.com

VIA HAND DELIVERY

Russell A. Smith
Staff Director
Subcommittee on the District of Columbia
Rayburn House Office Building
B-349C
Washington, D.C. 20015

Re: W.C. & A.N. Miller Companies v. United States, Civ. No. 96-0453, Stipulation of Settlement and Mutual Release of Claims

Dear Russell:

As we discussed this morning, please find enclosed a copy of the Stipulation of Settlement and Mutual Release of Claims in the above-referenced case.

If you should need anything further, please let me know.

Very truly yours,

HOLLAND & KNIGHT LLP

Amy L. Edwards

Amy L. Edwards

Enclosure

cc: Edward J. Miller, Jr. (with encl.)
J. Patrick Brown, Esq. (with encl.)
Douglas Patton, Esq. (with encl.)

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

W.C. & A.N. MILLER COMPANIES, Plaintiff, v. UNITED STATES OF AMERICA, Defendant.	Civil A. No. 96-0453 (SS/DAR)

FILED
DEC 1 1 1998
NANCY MAYER-WHITTINGTON, CLERK
U.S. DISTRICT COURT

STIPULATION OF SETTLEMENT AND MUTUAL RELEASE OF CLAIMS

Plaintiff, W.C. & A.N. Miller Companies, and defendant, United States of America, hereby stipulate and agree that, upon approval by the Court of this Stipulation of Settlement and Mutual Release of Claims (the "Stipulation and Release"), Plaintiff's claims against the Defendant in the above-captioned civil action, and Defendant's claims against Plaintiff, shall be dismissed with prejudice.

The conditions of this Stipulation and Release are as follows:

1. The United States of America shall pay Plaintiff the sum of Two Million, One Hundred Thousand Dollars ($2,100,000). This amount shall be paid by a check drawn on the Treasury of the United States made payable to the order of Holland & Knight LLP on behalf of the W.C. & A.N. Miller Companies. The check shall be hand-delivered to Plaintiff's counsel at the following address:

Amy L. Edwards, Esquire
Holland & Knight LLP
2100 Pennsylvania Avenue, N.W.
Washington, D.C. 20037
(202) 955-3000

(N)

Such payment shall constitute the full and complete settlement and satisfaction of all claims that have been, or could have been made in this case against the United States, and all claims by Plaintiff related to the discovery of munitions and military materiel, including without limitation all claims for attorneys' fees, expert fees, expenses and costs.

2. This Stipulation and Release shall not be deemed an admission of liability or fault on the part of the United States of America, its agents, servants, or employees, or any agency thereof, and has been entered into for the purpose of compromising disputed claims and avoiding the expenses and risks of litigation.

3. The settlement amount of $2,100,000 represents the entire amount of the settlement, and the parties will each bear their respective attorneys' fees, expert fees, expenses and costs incident to this case. Any attorneys' fees owed by the Plaintiff will be paid out of the settlement proceeds and not in addition thereto.

4. This Stipulation and Release also constitutes the full and complete settlement and satisfaction of all civil claims that have been or could have been made in this case or in related investigations and proceedings by Defendant against Plaintiff as a result of information learned or discovered in this case, including without limitation all claims for attorneys' fees, expert fees, expenses and costs. Defendant also dismisses its counterclaim against Plaintiff with prejudice. In addition, the United States Attorney's Office for the District of Columbia states that it has

reviewed the Administrative Tort Claim, filed by the W.C. & A.N. Miller Companies on January 4, 1995, to determine whether any federal criminal violations have been committed. Based upon this review, the United States has determined not to prosecute the W.C. & A.N. Miller Companies, its officers, directors, employees, and agents.

5. This Stipulation and Release shall not be deemed an admission of liability or fault on the part of the W.C. & A.N. Miller Companies, its agents, servants, or employees, and has been entered into for the purpose of compromising disputed claims and avoiding the expenses and risks of litigation.

6. This Stipulation and Release constitutes a full and complete release and discharge of both parties', their agents', servants', or employees' claims against each other, whether asserted or not, arising from, related to, or connected with, the discovery of munitions or military materiel, and other information learned during discovery in this case or in related investigations and proceedings.

7. This Stipulation and Release does not void the Stipulated Protective Order Respecting Confidentiality of Discovery Material and Information (the "Protective Order") approved by the Court on October 17, 1997. The Protective Order remains in full force and effect, and Defendant agrees not to use any discovery material or other information obtained pursuant to the terms and conditions of that Protective Order for any other purpose.

8. Notwithstanding any other provision of this Agreement, the United States does not release W.C. & A.N. Miller Companies from any claims arising under Title 26, United States Code (Internal Revenue Code).

9. W.C. & A.N. Miller agrees that all costs as defined in the Federal Acquisition Regulations (FAR 31.205-47) incurred by or on its behalf, including its officers, directors, agents, and employees, in connection with (a) the matters covered by this Agreement; (b) the Government's audit and investigation of the matters covered by this Agreement; (c) the W.C. & A.N. Miller Company's investigation and defense of the matters, and corrective actions; (d) the negotiation of this Agreement; and (e) the payments made to the United States pursuant to this Agreement, will be unallowable costs for Government contract accounting purposes. The "matters covered by this Agreement" include related criminal matters, if any.

FOR PLAINTIFF:

EDWARD J. MILLER, JR.
President and Chairman of the Board
W.C. & A.N. Miller Companies

CHRISTOPHER A. MYERS
D.C. Bar # 263517
AMY L. EDWARDS
D.C. Bar # 250738
Holland & Knight LLP
Washington, DC 20037-3202
(202) 955-3000

FOR DEFENDANT:

WILMA A. LEWIS
D.C. Bar # 358637
United States Attorney

MARK E. NAGLE
D.C. Bar # 416364
Assistant United States Attorney

RODERICK L. THOMAS
D.C. Bar # 433433
Assistant United States Attorney
555 4th Street, NW
Washington, DC 20001
(202) 514-7131

Dated: December 11, 1998

Dated: December 11, 1998

APPROVED:

Dated: 12/14/98

UNITED STATES DISTRICT COURT JUDGE

WAS1-385477.4

W.C. & A.N. MILLER COMPANIES, Plaintiff,
v.
UNITED STATES of America, Defendant.
E. Conrad HICKS, Jr., M.D., et al., Plaintiffs,
v.
UNITED STATES of America, et al., Defendants.

Civil Action Nos. 96-0453 (SS), 97-0350 (SS).

United States District Court, District of Columbia.

May 6, 1997.

Vendor of real property brought action against Army under Federal Tort Claims Act (FTCA) for damages arising from Army's burial of munitions on property during World War I. Action was consolidated with action against government and vendor by homeowners who purchased their property from vendor. The District Court, Sporkin, J., denied government's motion to dismiss or for summary judgment, 963 F.Supp. 1231, and held that government breached its duty to vendor by failing to warn of buried munitions. On government's motion for reconsideration and motion to dismiss claims against it by homeowners, and vendor's motion to dismiss or for summary judgment against homeowners, the District Court, Sporkin, J., held that: (1) government was not entitled to reconsideration of earlier order despite claim that court's holding in favor of vendor was premature; (2) homeowners' claims against government were time barred; and (3) Court would decline to exercise supplemental jurisdiction over homeowners' claims against vendor.

Ordered accordingly.

[1] FEDERAL CIVIL PROCEDURE ⚷2659
170Ak2659
Motion for reconsideration, although not expressly provided for in Federal Rules of Civil Procedure, may be treated as motion to alter or amend judgment if it is filed within ten days of entry of judgment. Fed.Rules Civ.Proc.Rule 59(e), 28 U.S.C.A.

[2] FEDERAL CIVIL PROCEDURE ⚷2651.1
170Ak2651.1
Primary reasons for granting motion to alter or amend judgment are intervening change of controlling law, availability of new evidence, or need to correct clear error or prevent manifest injustice; such motion is not second opportunity to present argument upon which court has already ruled, nor is it means to bring before court theories or arguments that could have been advanced earlier. Fed.Rules Civ.Proc.Rule 59(e), 28 U.S.C.A.

[2] FEDERAL CIVIL PROCEDURE ⚷2655
170Ak2655
Primary reasons for granting motion to alter or amend judgment are intervening change of controlling law, availability of new evidence, or need to correct clear error or prevent manifest injustice; such motion is not second opportunity to present argument upon which court has already ruled, nor is it means to bring before court theories or arguments that could have been advanced earlier. Fed.Rules Civ.Proc.Rule 59(e), 28 U.S.C.A.

[3] FEDERAL CIVIL PROCEDURE ⚷2651.1
170Ak2651.1
Government was not entitled to reconsideration of district court's order, in action brought by vendor of real property against Army for damages arising from Army's burial of munitions on property, which denied government's motion to dismiss or for summary judgment and held that government breached its duty to vendor by failing to warn of buried munitions; although vendor did not request ruling in its favor at time of summary judgment motion, parties engaged in extensive discovery prior to that motion, expert testimony which government claimed was necessary was not in fact required, and government had notice and opportunity to put its case forward.

[4] FEDERAL CIVIL PROCEDURE ⚷2533.1
170Ak2533.1
Court may enter summary judgment sua sponte in favor of party opposing summary judgment motion, even if that party has not made formal cross-motion for summary judgment, so long as losing party was on notice that it needed to come forward with all of its evidence.

[5] FEDERAL CIVIL PROCEDURE ⚷2533.1
170Ak2533.1
To be on notice that party moving for summary judgment must present all of its evidence, to avoid summary judgment for nonmovant even though movant has not cross-moved for summary judgment, does not require that movant receive formal notice document or that district court specifically give

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movant such notice; rather, question is whether, given particular procedural posture of case, defendant had opportunity to demonstrate that there was genuine material issue and nonmovant was not entitled to judgment as matter of law.

[6] UNITED STATES ⚷127(2)
393k127(2)
Homeowners' Federal Tort Claims Act (FTCA) claims against government arising from Army's burial of munitions on property during World War I were barred by FTCA's two-year statute of limitations because homeowners failed to file administrative claims within two years of claims' accrual, which occurred upon homeowners' discovery of munitions and sending of demand letter to seller of property, not upon sale of their homes. 28 U.S.C.A. § 2401(b).

[7] UNITED STATES ⚷127(2)
393k127(2)
Cause of action under Federal Tort Claims Act (FTCA) accrues when injured party discovers, or in due diligence should have discovered, that it has been injured. 28 U.S.C.A. § 2401(b).

[8] FEDERAL COURTS ⚷18
170Bk18
District Court would decline to exercise supplemental jurisdiction over homeowners' common law claims against company from which homeowners purchased their property, where Court dismissed homeowners' claims against government under Federal Tort Claims Act (FTCA), company's consolidated action against government was in damages phase, and issue of company's liability to homeowners involved only matters of local law. 28 U.S.C.A. §§ 1346(b), 1367, 2671 et seq.

*2 Amy L. Edwards, Christopher A. Myers, Holland & Knight, L.L.P., Washington, DC, for W.C. & A.N. Miller Companies.

Christopher G. Hoge, Patrick T. Hand, Crowley, Hoge & Fein, P.C., Washington, DC, for E. Conrad Hicks, Jr., Ronald Wood, Patricia Wood.

Roderick L. Thomas, Assistant United States Attorney, along with whom Eric H. Holder, Jr., United States Attorney, appeared on the briefs, for Defendants; Jeffrey D. Smith, Major, United States Army, appeared of counsel.

MEMORANDUM OPINION

SPORKIN, District Judge.

BACKGROUND

On March 8, 1996, the plaintiff W.C. & A.N. Miller Companies ("Miller") sued the Army under the Federal Tort Claims Act, 28 U.S.C. §§ 1346(b), 2671 et seq. ("FTCA"), for damages arising from the United States Army's burial of munitions during World War I on land in Northwest Washington, District of Columbia. On July 19, 1996, the United States filed a motion to dismiss or, in the alternative, for summary judgment. Miller opposed the government's motion, but did not cross-move for summary judgment. On March 21, 1997, in a Memorandum Opinion and Order, the Court denied the defendant's motion and held that the defendant breached its duty to the plaintiff by failing to warn of the buried munitions.

On February 21, 1997, three homeowners who had purchased their property from Miller also filed suit. The homeowners' suit was consolidated with the present suit for administrative convenience. The three homeowners each claim that they suffered a loss of equity when they subsequently sold their homes. The homeowners sue the United States under the FTCA for negligence, public and private nuisance, and trespass. The homeowners sue Miller in common law tort for fraudulent misrepresentation, negligent misrepresentation, and rescission.

On April 2, 1997, the United States filed a "Motion for Reconsideration" of the Court's March 21, 1997 Order, pursuant to Federal Rule of Civil Procedure 59(e). The United States also filed a Motion to Dismiss the claims against it by the homeowners. On April 14, 1997, Miller filed a Motion to Dismiss or for Summary Judgment against the homeowners. The Court held a hearing on these Motions on May 5, 1997.

Based on the arguments, the pleadings, the entire record herein and the law applicable thereto, and for the reasons expressed below, the Court will deny the United States' Motion for Reconsideration, will grant the United States' Motion to Dismiss the homeowners' *3 claims against the government, and will grant Miller's Motion to Dismiss the

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homeowners' claims against Miller.

DISCUSSION

I. THE COURT WILL DENY THE UNITED STATES' MOTION FOR RECONSIDERATION.

[1] A "Motion for Reconsideration," although not expressly provided for in the Federal Rules of Civil Procedure, may be treated as a motion to alter or amend judgment pursuant to Rule 59(e) if it is filed within 10 days of entry of the judgment. See Derrington-Bey v. District of Columbia Dept. of Corrections, 39 F.3d 1224, 1226 (D.C.Cir.1994). The government's present motion is timely under Rule 59(e).

[2] The primary reasons for granting a Rule 59(e) motion are "an intervening change of controlling law, the availability of new evidence, or the need to correct a clear error or prevent manifest injustice." National Trust v. Department of State, 834 F.Supp. 453, 455 (D.D.C.1993) (quoting Virgin Atlantic Airways, Ltd. v. National Mediation Bd., 956 F.2d 1245, 1255 (2d Cir.), cert. denied, 506 U.S. 820, 113 S.Ct. 67, 121 L.Ed.2d 34 (1992)), aff'd in part and rev'd in part on other grounds sub nom. Sheridan Kalorama Historical Ass'n v. Christopher, 49 F.3d 750 (D.C.Cir.1995). A Rule 59(e) motion is not a second opportunity to present argument upon which the Court has already ruled, nor is it a means to bring before the Court theories or arguments that could have been advanced earlier.

[3] In acting on the government's July 19, 1996 motion in this case, the Court held that the government breached its duty to warn Miller of the buried munitions. The United States argues that the Court could not so hold without the plaintiff first having requested such a disposition because, in doing so, the Court imposed liability on the government without proper notice, without allowing discovery on the merits, and without requiring the plaintiff to demonstrate the merits of their claim.

[4][5] A court may enter summary judgment, sua sponte, in favor of a party opposing summary judgment, even if, as in this case, that party has not made a formal cross-motion for summary judgment. See Celotex Corp. v. Catrett, 477 U.S. 317, 326, 106 S.Ct. 2548, 2554, 91 L.Ed.2d 265 (1986); Leahy v. District of Columbia, 833 F.2d 1046, 1047 (D.C.Cir.1987); 10A Charles Alan Wright, Arthur R. Miller, Mary Kay Kane, Federal Practice and Procedure § 2720, at 28-34 (2d ed.1983). The critical question for the Court is whether the losing party was "on notice" that it needed to "come forward with all of [its] evidence." Celotex, 477 U.S. at 326, 106 S.Ct. at 2554. To be on notice "does not mean that [the defendant] had to receive a formal document called 'notice' or that the district court had to say the words 'you are on notice' or even that the court had to explicitly tell [the defendant], 'I am thinking of ordering summary judgment for [the plaintiff] sua sponte.' " National Expositions, Inc. v. Crowley Maritime Corp., 824 F.2d 131, 133 (1st Cir.1987). Rather, the question is whether, given the particular procedural posture of the case, the defendant had the opportunity to demonstrate that there was a genuine material issue and its opponent was not entitled to judgment as a matter of law. In this case, the government had that opportunity.

At the outset, the Court notes that, prior to the government's July 19, 1996 motion, the parties had engaged in extensive discovery. In fact, the parties requested extensions of time in the dispositive motion schedule in light of the

> substantial number of documents that must be accessed and reviewed.... [T]he Department of the Army in Baltimore, Maryland, maintains approximately twenty- five filing cabinets full of documents associated with Spring Valley, the property at issue in this lawsuit.

Joint Motion for Amended Dispositive Motion Schedule (June 7, 1996). The late Honorable Charles R. Richey, who presided over this case until his death, granted the requested extensions to ensure that sufficient time was afforded for discovery.

*4 Despite the voluminous documents reviewed by the parties and those submitted to this Court in connection with the government's July 19, 1996 motion, the government asserts that more discovery is needed. However, the government has been unable to proffer any specific evidence which would materially alter the Court's previously stated rulings in this case.

Relying on Scott v. District of Columbia, 101 F.3d 748, 757 (D.C.Cir.1996), the government contends that expert testimony is needed to establish a standard of care. However, this case does not present concepts beyond the realm of common

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knowledge and everyday experience. The Court need not call upon the advice of an expert to determine that the government owed a duty of care to warn of live munitions it buried in Northwest DC.

The government also asserts that discovery is needed to determine the proper method of burying munitions in the relevant time period. However, in light of the Court's March 21, 1997 ruling, the question is not the propriety of burying live munitions circa 1919; rather, the question is, once live munitions were buried by the government, did the government have a duty to warn of those munitions. Certainly, the method of burial does not absolve the government of its duty to subsequent users of the property to disclose what has been buried under the land--munitions that created a real risk to human life and the danger of property damage.

The questions whether the government had a duty to warn the **Miller** Companies and whether it provided any such warning were extensively briefed in the government's July 19, 1996 motion. That motion rested in part on the United States' argument that it owed no actionable duty to the plaintiff. The facts and law concerning that issue was the same as those going to the merits of **Miller's** negligent failure to warn claim. See Cockrum v. Califano, 475 F.Supp. 1222, 1226 (D.D.C.1979) ("[W]here the parties have had full opportunity to present the issues and to contest the proposition that there exist no facts in dispute material to entry of judgment, the Court may enter judgment for a party which has not In haec verba moved for summary judgment."). That the government had such a duty to warn was determined by the Court, as a matter of law, in its March 21, 1997 Memorandum Opinion and Order. See **W.C. & A.N. Miller** Cos. v. United States of America, 963 F.Supp. 1231, 1242-43 (1997) (citing Rosenblatt v. Exxon Co., 335 Md. 58, 642 A.2d 180 (1994)).

Furthermore, the question whether **Miller** knew or should have known about the buried munitions or whether it was warned or otherwise put on notice was **an** essential element of the defendant's affirmative defense that the plaintiff's claims were barred by the effective date of the FTCA and the statute of limitations. Numerous pages of the government's July 19, 1996 motion and other pleadings were devoted to these issues. The government's arguments were considered by the Court and rejected. The government had notice and opportunity to put its case forward. It was not taken by surprise by a premature ruling in any respect.

Based on the foregoing, the Court will deny the United States' Motion for Reconsideration. In so doing, the Court does not in any way prejudice the right of the government to seek full discovery regarding **Miller's** damages and to inquire into whether those damages were caused by the defendant's actions.

II. THE COURT WILL GRANT THE UNITED STATES' MOTION TO DISMISS THE HOMEOWNERS' CLAIMS AGAINST IT BECAUSE THEY ARE BARRED BY THE FTCA'S STATUTE OF LIMITATIONS.

[6] The government moves to dismiss the homeowner's claims against it on the basis, inter alia, that the claims are barred by the FTCA's two-year statute of limitations because the homeowners failed to file administrative claims within two years of the claims' accrual. Because the Court shall grant the government's motion on this basis, it need not address the government's alternative arguments.

[7] Under the FTCA's statute of limitations, a tort claim against the government is ***5** barred unless an administrative claim is presented within two years of the date on which the claim accrued. 28 U.S.C. § 2401(b); United States v. Kubrick, 444 U.S. 111, 113, 100 S.Ct. 352, 354-55, 62 L.Ed.2d 259 (1979). A cause of action accrues when the injured party discovers--or in due diligence should have discovered--that it has been injured. Sprint Communications Co., L.P. v. F.C.C., 76 F.3d 1221, 1228 (D.C.Cir.1996).

The munitions were unearthed by **Miller** in January 1993. At least as early as March 1993, the homeowners knew of their injuries. On March 10, 1993, a demand letter was sent by counsel for the homeowners to **Miller** for "present and future losses and potential losses incurred ... as a result of the presence of munitions." See Supp. to Defendant's Mot. to Dismiss. Despite these undisputed facts, however, the homeowners argue that their cause of action did not accrue until the sale of their homes.

Contrary to the homeowners' view, accrual of the

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homeowners' claims did not wait until the homeowners had enough information to calculate their damages. Sprint Communications, 76 F.3d at 1228. To accept the homeowners' view would frustrate the purpose of the jurisdictional limitations period, which is to encourage the prompt presentation of claims. Under the homeowners' view, they could have waited years to sell their homes, extending the limitations period indefinitely beyond the discovery of the buried munitions.

The homeowners here filed their administrative claims in May 1996, over two years after the unearthing of the material and the demand letter. The homeowners' failure to file **an** administrative claim within two years of when their claims accrued accordingly bars their claims under the FTCA.

III. THE COURT WILL GRANT **MILLER'S** MOTION TO DISMISS THE HOMEOWNERS' CLAIMS AGAINST **MILLER**.

[8] In light of the Court's ruling with respect to the government's motion to dismiss the homeowners claims, the Court will decline to exercise supplemental jurisdiction over the homeowner's claims against **Miller**. The homeowners and **Miller** are both citizens of the District of Columbia; thus, there is no diversity jurisdiction. 28 U.S.C. § 1367 provides for supplemental jurisdiction over related claims if a court has original jurisdiction over other claims in the action. However, under § 1367(c)(3), the Court may decline to exercise supplemental jurisdiction over a claim if the Court has dismissed all claims over which it has original jurisdiction. 28 U.S.C. § 1367(c)(3). See also LaShawn A. v. Barry, 87 F.3d 1389, 1397 n. 10 (D.C.Cir.1996) (en banc) (if federal claims are dismissed before trial, state claims should be dismissed as well) (citing United Mine Workers of Am. v. Gibbs, 383 U.S. 715, 726, 86 S.Ct. 1130, 1139, 16 L.Ed.2d 218 (1966)). The case is in the damages phase with respect to **Miller** and the United States. The issue of **Miller's** liability to the homeowners involves only matters of local law, which are best resolved in District of Columbia Court.

CONCLUSION

For the reasons set forth herein, the Court will deny the government's Motion for Reconsideration, will grant the government's Motion to Dismiss, and will grant **Miller's** Motion to Dismiss. **Miller's** Motion for Summary Judgment will be declared moot. The Court will issue **an** Order of even date herewith, consistent with the foregoing Memorandum Opinion and setting a schedule for trial on the damages issue remaining in this case.

END OF DOCUMENT

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W.C. & A.N. MILLER COMPANIES, Plaintiff,
v.
UNITED STATES of America, Defendant.

Civil Action No. 96-00453.

United States District Court,
District of Columbia.

March 21, 1997.

Landowner brought action against United States under Federal Tort Claims Act (FTCA) for damages allegedly arising from United States Army's burial of munitions during World War I on leased land. On defendant's motion to dismiss or for summary judgment, the District Court, Sporkin, J., held that: (1) plaintiff's claims were not barred by FTCA's effective date or independent contractor provisions; (2) plaintiff's claims arising from defendant's failure to warn of buried munitions were not barred by FTCA's discretionary function provision; (3) claims were not barred by statute of limitations; and (4) defendant owed duty to warn plaintiff, as a subsequent occupant of property, that defendant buried munitions on property.

So ordered.

Reconsideration denied, 1997 WL 251515.

[1] UNITED STATES ⚷78(14)
393k78(14)
Question of whether claim has accrued under Federal Tort Claims Act (FTCA) is matter of state law. 28 U.S.C.A. § 1346(b).

[2] LIMITATION OF ACTIONS ⚷55(2)
241k55(2)
Claim "accrues" when negligent act or omission complained of has had impact that results or will result in injury.
See publication Words and Phrases for other judicial constructions and definitions.

[3] UNITED STATES ⚷78(2)
393k78(2)
Federal Tort Claims Act (FTCA) confers jurisdiction over claims for which injury occurred after Jan. 1, 1945, regardless of when act or omission complained of occurred; FTCA's effective date provision establishes jurisdiction on basis of when claims accrued rather than when allegedly tortious conduct occurred. 28 U.S.C.A. § 1346(b).

[4] UNITED STATES ⚷78(4)
393k78(4)
Federal Tort Claims Act (FTCA) adopts common-law distinction between liability of employer for negligent acts of its employees and for negligent acts of those with whom it contracts; for government to be liable under FTCA, it must be shown that acts or omissions complained of were taken by employee of government. 28 U.S.C.A. §§ 1346(b), 2671.

[5] UNITED STATES ⚷78(5.1)
393k78(5.1)
Landowner's claim, under Federal Tort Claims Act (FTCA), that United States Army was negligent in failing to take appropriate action after learning from its independent contractor that there were possible burial sites, shell and bomb pits, trenches, and possible test areas remaining from war effort was not barred by FTCA's independent contractor provision; landowner's challenge was to Army's conduct, not to contractor's conduct. 28 U.S.C.A. §§ 1346(b), 2671.

[6] UNITED STATES ⚷78(12)
393k78(12)
Discretionary function exception to district court jurisdiction under Federal Tort Claims Act (FTCA) marks boundary between Congress' willingness to impose tort liability on United States and its desire to protect certain governmental activities from exposure to suit by private individuals; exception was designed to prevent courts from "second guessing," through decisions in tort actions, the way that government officials choose to balance economic, social, and political factors as they carry out their official duties. 28 U.S.C.A. § 2680(a).

[7] UNITED STATES ⚷78(12)
393k78(12)
To determine whether discretionary function exception applies in particular Federal Tort Claims Act (FTCA) case, court must first determine whether any federal statute, regulation, or policy specifically prescribes course of action for employee to follow; if specific directive exists, then employee had no choice and no rightful option but to adhere to directive, but if no specific directive exists, court must make second determination of whether judgment is of the kind that FTCA exception was

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designed to shield from liability, that is, a decision grounded in social, economic, or political policy. 28 U.S.C.A. § 2680(a).

[8] UNITED STATES ⚷78(12)
393k78(12)
Discretionary function provision of Federal Tort Claims Act (FTCA) barred landowner's claims based on United States' allegedly wrongful burial of munitions during World War I, allegedly negligent investigation in 1986, and failure to remove munitions prior to landowner's discovery; United States' actions were types of conduct that implicated social, economic, or political judgment, and were thus beyond reach of FTCA. 28 U.S.C.A. § 2680(a).

[9] UNITED STATES ⚷78(12)
393k78(12)
Discretionary function provision of Federal Tort Claims Act (FTCA) did not bar landowner's claims based on United States Army's failure to mark or warn that there were buried munitions on private land; Army's decision was not type of decision that involved social, economic, or policy considerations. 28 U.S.C.A. § 2680(a).

[10] LIMITATION OF ACTIONS ⚷95(7)
241k95(7)
Real estate business' claims under Federal Tort Claims Act (FTCA), for damages allegedly arising from United States Army's burial of munitions during World War I, were not barred by FTCA's two-year statute of limitations, despite argument that claims accrued when business' founders purchased property in question because founders should have been aware of Army's activities at time of purchase; even if founders knew that property was a testing site, there was no evidence that founders knew or had reason to know that Army had buried munitions beneath surface of property. 28 U.S.C.A. § 2401(b).

[11] NEGLIGENCE ⚷136(14)
272k136(14)
Question whether duty is owed is question of law to be determined by the court.

[12] NEGLIGENCE ⚷2
272k2
Determination of whether duty should be imposed is made by weighing various policy considerations and reaching a conclusion that plaintiff's interests are, or are not, entitled to legal protection against conduct of defendant.

[13] UNITED STATES ⚷78(5.1)
393k78(5.1)
Under District of Columbia law, as predicted by district court, United States Army owed duty to warn landowner, as a subsequent occupant of property, that Army buried munitions on property during World War I; when it buried live munitions, Army in effect "booby-trapped" the land, it had to be obvious to Army when it embarked on its disposal project that any subsequent user of land might need to excavate below the surface for subsequent construction, and Army was in best position to warn future occupants.

***1232** Amy L. Edwards and Christopher A. Myers, Holland & Knight, Washington, DC, for Plaintiff.

Roderick L. Thomas, Assistant United States Attorney, Eric H. Holder, Jr., United States Attorney, on the briefs, and Jeffrey D. Smith, Major, United States Army, of counsel, for Defendant.

MEMORANDUM OPINION

SPORKIN, District Judge.

INTRODUCTION

On March 8, 1996, the plaintiff **W.C. & A.N. Miller** Companies (**"Miller"**) filed this action under the Federal Tort Claims Act, 28 U.S.C. §§ 1346(b), 2671 et seq., for damages allegedly arising from the United States Army's burial of munitions [FN1] during World War I on leased land in northwest Washington in the District of Columbia. Compl. ¶¶ 1-5. These munitions initially were discovered by **Miller** in January 1993, when **Miller** was excavating a trench for utilities ***1233** for a new home on land it owned. Compl. ¶ 13.

FN1. The Complaint alleges that the Army buried intact munitions, assorted ordnance-related debris, and laboratory material, including scrap metal and contaminated laboratory glass. Compl. ¶ 15. The Court shall refer to the buried material collectively as "munitions."

The defendant has moved for dismissal or, in the alternative, for summary judgment on the grounds

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that: (1) the Court lacks subject matter jurisdiction over the plaintiff's claims; (2) the claims are barred by the applicable statute of limitations; and (3) the plaintiff has failed to state a claim upon which relief can be granted. The plaintiff opposes the defendant's motion. Based on the pleadings, the entire record herein, the law applicable thereto, and for the reasons expressed below, the Court will deny the defendant's Motion, will hold that the defendant breached its duty of care to the plaintiff to warn of the buried munitions, and will set a schedule to dispose of the remaining issue of damages in this case.

BACKGROUND

On April 30, 1917, in a letter addressed to President Woodrow Wilson, American University's board of trustees offered the United States Government the use of its 91-acre campus in northwest Washington to support the war effort against Germany. See Martin K. Gordon, Barry R. Sude, Ruth Ann Overbeck & Charles Hendricks, A Brief History of the American University Experiment Station and U.S. Navy Bomb Disposal School. American University (Office of History Headquarters, U.S. Army Corps of Engineers, June 1994) at 15. On May 28, 1917, the Army Corps of Engineers established Camp American University (later renamed Camp Leach) on a portion of the property. The Bureau of Mines established the American University Experiment Station ("AUES") on the campus a short time later. Id. at 16-19. Control of AUES was transferred by President Wilson to the War Department's Gas Service (later called the Chemical Warfare Service) on June 25, 1918. Id. [FN2]

FN2. Camp Leach and AUES were distinct entities. The property subject to the present suit is that formerly occupied by AUES.

By summer and fall of 1918, there were 12 research sections and more than 1,000 personnel researching war gas problems at the AUES. Id. at 19-20. By the end of the war, there were nearly 2,000 military and civilian personnel supporting the AUES's Research Division. Id. at 20. When space was required for additional drill fields and training trenches, the Construction Division of the Quartermaster Corps leased adjoining properties owned by area residents. There were 153 structures of various sizes and types spread throughout the campus and adjoining properties, including privately-owned tracts. Id. at 23.

The American University land and surrounding properties became the site of a massive training, research, and testing ground for conventional and chemical warfare defensive and offensive techniques. Projects were conducted related to the development, testing, and manufacture of gases, toxic and incendiary munitions, smoke mixtures, and signal flares. Field tests were conducted using gas shells, smoke clouds and equipment, mortars and Liven's projectiles, hand grenades, incendiary and flaming liquid weapons, and signal lights. Id. at 17-19.

On November 9, 1918, the German government officially accepted President Wilson's terms for an armistice, and two days later, the fighting in Europe ceased. Id. at 31. On November 29, 1918, the War Department ordered the immediate and complete demobilization of the Chemical Warfare Service. Under this order, the AUES suffered a drastic reduction in personnel and a dismantling of much of its research and manufacturing equipment for shipment to the Edgewood-Arsenal. A year later, the War Department ordered the Chemical Warfare Service to immediately vacate the AUES. It transferred personnel, equipment, and material to Edgewood Arsenal. Id. at 35.

In 1986, in response to inquiries from American University, see Def's Mot., Exh. 11, the United States contracted with the Bionetics Corporation to conduct a photographic analysis of the area, see id. Exh. 12. Pursuant to Contract No. 68-03-3161, Bionetics produced a report in July 1986, which indicated "***1234** possible burial sites" of munitions and gas. Id. Exh. 12 at 14.

The Army also conducted its own document review in 1986 to determine whether historical records reflected a large-scale burial of munitions on the AUES. Id. Exh. 14-15. The document review produced "no official documentation of the alleged large-scale burial of munitions on the [AUES]." Id. Exh. 14 at 1. However, the review concluded that "it can be inferred that laboratory quantities of toxic materials were disposed of onsite prior to or following the documented transfer of personnel and equipment from the [AUES] to Edgewood Arsenal

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in November 1919." Id. The review concluded that official correspondence from the period "strongly suggests that all munitions were removed to Edgewood Arsenal," but that the review "could not disprove the possibility that some materials remain buried on or near Camp American University [i.e., Camp Leach]." Id. Exh. 15 at 1. The review further concluded: "If any materials were buried, they were probably small quantities of laboratory or experimental materials. All sources we found were inconsistent with the notion of substantial quantities of any munitions or the components for munitions existing at [American University]." Id. Exh. 15 at 3. [FN3]

FN3. The only sources stating that munitions were buried were found to be historically suspect. Both-sources were references in 1921 issues of the AU newspaper, The American University Courier. Both sources refer to burying $800,000 worth of munitions at the end of the war, two and a half years earlier. See Def's Mot. Exh. 15 at 2-3.

* * *

The plaintiff **Miller** is a family-owned real estate business operating in the Washington metropolitan area. Compl. ¶ 2. The plaintiff alleges that, in or around 1927, it began to accumulate various parcels of land in northwest Washington. The plaintiff ultimately acquired approximately 300 acres of land in this area over a period of several years. This area later became known as Spring Valley. Id. ¶ 6. Over the years, **Miller** has developed its Spring Valley holdings into housing, commercial, and retail space. Id. ¶ 7.

On or about January 5, 1993, **Miller** was excavating a trench for utilities for a new home on land **Miller** owned in Spring Valley. It discovered objects that appeared to be old munitions. **Miller** promptly notified the District of Columbia government, which in turn notified the United States Army. Compl. ¶ 13. The Army promptly assumed responsibility for the situation and conducted a response action pursuant to the Defense Environmental Restoration Act, 10 U.S.C. §§ 2701-07, and the Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. § 9601 et seq.

The Army conducted its investigation in two phases. Phase I was the emergency response phase of the investigation, which lasted 27 days, from January 5, 1993 to February 2, 1993. Compl. ¶ 14. During Phase I, the Army excavated in and around the area where the objects had been discovered. The Army removed intact munitions, assorted ordnance-related debris, and laboratory material, all from the World War I era. Compl. ¶ 15. During Phase II of the investigation, which extended into 1995, the Army continued to investigate for buried munitions in an area over 600 acres in size. The Army discovered additional live munitions and spent ordnance and debris. Compl. ¶ 18-19. During both phases I and II, households were evacuated from the area.

On March 8, 1996, **Miller** filed the present suit under the Federal Tort Claims Act (FTCA). **Miller** claims that the Army was negligent in burying munitions during 1917-1920, failing to mark or warn the public that there were buried munitions, investigating in 1986, and failing to remove the munitions prior to 1993. Compl. ¶ 1. Specifically, **Miller** alleges that these acts and omissions: (1) interfered with **Miller**'s use and enjoyment of the land and constitute a private nuisance; (2) interfered with the public's use and enjoyment of the land and constitute a public nuisance; (3) constituted a breach of the defendant's duty of care to **Miller**; and (4) constituted a trespass.

Miller seeks damages totaling approximately $14,000,000 for expenses it incurred in assisting the Army during its investigation, in defending itself against homeowners' legal proceedings, and in combating the effects on its business of the uncertainty in the ***1235** community caused by the discovery of the buried munitions. Compl. ¶ 30-39. **Miller** does not claim that the Army negligently responded to the discovery of munitions, nor does it claim that any physical harm resulted from those munitions.

On July 19, 1996, the defendant filed the present motion to dismiss or, in the alternative, for summary judgment. First, the defendant asserts that the Court lacks subject matter jurisdiction over this case because the FTCA does not waive the government's sovereign immunity for claims arising from: (a) the defendant's conduct prior to January 1, 1945, the effective date of the FTCA; (b) the conduct of the defendant's independent contractor; and (c) the defendant's conduct that involves

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"discretionary functions" of the government. Second, the defendant asserts that the statute of limitations bars suit by the plaintiff whose founders knew or should have known of its claims when they purchased the land. Third, the defendant asserts that the Complaint fails to state a claim upon which relief can be granted because under District of Columbia law, a leaseholder owes no duty to a subsequent purchaser of land under nuisance, negligence, or trespass theories. The plaintiff filed an opposition to the present motion on August 12, 1996, to which the defendant replied on September 9, 1996. On September 19, 1996, the plaintiff moved to file a surreply, which the court shall accept, as it addresses issues raised in the defendant's reply.

DISCUSSION

Dismissal is appropriate when the Court lacks jurisdiction over the subject matter of a claim or when the plaintiff has failed to state a claim upon which relief can be granted. Fed.R.Civ.P. 12(b)(1), (6). Under Rule 12(b)(6), a claim must be dismissed if it appears beyond doubt that the plaintiff can prove no set of facts in support of the claim that would entitle the plaintiff to relief. Conley v. Gibson, 355 U.S. 41, 45-46, 78 S.Ct. 99, 101-02, 2 L.Ed.2d 80 (1957). In evaluating the plaintiff's complaint on a motion to dismiss, the Court must accept the factual allegations as true and draw all reasonable inferences therefrom in favor of the plaintiff. Maljack Productions, Inc. v. Motion Picture Ass'n of Am., Inc., 52 F.3d 373, 375 (D.C.Cir.1995). At the same time, the Court must not accept inferences drawn by the plaintiff if they are unsupported by the facts, nor must the Court accept purely legal conclusions masked as factual allegations. Id.

If, on a motion to dismiss pursuant to 12(b)(6), matters outside the pleadings are presented to and not excluded by the court, the motion shall be treated as one for summary judgment and disposed of as provided in Rule 56. Fed.R.Civ.P. 12(b). Summary judgment is appropriate when "the pleadings, depositions, answers to interrogatories, and admissions on file, together with the affidavits, if any, show that there is no genuine issue as to any material fact and that the moving party is entitled to a judgment as a matter of law." Fed.R.Civ.P. 56(c); Anderson v. Liberty Lobby, Inc., 477 U.S. 242, 249, 106 S.Ct. 2505, 2510-11, 91 L.Ed.2d 202 (1986); Matsushita Elec. Indus. Co. v. Zenith Radio Corp., 475 U.S. 574, 587, 106 S.Ct. 1348, 1356, 89 L.Ed.2d 538 (1986). An issue must be both genuine and material to preclude the entry of summary judgment. Anderson, 477 U.S. at 247-48, 106 S.Ct. at 2509-10. An issue is genuine if there is sufficient evidence to support a rational finding either way. In making this determination, the non-movant's evidence "is to be believed, and all justifiable inferences are to be drawn in [their] favor." Id. at 255, 106 S.Ct. at 2513. "Only disputes of facts that might affect the outcome of the suit ... will properly preclude the entry of summary judgment." Id. at 248, 106 S.Ct. at 2510.

I. THE COURT HAS SUBJECT MATTER JURISDICTION OVER THE PLAINTIFF'S CLAIMS ARISING FROM THE DEFENDANT'S FAILURE TO WARN OF THE BURIED MUNITIONS.

A. The plaintiff's claims are not barred by the FTCA's "effective date" or "independent contractor" provisions; The plaintiff's claims arising from the defendant's failure to warn of buried munitions are not barred by the discretionary function provision.

As a sovereign, the United States is immune from suit except if it has consented to be sued. United States v. Dalm, 494 U.S. *1236 596, 608, 110 S.Ct. 1361, 1368, 108 L.Ed.2d 548 (1990). The FTCA waives sovereign immunity for civil suits against the United States

> for money damages ... for injury or loss of property, or personal injury ... caused by the negligent or wrongful act or omission of any employee of the Government while acting within the scope of his [or her] office or employment, under circumstances where the United States, if a private person, would be liable to the claimant in accordance with the law of the place where the act or omission occurred.

28 U.S.C. § 1346(b).

The FTCA contains several exceptions to this waiver of sovereign immunity. Berkovitz v. United States, 486 U.S. 531, 535, 108 S.Ct. 1954, 1958, 100 L.Ed.2d 531 (1988). If a plaintiff's claims are excepted from the FTCA's waiver of sovereign immunity, the Court lacks subject matter jurisdiction

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over those claims. See Cope v. Scott, 45 F.3d 445, 448 (D.C.Cir.1995).

Exceptions to the waiver of sovereign immunity are established by the FTCA's effective date, independent contractor, and discretionary function provisions, each of which the defendant cites as a bar to the present suit. The Court concludes that the effective date and independent contractor provisions do not bar suit here. The discretionary function provision bars suit with respect to the defendant's burial of munitions, investigation, and failure to remove the munitions; however, it does not bar suit with respect to the defendant's failure to warn of the buried munitions.

i. The FTCA's "Effective Date" Provision Does Not Bar Claims Arising From The Defendant's Conduct Prior To January 1, 1945 Because The Plaintiff's Claims Did Not Accrue Until After That Date; The FTCA Establishes Jurisdiction On The Basis Of When A Claim Accrues, Rather Than When The Tortious Conduct Occurs.

By its effective date provision, the FTCA confers jurisdiction in district court for civil actions for money damages against the United States on

> claims ... accruing on and after January 1, 1945 ... in accordance with the law of the place where the act or omission occurred.

28 U.S.C. § 1346(b). It is the defendant's position that the FTCA does not apply to claims arising out of acts or omissions that occurred before 1945, even if the injuries resulting from those acts or omissions occurred after 1945. According to the defendant, any claims arising from the Army's burial of munitions during the 1917-1920 time period are barred by the FTCA's effective date provision.

The Court begins with the presumption that Congressional intent is expressed by the plain meaning of the words chosen. Richards v. United States, 369 U.S. 1, 9, 82 S.Ct. 585, 590-91, 7 L.Ed.2d 492 (1962). In the provision at issue, Congress used the two phrases "claims ... accruing" and "act or omission occurred" in the same sentence. Notably, Congress chose to include the phrase "on and after January 1, 1945" directly after the phrase "claims ... accruing," thereby logically indicating that the words "on and after January 1, 1945" modify the phrase "claims ... accruing" rather than the phrase "act or omission occurred." Had Congress intended that the act or omission at issue must occur after 1945, as the defendant suggests, it would have used an altogether different statutory construction.

[1][2] The phrases "claims ... accruing" and "act or omission occurring" are distinct. By specifying that a claim accrues on a certain date by virtue of some act or omission that occurred in a certain place, Congress intended to distinguish the place of the act from that act's operative effect. It is the operative effect, or injury, which measures when a claim accrues [FN4]. Thus, under the plain meaning of the words chosen, Congress ***1237** intended that the FTCA confer jurisdiction over claims for which the injury occurred after January 1, 1945, regardless of when the act or omission complained of occurred.

FN4. The question when a claim accrues has been held to be a matter of federal law for purposes to the FTCA's statute of limitations. Kossick v. United States, 330 F.2d 933 (2d Cir.1964); Quinton v. United States, 304 F.2d 234 (5th Cir.1962); Maryland v. United States, 165 F.2d 869 (4th Cir.1947). However, whether or not a claim has accrued is a matter of state law in accordance with § 1346(b). See Richards v. United States, 369 U.S. 1, 82 S.Ct. 585, 7 L.Ed.2d 492 (1962). District of Columbia case law holds that when the fact of an injury can be readily determined, a claim accrues at the time the injury actually occurs. Farris v. Compton, 652 A.2d 49, 54 (D.C.App.1994). However, if the existence of an injury is not readily apparent, the case law is clear that the claim does not accrue until the plaintiff, exercising due diligence, has "discovered or reasonably should have discovered all of the essential elements of [its] possible cause of action, i.e., duty, breach, causation and damages." Id. It is generally understood that the terminology "claim accrued" refers to the point at which damages are vested or injury has occurred, and a cause of action may be maintained. Black's Law Dictionary 37, 314 (4th ed.1968). A claim "accrues" when the negligent act or omission complained of has had an impact that results or will result in injury. See In re Silver Bridge, 381 F.Supp. 931, 940 (S.D.W.Va.1974) (citing W. Prosser, Law of Torts § 30 at 143-44 (4th ed.1971)).

Courts that have focused on the FTCA's effective date provision have rejected the government's position and have held that as long as the injury occurred subsequent to January 1, 1945, a district court has jurisdiction, even if the tortious acts or

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omissions took place prior to that date. See Carnes v. United States, 186 F.2d 648 (10th Cir.1951) (FTCA permitted suit when child who took home an explosive device from a crashed Army airplane in 1944 was injured in February 1945 when the device exploded); In re Silver Bridge Disaster Litigation, 381 F.Supp. 931 (S.D.W.Va.1974) (claim of negligence with respect to Army's building of bridge in 1928 accrued in 1967 when the bridge collapsed). The government has not cited any persuasive authority to the contrary.

[3] In accordance with the plain language of the FTCA, the plaintiff's claims will not barred by the effective date provision just because those claims arise from acts and omissions that occurred before January 1, 1945. The effective date provision establishes jurisdiction on the basis of when the claims accrued rather than when the allegedly tortious conduct occurred.

ii. The Plaintiff's Claims Arising From The Allegedly Negligent Investigation In 1993 Are Not Barred By The Independent Contractor Provision Of The FTCA Because The Plaintiff's Challenge Is To The Defendant's Conduct, Not To The Contractor's Conduct.

[4] Liability under the FTCA must be premised upon a "negligent or wrongful act or omission of any employee of the Government." 28 U.S.C. § 1346(b) (emphasis added). The FTCA defines "employee of the government" to include "officers or employees of any federal agency," and defines "federal agency" to include

> the executive department, the judicial and legislative branches, the military departments, independent establishments of the United states, and corporations primarily acting as instrumentalities or agencies of the United States, but does not include any contractor with the United States.

28 U.S.C. § 2671 (emphasis added). Thus, the FTCA adopts the common-law distinction between the liability of an employer for the negligent acts of its employees and for the negligent acts of those with whom it contracts. Logue v. United States, 412 U.S. 521, 526, 93 S.Ct. 2215, 2218-19, 37 L.Ed.2d 121 (1973). In order for the government to be liable under the FTCA, it must be shown that the acts or omissions complained of were taken by an employee of the government.

[5] The defendant asserts that, to the extent the plaintiff bases its action on the 1986 Photographic and Historical Report, it is immune from suit under the independent contractor provision. However, the defendant's invocation of the independent contractor provision is inappropriate in this case because the plaintiff's complaint does not challenge the actions of the independent contractor. Rather, the plaintiff claims that the Army was negligent in failing to take appropriate action after learning from its independent contractor that there were "possible burial sites, shell and bomb pits, trenches and possible test areas." This claim is not barred by the independent contractor provision.

*1238 iii. The Discretionary Function Provision Of The FTCA Bars The Plaintiff's Claims Based On The Defendant's Allegedly Wrongful Burial of Munitions During 1917-1920, its Allegedly Negligent Investigation in 1986; And its Failure To Remove The Munitions Prior To 1993. The Discretionary Function Provision Does Not Bar Claims Based On the Defendant's Failure To Mark Or Warn That There Were Buried Munitions.

[6] The FTCA excepts from its provisions

> [a]ny claim based upon an act or omission of an employee of the Government, exercising due care, in the execution of a statute or regulation, whether or not such statute or regulation be valid, or based upon the exercise or performance or the failure to exercise or perform a discretionary function or duty on the part of a federal agency or an employee of the Government whether or not the discretion involved be abused.

28 U.S.C. § 2680(a) (emphasis added). This exception to the Court's jurisdiction under the FTCA is known as the "discretionary function" exception and "marks the boundary between Congress' willingness to impose tort liability upon the United States and its desire to protect certain governmental activities from exposure to suit by private individuals." United State v. S.A. Empresa de Viacao Aerea Rio Grandense, 467 U.S. 797, 808, 104 S.Ct. 2755, 2762, 81 L.Ed.2d 660 (1984) ("Varig Airlines "). It "was designed to prevent the courts from 'second guessing,' through decisions in tort actions, the way that government officials choose to balance economic, social, and political factors as they carry out their official duties." Cope v. Scott, 45 F.3d 445, 448 (D.C.Cir.1995) (citing

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Varig Airlines, 467 U.S. at 814, 104 S.Ct. at 2764-65).

[7] The Supreme Court has defined a two-part test for deciding whether the discretionary function exception applies in a particular case. Id. at 448. Under this test, the Court must first determine whether any "federal statute, regulation, or policy specifically prescribes a course of action for an employee to follow." Id. If a specific directive exists, then the federal employee had no "choice" and no rightful option but to adhere to the directive. Id. However, if no specific directive exists, the action does involve judgment and the Court must make a second determination whether that judgment is of the kind that the FTCA exception was designed to shield from liability, that is, a decision grounded in social, economic, or political policy. Id.

The second determination asks not whether there was an "actual, specific decision involving the balancing of competing policy considerations" but, rather, whether the "nature" of the decision implicates policy analysis. Id. at 449. This Circuit has held that a Court must focus on whether the decision is

> "fraught with" economic, political, or social judgments. No matter the level at which the decision was made, the nature of the decision, or the impact it had on others, ... the discretionary function exception applies "only where the question is not negligence but social wisdom, not due care but political practicability, not reasonableness, but economic expediency.' "

Id. at 450 (quoting Sami v. United States, 617 F.2d 755, 766 (D.C.Cir.1979)). Thus, if the exception is found to apply, it makes no difference whether the governmental actor indeed was negligent. See 28 U.S.C. § 2680(a).

a. No applicable federal statute, regulation, or policy specifically prescribed a course of action for the government to follow in this case.

The parties disagree whether applicable law specifically prescribed a course of action with respect to the actions complained of here. The plaintiff argues that the defendant's actions in burying munitions violated mandatory regulations and orders governing property accountability and responsibility. The defendant counters that its conduct was consistent with existing policies.

The plaintiff states that the Army was under orders to ship all equipment and supplies to Edgewood Arsenal. However, that ***1239** proposition has not been supported by any documentation. The plaintiff also states that the defendant's burial of munitions violated 1913 regulations pertaining to public property accountability. According to the plaintiff's witness Richard H. Groves [FN5], a retired Army Lieutenant General, an officer in the relevant time period had only four options regarding the disposal of ordinance: (1) to retain it under his control and remain accountable; (2) to turn it in, if serviceable; (3) to expend it, if consumable, and certify that he had done so; or (4) to salvage unserviceable property and dispose of it after inspection and a survey [FN6]. Groves Dec. ¶ 10(0). In order to remove the government's conduct from the realm of discretion, a statute or regulation must be both mandatory and specific, such that "there is no element of judgment or choice" and the "employee has no rightful option but to adhere to that directive." Gaubert, 499 U.S. at 322, 111 S.Ct. at 1273. The plaintiff's reading of the 1913 regulations itself proves that the regulations permit an element of choice in disposing of property.

> FN5. The defendant requests that the Declaration of the plaintiff's witness Groves be stricken or disregarded because, among other reasons, there is no basis for concluding that his Army experience qualifies him as an expert concerning World War I or Army regulations or policies. Even considering Groves' Declaration, however, neither Groves' testimony nor the other evidence of record is sufficient to establish jurisdiction over this action.

> FN6. The government asserts that a "fifth" opinion was available in accordance with the 1913 regulations, that is, "when practicable," inspectors could cause the destruction of property "at or near the place of inspection." See Def's Reply at 16 & n. 16.

The plaintiff also states that a lease for the subject property may have provided a mandatory prescription. Groves Decl. ¶ 10(A-C). However, in his declaration, Groves states that no lease for the subject property has been found. Thus, it is uncertain whether a lease even existed. [FN7]

> FN7. The plaintiff states that the contents of a possible lease for the subject property would have provided that the government must surrender the

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premises in original condition. However, to support this speculation, the plaintiff relies on an unexecuted document. See Groves Ded., Att. 5. The defendant, on the other hand, points to an executed 1918 lease involving property leased to the Army, in which the government agreed that "the land, so far as practicable, shall be restored to its original condition." See Groves Ded., Att. 5. Such language is not mandatory and specific. Additionally, the government points out that some of the Army leases contained indemnification clauses protecting the United States. See Groves Ded., Att. 3.

The defendant, on the other hand, states that during the relevant time period, burial was an accepted method for the permanent disposition of munitions. The government relies on American Expeditionary Force Regulation Number 253, dated November 1917, which provided that gas shells, bombs, and grenades should be buried in the ground 3 to 3-1/2 feet deep, and should not be thrown into water. Def's Mot. Exh. 16 at 31. The government asserts that similar burial guidance was given in January 1918, see Exh. 17 at 60, and January 1920, see Exh. 18 at 27. The regulations cited by the government do not appear to have had specific application to the disposal of munitions at AUES; rather, these regulations appear to have related to combat forces and battlefield activity, permitting the burial during a gas attack to protect combat troops.

Neither party has established that the government violated or followed any mandatory and specific statute, regulation, or policy governing the burial of munitions in connection with the subject property. [FN8] Accordingly, the Court shall turn to the second determination, that is, whether the conduct at issue here is of the kind that the discretionary function exception was designed to shield.

FN8. The parties have cited a memorandum from the Adjutant General of the Army, dated December 23, 1918, concerning the discontinuance of the use of Camp Leach. In that memorandum, the Commanding Officer at Camp Leach was ordered to "dispose of all supplies, equipment and transportation now at Camp Leach in such a way as will be for the best interest of the Government, and salvage such property as is considered necessary to salvage for the best interests of the Government ..." Def's Exh. 23. These directions, so far as they may relate to the subject property, are discretionary and do not provide a mandatory and specific prescription.

***1240** b. The burial of the munitions, the 1986 investigation, and the failure to remove the munitions prior to 1993 are types of conduct that implicate "social, economic, or political judgment" and, therefore, beyond the reach of the FTCA.

Decisions regarding the disposal of munitions by the Army are of the type that require a balancing of objectives sought to be obtained against such considerations as staffing, funding, national security, and safety. Cf. Boyle v. United Technologies Corp., 487 U.S. 500, 511, 108 S.Ct. 2510, 2518, 101 L.Ed.2d 442 (1988) ("selection of the appropriate design for military equipment to be used by our Armed Forces is assuredly a discretionary function [since it] often involves ... judgment as to the balancing of many technical, military, and even social considerations, including specifically the trade-off between greater safety and greater combat effectiveness."); Varig Airlines, 467 U.S. at 820, 104 S.Ct. at 2767-68 (government agents necessarily take calculated risks in order to make policy judgments regarding safety and in the advancement of a governmental purpose). Accordingly, numerous courts have applied the discretionary function exception in the context of military activities and the Government's handling and disposal of hazardous materials. See Dalehite v. United States, 346 U.S. 15, 73 S.Ct. 956, 97 L.Ed. 1427 (1953) (claims arising from distribution of fertilizer for export to devastated areas after World War II barred by discretionary function exception); Kirchmann v. United States, 8 F.3d 1273, 1278 (8th Cir.1993) (discretionary function exception applied to action based on groundwater contamination during construction of missile site); Industria Panificadora, S.A. v. United States, 957 F.2d 886, 887 (D.C.Cir.) (decisions concerning the "allocation of military and law enforcement resources [are] sheltered by the [discretionary function] exception"), cert. denied, 506 U.S. 908, 113 S.Ct. 304, 121 L.Ed.2d 227 (1992); Allen v. United States, 816 F.2d 1417 (10th Cir.1987) (Atomic Energy Commission's decision involved in carrying out programs relating to open-air atomic bomb test were within discretionary function exception), cert. denied, 484 U.S. 1004, 108 S.Ct. 694, 98 L.Ed.2d 647 (1988); Laurence v. United States, 851 F.Supp. 1445, 1450-52 (N.D.Cal.1994) (discretionary function applied to action based upon alleged contaminated soil used in construction of housing

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complex to support World War II emergency need), aff'd, 59 F.3d 112 (9th Cir.1995) (affirming on independent contractor exception); Bowman v. United States, 848 F.Supp. 979, 985 (M.D.Fla.1994) (Navy's judgment on the method for disposing of pyridine protected under discretionary function exception to FTCA); see also David S. Fishback and Gail Killefer, The Discretionary Function Exception to the Federal Tort Claims Act, 25 Idaho L.Rev. 291 (1988-89).

[8] Whether or not the Army exercised the best judgment in disposing of its munitions--including its decision to bury munitions on private land, to leave the munitions buried until 1993, and to respond to its 1986 investigation as it did--are actions not properly subject to the Court's inquiry in a FTCA suit. Congress has provided that the Court may not "second guess" those types of judgments by way of a tort action.

c. The failure to mark or warn of the buried munitions does not fall within the discretionary function exception to the FTCA.

In Cope v. Scott, 45 F.3d 445 (D.C.Cir.1995), the District of Columbia Circuit determined that, although the Park Service's failure to maintain an adequate skid resistance on a road surface fell within the discretionary function exception, its failure to post adequate warning signs about the nature of the surface did not. Cope, 45 F.3d at 450-51. Cope explained that the failure to warn of known dangers falls within the discretionary function exception only when it is part of an overall discretionary policy or program. Id. Consistent with this approach, Court's have recognized that the government's decision whether or not to issue warnings is protected by the discretionary function exception only when that decision involves policy considerations. See Dalehite, 346 U.S. at 15, 73 S.Ct. at 956 (discretionary function exception barred allegations that the government failed to warn of the dangers of the fertilizer it ***1241** selected for use in a post-war program); Wells v. United States, 851 F.2d 1471 (D.C.Cir.1988) (discretionary function applied to claim that EPA negligently regulated and communicated knowledge of public health risks and lead pollution dangers in plaintiffs' neighborhoods), cert. denied, 488 U.S. 1029, 109 S.Ct. 836, 102 L.Ed.2d 969 (1989); Allen, 816 F.2d at 1423 (discretionary function barred failure to warn and negligence allegations associated with open-air atomic bomb testing); Smith v. Johns-Manville, 795 F.2d 301 (3d Cir.1986) (discretionary function barred claim based on the GSA's disposition of asbestos and alleged failure to warn); Begay v. United States, 768 F.2d 1059, 1065 (9th Cir.1985) (decision of U.S. public health service not to disclose to miners the possible health hazards of working in uranium mines protected by discretionary function exception); Cisco v. United States, 768 F.2d 788, 789 (7th Cir.1985) (failure of EPA to warn neighborhood residents that dirt used in local landfill had been contaminated with toxic chemicals and failure to require that dirt be removed was protected by discretionary function); Wainwright v. Washington Metro. Area Transit Auth., 903 F.Supp. 133, 138 (D.D.C.1995) (duty to warn a discretionary function for which government retains immunity); Western Greenhouses v. United States, 878 F.Supp. 917, 927-29 (N.D.Tex.1995) (Air Force decisions concerning investigation, monitoring, and public notification of potential contamination protected by discretionary function); Lewis v. United States Navy, 865 F.Supp. 294, 299-300 (D.S.C.1994) (veteran's claim for failure to warn of long- term health effects of mustard gas exposure barred); Bowman, 848 F.Supp. at 979 (allegations associated with navy's failure to warn of buried pyridine barred by discretionary function exception); see also David S. Fishback and Gail Killefer, The Discretionary Function Exception to the Federal Tort Claims Act, 25 Idaho L.Rev. 291 (1988-89).

[9] Here, the Army's decision not to warn that it had buried munitions on private land is not the type of decision that involves social, economic, or policy considerations. Accord Faber v. United States, 56 F.3d 1122, 1125 (9th Cir.1995) (Forest Service's failure to warn of specific, known dangers in a national forest involved considerations of safety, not public policy, and did not fall within exception); Sutton v. Earles, 26 F.3d 903, 910 (9th Cir.1994) (Navy's decision not to warn of a known water hazard was not the kind of social, economic, or policy decision the exception was intended to protect); Andrulonis v. United States, 952 F.2d 652, 655 (2nd Cir.1991) (government scientist's failure to warn of obvious dangerous conditions in state laboratory studying government supplied rabies virus could not implicate any policy considerations and was not protected), cert. denied, 505 U.S.

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1204, 112 S.Ct. 2992, 120 L.Ed.2d 869 (1992); Summers v. United States, 905 F.2d 1212 (9th Cir.1990) (Forest Service's failure to provide adequate warnings about fire rings on a beach in a national park not protected by the discretionary function exception); Boyd v. United States, 881 F.2d 895, 898 (10th Cir.1989) (alleged failure to warn swimmers of dangerous conditions in swimming area does not implicate social, economic, or political policy judgments); Kennewick Irrigation District v. United States, 880 F.2d 1018, 1031-32 (9th Cir.1989) (decisions by contracting officer during construction of irrigation canal concerning whether to remove unsuitable ground material were based not on policy judgments but on technical, scientific, engineering considerations and therefore did not fall within exception); ARA Leisure Servs. v. United States, 831 F.2d 193 (9th Cir.1987) (Park Service's failure to maintain portion of road in safe condition not protected by exception); Smith v. United States, 546 F.2d 872 (10th Cir.1976) (Park Service's failure to post signs warning of danger of collapsing thermal pool crusts not protected); Noel v. United States, 893 F.Supp. 1410, 1420-22 (N.D.Cal.1995) (Navy's decision not to put barriers around holes in tarmac during air base open house was motivated solely by safety considerations, so not protected by the exception; Navy's failure to execute its self-imposed crowd control plan did not involve a balancing of social, economic, or political policy considerations). Although the Army states that its failure to warn of buried munitions involved economic and social considerations, there is evidence that the Army did mark ***1242** and fence off some hazards left on the formerly leased properties. See Martin K. Gordon, Barry R. Sude, Ruth Ann Overbeck & Charles Hendricks, A Brief History of the American University Experiment Station and U.S. Navy Bomb Disposal School. American University (Office of History Headquarters, U.S. Army Corps of Engineers, June 1994) at 36. Thus, the Army had already made a decision to warn. Its failure to effectuate that decision properly was not itself the product of a policy decision. See Cope, 45 F.3d at 452 (when Park Service already posted signs in **an** effort to warn, the placement of additional or different signs does not implicate economic, social, or political concerns); cf. Indian Towing Co. v. United States, 350 U.S. 61, 76 S.Ct. 122, 100 L.Ed. 48 (1955) (Coast Guard, having undertaken to provide lighthouse service, had a duty to use due care to make certain that the lighthouse was kept in good working order and to repair light or give warning that it was not functioning).

II. THE PLAINTIFF'S CLAIMS ARE NOT BARRED BY THE FTCA'S STATUTE OF LIMITATIONS.

[10] The defendant asserts that the plaintiff's claims are barred by the FTCA's two-year statute of limitations. The FTCA's statute of limitations, like its effective date provision, runs from the date the claim accrues. 28 U.S.C. § 2401(b). The defendant asserts that the plaintiff's claims accrued when **Miller's** founders purchased the property in question because, according to the defendant, the plaintiff's founders should have been aware of the Army's activities when they purchased the property, based on evidence that some reports appeared in the local press.

The Court rejects this notion. Even if the founders knew that the property was a testing site, there is no evidence to suggest that they knew or had reason to know that the Army had buried munitions beneath the surface of property. The defendant's own document review reported that there was no official documentation of the large-scale burial of munitions and that those munitions reportedly were moved to Edgewood Arsenal. In the present case, the discovery of all of the essential elements of the plaintiff's possible causes of action did not occur until after the munitions were discovered in 1993.

III. THE PLAINTIFF HAS STATED A CAUSE OF ACTION FOR NEGLIGENCE UNDER DISTRICT OF COLUMBIA LAW; THE DEFENDANT HAD A DUTY TO WARN OF BURIED MUNITIONS.

Pursuant to the FTCA, the United States is subject to suit only "under circumstances where the United States, if a private person, would be liable to the claimant in accordance with the law of the place where the act or omission occurred." 28 U.S.C. § 1346(b). The applicable law here is the District of Columbia Law. Based on the Court's rulings above, the Court need only consider whether the plaintiff has stated a cause of action under District of Columbia law in negligence with respect to the plaintiff's failure to warn of buried munitions.

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To prevail in a cause of action for negligence, a plaintiff must prove duty, a breach of that duty, causation, and damages. See Art Metal--U.S.A., Inc. v. United States, 753 F.2d 1151, 1157 (D.C.Cir.1985). The defendant asserts that it did not owe a duty to the plaintiff to warn of buried munitions.

The District of Columbia Court of Appeals has not addressed the question whether a subsequent occupier of property has a cause of action in negligence for damages against a former occupant whose activities during its occupancy allegedly caused the property to become contaminated by chemicals. See 325- 343 E. 56th Street Corp. v. Mobil Oil Corp., 906 F.Supp. 669, 676 (D.D.C.1995) (Urbina, J.). To decide this question, this Court must predict what the District of Columbia would hold under these circumstances. Id. (citing Erie R.R. v. Tompkins, 304 U.S. 64, 58 S.Ct. 817, 82 L.Ed. 1188 (1938)). The Mobil decision of this court, addressing this very issue, adopted the legal principles established by the Maryland Court of Appeals in Rosenblatt v. Exxon Co., 335 Md. 58, 642 A.2d 180 (1994). See Mobil, 906 F.Supp. at 676 (citing Gerace v. Liberty Mutual Ins. Co., 264 F.Supp. 95, 97 (D.D.C.1966) ***1243** ("[S]ince the District of Columbia derives its common law from Maryland, decisions of Maryland courts on points not determined by the court of Appeals of the District of Columbia or by the Supreme Court of the United states are, if not completely controlling, nevertheless, of great weight, of greater weight than the decisions of other states.")). After careful consideration, the court adopts those sound principles in the present case.

[11][12][13] The question whether a duty is owed is a question of law to be determined by the court. See Rosenblatt, 642 A.2d at 188 (citing Prosser & Keeton, Law of Torts, § 45 at 320 (5th ed.1984)).

> In determining the existence of a duty owed to a plaintiff, [courts] have applied a "foreseeability of harm" test, which is based on the recognition that duty must be limited to avoid liability for unreasonably remote consequences.... Inherent also in the concept of duty is the concept of a relationship between the parties out of which the duty arises.... [U]ltimately, the determination of whether a duty should be imposed is made by weighing the various policy considerations and reaching a conclusion that the plaintiff's interest are, or are not, entitled to legal protection against the conduct of the defendant.... The imposition of a duty upon one to another serves to balance the burdens between the parties in avoiding the harm.

Id. at 189. Applying these principles to the present case, the Court concludes that, as a matter of law, the defendant owed a duty to warn the plaintiff, a subsequent occupant of the land, of the buried munitions.

When it buried live munitions, the Army had in effect "booby-trapped" the land. The live munitions were buried so close to the surface that subsequent preparation of the land for development by the plaintiffs resulted in unearthing of the munitions. It had to be obvious to the Army when it embarked on its disposal project that any subsequent user of the land may well need to excavate below the surface for subsequent construction. It should have been recognized that such a reasonable use of the land obviously would have exposed the subsequent user to serious bodily harm or possibly even death if one of the unexploded munitions was discharged inadvertently.

Moreover, the Army was in the best position to warn future occupants. Indeed, there is no basis to conclude that anyone but the Army even knew of the buried munitions; nor is there basis to conclude that the munitions could have been discovered by a future occupant, even if that occupant exercised reasonable diligence with inquiry and inspection. The Army itself concluded that there were no buried munitions after its 1986 investigation.

Clearly, the duty to warn under these circumstances is **an** absolute necessity. No department of government can so callously conduct itself, placing segments of the public in serious jeopardy, without appropriate warning of the hazards that exist. The land in this case was contaminated and the Army had a duty to clearly warn of that fact. To now attempt to shield itself from its obligations and transfer substantial costs to the plaintiff is unacceptable. Where there is a dispute between two parties as to which party must pay for a loss incurred, it is hornbook law that the party causing the loss is the one that must pay. Cf. Vincent v. Lake Erie Transp. Co., 109 Minn. 456, 124 N.W. 221 (1910) ("[P]ublic necessity, in times of war or peace, may require the taking of private property for public purposes; but under our system of

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jurisprudence compensation must be made."); Rylands v. Fletcher, L.R. 3 H.L. 330 (1868) ("[W]hen one person, ... causes, however innocently, damage to another, it is obviously only just that he should be the party to suffer.")

The Army in this case created the hazard and literally "covered it up." At the least, it had the duty to warn potential users of the property of the high risks to life and property to which subsequent innocent users would be exposed. The Army clearly has responsibility in this case. To transfer its burden to **an** innocent party can under no circumstances be rationalized. Why the Army has resisted discharging its obligations demanded by the law and the public interest is inexplicable. The risk of these buried munitions simply is not one the public should assume.

***1244** The Army had a duty to warn **Miller**, as a subsequent occupant of the property, that the Army had buried munitions on the property. Accord T & E Industries. Inc. v. Safety Light Corp., 123 N.J. 371, 587 A.2d 1249 (1991) (defendant who contaminated land with radioactive tailings was liable to a subsequent owner of the land); Mangini v. Aerojet-General Corp., 230 Cal.App.3d 1125, 281 Cal.Rptr. 827 (1991) (current landowner has action against prior lessee for damages caused by failure to remove wast rocket fuel from property); State, Dept., of Environmental Protection v. Ventron Corp., 94 N.J. 473, 468 A.2d 150 (1983) (summary judgment in favor of current owner in action against prior owner for dumping abnormally dangerous mercury); Prospect Indus. Corp. v. Singer Co., 238 N.J.Super. 394, 569 A.2d 908 (1989) (prior owner who caused release of PCBs into environment liable to subsequent property owner for costs of cleanup). The Army will be held liable for the breach of its duty to warn.

CONCLUSION

The defendant breached its duty of care to the plaintiff to warn of buried munitions. The Court will set a status conference to establish a schedule for the resolution of the remaining question of damages. The Court will issue **an** Order of even date herewith, consistent with the foregoing Memorandum Opinion.

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Mrs. MORELLA. I'm now going to ask Dr. Walks, Ivan C.A. Walks, and Theodore Gordon and Dr. Richard Albright if they would stand so I could administer an oath before they testify. If you would raise your right hands, gentlemen.

[Witnesses sworn.]

Mrs. MORELLA. The record, again, will demonstrate and state an affirmative response.

We have asked those who are testifying to try to confine their comments to 5 minutes. I think you're the one who basically is going to be testifying, Dr. Walks, and perhaps they will be assisting in some way. So I would be happy to recognize you.

Oh, and before I do, I would like to introduce to those who are here today the newest member of our subcommittee. I think this will be her very first meeting. I had already introduced her before she arrived, Diane Watson, who is from California, and who replaced the late Julian Dixon. She will be a very valuable addition to this subcommittee.

Welcome. Did you have an opening comment you wanted to make, Congresswoman Watson?

Ms. WATSON. Madam Chair, I would like to say thank you for the introduction, and it is quite a privilege to serve on the Committee on Government Reform. I look forward to addressing some of the issues that have been identified in the past and will be ongoing.

I also look forward to serving on the Subcommittee on the District of Columbia, along with our esteemed representative from D.C., and I hope to be able to be effective, and I will take my lead from the Chair and the ranking member on the D.C. Subcommittee, Ms. Norton. I look forward to the work that is ahead and the challenge, too, and thank you so much.

Mrs. MORELLA. Thank you. We're delighted to have you on board.

And so now, Dr. Walks.

Mr. WALKS. Good morning, Madam Chairman Morella, Ms. Norton, Mr. Platts, and Ms. Watson. I am particularly excited to see Ms. Watson, who I had the pleasure of working with years ago in California.

I am Dr. Ivan Walks. I'm the chief health officer of the District of Columbia and director of the Department of Health. With me today are Theodore J. Gordon, our chief operating officer for the Department of Health; Dr. Richard Albright; and other senior scientists with the District of Columbia Department of Health. We appreciate this opportunity to testify, and commend you for convening this hearing, because the discussion here this morning further supports the efforts of the District of Columbia Department of Health to eliminate the issues regarding environmental exposures to contaminants in the Spring Valley community.

We are also committed to continuously informing the affected community and involving them in our decisionmaking procedures designed to address their concerns. We cannot overemphasize the importance of an ongoing interaction between the District government and members of the Spring Valley community. There can be no substitute for an informed community and the basic right to feel safe in your own home. That theme will continue to guide our efforts in the Spring Valley community and in any other community

in our basic mission to prevent disease, dysfunction and premature death.

Allow me now to turn to the substantive issues regarding Spring Valley. My testimony will cover the current activities and the recent history of the Department of Health and will then cover the history and the activities of the Army Corps of Engineers.

Mayor Anthony Williams has assembled an independent group, the Spring Valley Scientific Advisory Panel. You've already heard from Dr. Walker this morning; and I'm sure he's covered the composition of that advisory panel.

Mayor Williams is profoundly concerned about the health and welfare of all District residents and, in particular, with respect to this hearing, those in the Spring Valley community. Mayor Williams charged that advisory panel with advising the Department of Health and providing recommendations following the review of data collected in the assessment of potential exposure to environmental contaminants in Spring Valley.

They were also charged to review the results of biological assessment of exposure to environmental contaminants and to review morbidity and mortality data relevant to health trends in the Spring Valley community.

During its first meeting, the panel reviewed information provided by the Army Corps of Engineers, the Agency for Toxic Substances and Disease Registry [ATSDR], American University and the Department of Health. The information included existing soil sample results and the expanded soil sampling plan of the U.S. Army Corps of Engineers. It also included results of the exposure investigation of the American University Child Development Center conducted by ATSDR at the request of the Department of Health.

Additionally, results of an additional exposure investigation conducted by American University of its groundskeeper and maintenance staff, a summary of the health effects associated with arsenic exposure in the scientific literature and a comparison of the cancer incidence and mortality trends in the Spring Valley community as compared to an identified control community.

The Department of Health concurs with and will follow the recommendations of the Mayor's Spring Valley Scientific Advisory Panel. Our comprehensive plan will include additional analyses of the cancer incidence and mortality data from Spring Valley, with an additional comparison community from Maryland. The Maryland Department of Health has agreed to provide the comparative data.

In addition, we will provide biomonitoring, which is an exposure investigation for a sample of the Spring Valley residents. We have requested that the ATSDR provide technical assistance by conducting an additional exposure investigation of a sample of the Spring Valley residents.

Further, to complete an additional recommendation of the Spring Valley Scientific Advisory Panel, the Department of Health will collaborate with the Environmental Protection Agency and the U.S. Army Corps of Engineers to develop a risk communication strategy, the interpretation and translation of all environmental and health-related data collected for the residents of Spring Valley. The Department of Health has kept the Spring Valley community in-

formed of the issues by disseminating a quarterly Spring Valley newsletter.

We have held Spring Valley community meetings and currently participate on the Army Corps of Engineers Restoration Advisory Board. The Department of Health has met with the U.S. Army Corps of Engineers and the EPA to discuss the expanded soil sampling plan proposed in the Spring Valley community and has agreed with the final plan.

Prior to convening the Spring Valley Scientific Advisory Panel, the Department of Health performed several activities. In August 1998, before the intrusive investigation began, the Department of Health demanded the use of stronger measures to protect the neighborhood. The Army Corps of Engineers agreed to use a steel vapor containment structure over the intrusive investigation area.

From February 1999 to April 2001, intrusive investigation began at the Korean ambassador's residence and uncovered 680 pieces of munitions and laboratory equipment in two separate burial pits. Several of the items found contained chemical warfare materiel.

In December 2000, the District requested that the Army Corps of Engineers sample the soil at the CDC. The results indicated that arsenic levels were elevated and the District requested that the Army Corps of Engineers conduct an emergency removal of that soil.

Further testing was done at the CDC where results were as high as 498 parts per million of arsenic. That's against a background level for that area of less than 20.

The District received these results on Wednesday, January 17, 2001. The Department of Health requested technical assistance from ATSDR on January 18, 2001 to test all children currently enrolled at the Child Development Center for arsenic exposure. The ATSDR completed hair sampling of all enrolled children at the CDC on February 1, 2001. DOH met on March 9 with the Army Corps of Engineers and the EPA to discuss soil sampling options. Mayor Anthony Williams held the first Spring Valley Scientific Advisory Panel meeting on April 25, 2001 in the District.

Should the results of the Army Corps of Engineers' expanded soil sampling reveal other contaminants of concern, the Department of Health is committed to assessing and mitigating the risks to human health from cancerous and noncancerous effects.

We would be remiss if we did not identify the important role being played by other Federal agencies. The Department of Health appreciates the support that the District has received from the Environmental Protection Agency through the ATSDR. DOH was able to quickly address the concerns of parents and children enrolled at the American University Child Development Center. ATSDR conducted an exposure investigation of arsenic and provided biological monitoring.

I will conclude my statement at this time and submit the remainder of my testimony for the record. Again, thank you, Madam Chairperson and other members of the subcommittee, for this opportunity to testify. Myself, Mr. Gordon, Dr. Albright and other members of the senior scientific staff at the Department of Health are here to respond to your questions. Thank you.

[The prepared statement of Dr. Walks follows:]

Testimony of
Ivan C. A. Walks, M.D.
Chief Health Officer, Department of Health

Hearing on Spring Valley-Toxic Contamination in the Nation's Capitol Subcommittee on the District of Columbia Committee on Government Reform
House of Representative
July 27, 2001
Washington, D.C.

Good morning, Chairwoman Morella, Ranking Minority Member Norton, Distinguished Members of the Subcommittee. I am Ivan Walks, Chief Health Officer and Director of the Department of Health in the District of Columbia. With me today are Theodore J. Gordon, Chief Operating Officer of the Department of Health (DOH), and key staff members involved with Spring Valley. We appreciate the opportunity to testify and commend you for convening this Hearing because the discussion here this morning further complements our effort to illuminate the issues regarding environmental exposures to contaminants in the Spring Valley community. This hearing also enhances our effort to continuously inform the affected community and involve them in decisions or procedures designed to address their concerns. In summary,

we cannot over emphasize the importance of an ongoing interaction between the District Government and the members of the Spring Valley community. There can be no substitute for an informed community. That theme has been and will continue to be a guiding light for our efforts in the Spring Valley Community, and in any other effort to prevent disease, dysfunction and premature death. Allow me now to turn to the substantive issues regarding Spring Valley. I will first summarize the current activities of the Department and then I will cover the history and the activities of the Army Corps of Engineers.

Mayor Anthony Williams assembled an independent group, the Spring Valley Scientific Advisory Panel, which includes seven specialists in the field of epidemiology, toxicology and environmental health. The Panel also includes two representatives from the Spring Valley community. The first meeting of the Scientific Advisory Panel was held April 25, 2001. The Mayor's Scientific Advisory Panel is chaired by Dr. Bailus Walker, Jr., Professor of Environmental and Occupational Medicine, Howard University College of Medicine. Mayor Williams charged the Scientific Panel to advise the DOH, and

draw conclusions following the review of data collected in the assessment of potential exposure to environmental contaminants in Spring Valley; to review the results of biological assessment of exposure to environmental contaminants; and to review morbidity and mortality data relevant to health trends in the Spring Valley Community. During the first meeting, the panel reviewed the information provided by the Army Corps of Engineers, the Agency for Toxic Substances and Disease Registry (ATSDR), American University and the DOH. The information included existing soil sample results and the expanded soil sampling plan of the US Army Corps of Engineers; results of the exposure investigation of the American University Child Development Center conducted at the request of the DOH by ATSDR; the results of an additional exposure investigation conducted by American University of their groundskeeper/maintenance staff; a summary of the health effects associated with arsenic exposure in the scientific literature; and a comparison of the cancer incidence and mortality trends in the Spring Valley community as compared to an identified control community.

The DOH acknowledges and will follow the recommendations of the Spring Valley Scientific Advisory Panel. Our comprehensive plan will include additional analyses of the cancer incidence and mortality data from Spring Valley with an additional comparison community from Maryland. We have contacted the Maryland Department of Health to request these data, and they have agreed to provide the information. In addition, we will provide biomonitoring (an exposure investigation) for a sample of the Spring Valley residents. We have requested that the ATSDR provide technical assistance by conducting an additional exposure investigation (biomonitoring) of a sample of the Spring Valley residents. Further, to complete an additional recommendation of the Spring Valley Scientific Advisory Panel, the DOH will collaborate with the Environmental Protection Agency (EPA) and the US Army Corps of Engineers to develop a risk communication strategy (the interpretation and translation of all environmental and health related data collected) for the residents of Spring Valley.

The DOH has kept the Spring Valley community informed of the issues by providing a quarterly "Spring Valley Newsletter". We have

held Spring Valley community meetings and currently participate on the Army Corps of Engineer's Restoration Advisory Board. The DOH met with the US Army Corps of Engineers and the EPA to discuss the expanded soil sampling plan proposed in the Spring Valley Community, and has agreed with the final plan.

In addition, should the results of the Army Corps of Engineers' expanded soil sampling reveal other contaminants of concern, the DOH is committed to assessing and mitigating the risk to human health from cancerous and non-cancerous effects. We would be remiss if we did not identify the important role being played by other federal agencies. The DOH appreciates the support that the District has received from EPA through the ATSDR. DOH was able to quickly address the concerns of parents of children enrolled at the American University Child Development Center. ATSDR conducted an exposure investigation of arsenic, and provided biological monitoring.

I will conclude my statement here, and submit the summary of the historical events and the activities of the US Army Corps of Engineers for the record. Again, thank you Chairman Morella for holding these

hearings and for the opportunity to testify on behalf of the District of Columbia.

Historical Events

First, we believe it productive to sketch the historical elements of Spring Valley, which may indicate why we are here today.
During WWI, Spring Valley was the site of a project known as the American University Experiment Station. The Experiment Station evolved into a major chemical weapons research facility. This complex included over 150 Buildings and 1200 scientist and support staff. The principle focus of the research was on toxic chemicals. A large area (100s of acres) was designated as test sites for chemicals developed in the laboratories.

Evidently, trenches were dug in two separate areas because in 1993 munitions were found in those underground constructions. The best information that we have is that animals, (goats, sheep and dogs) were used to determine the effects of the gases, which is not unlike toxicology research today. The next major phase of this historical account was 1918 when the orders were given to close the research complex. The

following year the buildings were dismantled and these facilities were so heavily contaminated that they were burned rather than removed from the site. As was the military procedure during that period, items that could not be salvaged were buried. Evidently, they remained buried until they were discovered almost 8 years ago in 1993. Now let me discuss further developments in 1993 and 1995.

Developments in 1993 and 1995

After the Corps removed the discovered munitions in 1993, for the next year and a half they conducted an extensive survey of the entire Spring Valley area. They took soil samples and conducted geophysical examinations at over 50 Points of Interest. Approximately 25% of all properties in the area were sampled for soil contamination. In June 1995, the Army Corps of Engineers prepared a Record of Decision (ROD) that stated no further action was necessary in Spring Valley.

During this time frame, the District Government signed a Memorandum of Agreement with the Department of Defense. This MOA established procedures by which the District would be reimbursed for the technical review, guidance and oversight at military sites in the

District that were undergoing environmental restoration projects. This included what were known as Formerly Used Defense Sites, or FUDS, including the American University Experiment Station. An important part of the MOA designated the Environmental Regulation Administration of the Department of Consumer and Regulatory Affairs as the main point of contact for all issues under the Defense Environmental Restoration Program. Unfortunately, this piece of information was never communicated by the Department of Defense to the different services, including the Corps of Engineers, which was responsible for FUDS.

Once the MOA had been signed, a Cooperative Agreement Application was prepared and submitted to the Corps of Engineers. I should point out here that the Corps of Engineers Headquarters is responsible for the Cooperative Agreement process under the MOA. They distribute all funding from all the services to the states. It is the Baltimore District of the Corps that is responsible for the Spring Valley site. The Cooperative Agreement was approved in February 1995 and two staff members were brought on board in June 1995, at about the

same time that the Record of Decision "that no further action was necessary" was being released. One of the first assignments under the Cooperative Agreement was for the District to review the work that had been done by the Corps at Spring Valley and prepare a report.

At first, there was no reason to believe that anything other than documentation supporting the Corps' Record of Decision would be found. However, after spending almost a full year, and reviewing over ten thousand documents, staff prepared a draft report questioning many aspects of the Corps' work. The draft report, which contained over 50 separate areas of concern, basically boiled down to three major issues. First, were there any separate pieces of buried ordnance on properties in the Spring Valley area? Several lone pieces had been found during the investigation; residents who had found them on their properties turned some of them in. Second, were there any other burials of munitions in the area? Records contained an article from the American University campus newspaper from 1921 that stated that a large amount of high explosives had been buried on the "back acres of the university." We also learned that a significant number of shells had been buried in the

Spring Valley area. This information came from a person who had worked in the area. This further raised our concern that the Corps may not have searched the area thoroughly enough to uncover all buried materials. The question was: was there any other chemical contamination at the Spring Valley site? In the Record of Decision prepared by the Corps, a provision was made that if a contaminant had been found with concentrations above background levels, a risk assessment analysis would be conducted. However, no risk assessment was conducted for arsenic although arsenic concentrations in the soil were well above background levels.

Development April 19, 1996

In April 1996, the District Government was notified by an environmental contractor retained by American University that the contractor had discovered several bottles in the front yard of the University President. The excavating workers experienced adverse health effects and were sent to the hospital for observation. This contractor conducted an analysis of samples from the area and found arsenic levels as high as 1200ppm. It should be pointed out that the

normal range of arsenic in soil is 3-5ppm depending on the geographical region in the United States.

DC Government /Corps of Engineer Meeting: 1997

In January 1997, representatives of the District Government, EPA and the Corps of Engineers met in Washington, DC. The District presented the report of our findings that suggested other contaminants may be buried in Spring Valley. In this report, we included copies of archival documents to support our conclusions. At this meeting, the District was informed of the existence of an aerial photograph, which we can discuss during the question and answer period. Suffice it to say the aerial photograph further supported our suspicion that toxic contaminants were buried in the Spring Valley Area. Now, let me discuss the Glenbrook Road Site.

Glenbrook Road Site

Further discussion with the Corps of Engineers led to an effort to find the contaminants buried at the Glenbrook Road. Later the Corps began an investigation of this site. The excavation uncovered 680 items

including chemical warfare material, shells and bombs. It should be noted that this process took almost 14 months to complete.

Once the excavation was complete, soil samples were taken in the area. The analysis indicated a rather widespread occurrence of arsenic contamination with some levels high enough that a time-critical removal of soil was called for. This contamination was not only on the property at 4801 but also on the adjacent property at 4825 Glenbrook Road. The Corps has completed the removal of the top layers of soil from the Glenbroke site.

Developments 1998-2001

- August 1998: Before the intrusive investigation began, we demanded the use of stronger measures to protect the neighborhood. The Corps agreed to use a steel "vapor containment structure" over the intrusive investigation area.

- February 1999 – April 2001: Intrusive investigation at the Ambassador's residence uncovers 680 pieces of munitions and laboratory equipment in two separate burial pits. Several of the items found contain chemical warfare materials.

- In November 2000, the District was informed by a reporter from *Washingtonian* magazine of the presence of the Child Development Center (CDC) on the American University campus, near the area known as "arsenic valley."

- In December 2000, the District requested that the US Army Corps of Engineers sample the soil at the CDC. Results indicated that arsenic levels were elevated and the District requested that the Corps conduct an emergency removal of the soil.

- Further testing was done at the CDC with results as high as 498 parts per million of arsenic. The District received these results on Wednesday, January 17, 2001.

- The DOH requested technical assistance from ATSDR on January 18, 2001 to test all children currently enrolled at the CDC for arsenic exposure.

- ATSDR completed "hair sampling" of all enrolled children at the CDC on February 1, 2001.

- DOH met on March 9, 2001with Army Corps of Engineers, and EPA to discuss soil sampling options.

- Mayor Anthony Williams held the first Spring Valley Scientific Advisory Panel meeting on April 25, 2001 in the District of Columbia.

Mrs. MORELLA. Thank you, Dr. Walks. We will be going in order. I will start off with the ranking member, Mr. Platts, Ms. Watson. We'll try to keep our questioning to about 5 minutes and maybe go more than one round.

So I will start off, then, with Dr. Walks. Arsenic has been found in Spring Valley in levels requiring immediate removal. I'm going to ask you, why is arsenic so dangerous? And then I would like to have you further expand on what other dangerous chemicals have been found in Spring Valley and could you also explain their dangers as well.

Dr. WALKS. Yes, ma'am. I'll speak to the specific dangers of arsenic and then I'll ask Mr. Gordon to talk about some of the other chemicals and their specific concerns. Flat answer is arsenic causes cancer. It is dangerous, it is deadly, and with background ranges in different communities—arsenic is found in pesticides and other materials that are used in our communities—but background levels typically range from as low as 2 to 3 parts per million to no higher than 20. A level of nearly 500 is extremely dangerous, and any level over 43 requires immediate mitigation. So we are profoundly concerned about this level of arsenic being found in that community, and Mr. Gordon can talk about some of the other chemicals.

Mrs. MORELLA. This level is—like I see in your testimony—is as high as 1,200 parts per million.

Dr. WALKS. That's correct.

Mrs. MORELLA. You're saying anything over 43 is dangerous?

Dr. WALKS. Anything over 43 requires immediate removal. Even levels below 43 require mitigation.

Mrs. MORELLA. Has 43 always been the standard?

Dr. WALKS. I don't know the answer to that. Let me ask Mr. Gordon to address that.

Mrs. MORELLA. Thank you.

Mr. GORDON. Good morning, Chairwoman, and members of the committee. My name is Theodore Gordon. I'm the chief operating officer for the Department of Health; 43 is the U.S. Environmental Protection Agency standard for immediate removal. That has been the standard.

The other chemical of concern certainly is lucite. Lucite is a vesicant which means when it's exposed, it penetrates the skin and blisters the skin, and if it's inhaled, it blisters the lungs and can cause immediate death.

And certainly the other chemical is mustard gas. Mustard gas is also a vesicant that also when exposed to the skin or lungs causes blistering. Mustard takes a longer time but it's just as deadly as the lucite. These are the two other chemicals that we have great concern about in the Spring Valley area in addition to the arsenic. And, of course, arsenic being a heavy metal, we know that it remains fairly stable in the soil over an extended period of time.

Mrs. MORELLA. What is the life of arsenic in terms of its hazardous potential?

Mr. GORDON. Arsenic, being a heavy metal, has a very long stability. It doesn't deteriorate over a period of time. That's why we're finding the concentrations that we're finding today. I would add that arsenic or arsenicals were found in pesticides. That's why they have established what they consider background levels.

We know that we're going to find some level of arsenic in the environment because it was in pesticides and it was widely used in the fifties and sixties until it was banned by the U.S. Environmental Protection Agency. Background levels for arsenic in this area is around 2 parts per million. It ranges differently, but not to exceed that 2 parts per million throughout the country.

Here, we're finding concentrations as high as 1,200 parts per million, as we found at the residence of the American University president's home, and 498 parts per million we found at the Child Development Center on the AU campus. That gives us great concern. It has a long stability. It's something that doesn't degenerate over a period of time, and it's not necessarily mobile. It doesn't move. It stays in the soil.

Mrs. MORELLA. So lucite and mustard gas, are they not detected at a certain point?

Mr. GORDON. Mustard gas and lucite do in fact—will deteriorate over a period of time, and a lot depends on how they're contained and what type of container they're in, and if it leaks, if it's exposed, it does deteriorate. If it's in a canister that is contained, it could be highly toxic.

Mrs. MORELLA. What's the long-term exposure to those chemicals? What does that mean? A public health risk; how high is the risk over a long term?

Mr. GORDON. Well, certainly when you have exposure, a long-term exposure, the higher the risk. And of course there are—when we look at the various pathways for possible disease, there are essentially three. One is through inhalation into the lungs. The other is contact on the skin and absorption through the skin, and the third is ingestion. And when you have continuous exposure, the risk certainly goes up.

Mrs. MORELLA. Just let me ask you, are there any other contaminated sites in the District of Columbia?

Mr. GORDON. We have a number of sites that we're investigating. Camp Simms was a site that we're working with the Army Corps of Engineers, as you may know, has been identified as a major development area for the city. We want to make sure that everything has been taken care of. Of course the Navy Yard, we have—the Navy Yard is the only Superfund site in the District of Columbia, and the District of Columbia is a partner with the U.S. Environmental Protection Agency in cleaning up the Navy Yard as a Superfund site.

We also have an area up at the University of the District of Columbia which was—the former Bureau of Printing and Engraving was located there. We have some reason to believe there that there may be some contamination at that site and also at Catholic University. Catholic University was involved, along with American University, in the development of chemical warfare materials.

Mrs. MORELLA. It would be interesting if you could submit to us the degree of contamination of those different areas that you just cited.

Mr. GORDON. We would——

Mrs. MORELLA. We don't need them right now, but I——

Mr. GORDON. Certainly.

Mrs. MORELLA. I just want to ask you, have you—Dalecarlia Reservoir is so close. Have you tested the water at all there?

Mr. GORDON. We have provided the Mayor's Scientific Advisory Panel with 20 years of water quality monitoring data, and that is under review by the Scientific Advisory Panel. We are waiting for their review of that data to determine what the concentrations and levels of arsenic may be over that 20-year period of time.

Mrs. MORELLA. I see. Thank you. My time has expired. I now recognize our ranking member, Ms. Norton, for her first questioning.

Ms. NORTON. Thank you, Madam Chair. And I want to thank all the witnesses because your testimony has been very useful. I want to especially thank my own constituents, who I will call our civilian witnesses, those for whom toxic monitoring is not your day job, for the service you are rendering to our community: Ms. Shapley of the Spring Valley Restoration Board and Mr. Harrop of the Spring Valley/Wesley Heights Citizens Association. Your very professional work is much appreciated not only by your neighbors, but by all of us.

I want to get to what concerns me most. I think those of you who have spoken about what should come first are correct when you say let's look first to the health concerns, let's take those off the table while we continue to remediate; because while it is important for the community to know that remediation is taking place, this cloud hangs over us. Therefore, I cannot figure out why all of your testimony seems to reveal that no systematic health survey is in progress.

On April 2nd, I wrote to Secretary Thompson, after going to Spring Valley once again and being alerted to problems that had yet again risen, and in this letter I asked for further help from the Agency for Toxic Substances and Disease Registry, which of course has already been helpful to the District.

And let me read to you what I said and the response I got: The fact that chemical warfare agents and their breakdown byproducts have been identified in areas that are now overwhelmingly residential suggests that local citizens may have had relatively long-term exposures to a set of contaminants that is highly unusual.

And then I asked, because of the unique circumstances at Spring Valley and because the contamination was caused by the Federal Government, is it appropriate for the Department to partner with local health officials in an epidemiological study. In addition, should the initial review reveal the need for more analytical studies to be conducted, I am requesting that the Department provide both the personnel and funding necessary to meet those needs.

I appreciate the letter I got back from Secretary Thompson in which he spoke about what had been done. Apparently ATSDR has been helpful with health consultations, with the exposure investigation at the Child Development Center, and with technical assistance. And he promised further technical assistance.

Well, I tell you, if we are this late in the game and nobody is doing a systematic health study, systematic health survey, I have to ask you, why not? I want to know that from the Department of Health. I want to know if—since it is obviously the indicated thing to do, since it's got to be what the community and the city is most

concerned about, why isn't a systematic health survey now underway, and are there plans to have such a survey underway now?

Dr. WALKS. Yes, ma'am. There is in fact that plan. It is our top priority at the Department of Health. We did, in fact, have all of the children tested at the Child Development Center and the ATSDR assisted us with that testing, and those children were found not to have elevated levels; so they were OK.

Ms. NORTON. That's the kind of ad hoc approach that I'm railing against here. I don't know what a systematic epidemiological survey would consist of. I don't know what a health survey would constitute. All I know is investigating the children at a child care center, only when you get into a panic, is not what I mean.

Dr. WALKS. And you're right, and that is not how you develop a systematic plan. What we did was to respond immediately to the concerns of those children, and I wanted to report that we did that, because even though we are planning and we have a comprehensive long-term plan, immediate response to children at risk is absolutely what we would do.

Ms. NORTON. I'm well aware of that. Dr. Walks, there was some testimony—I think it was Dr. Walker—somebody testified that somebody was doing a control study——

Dr. WALKS. I did.

Ms. NORTON [continuing]. And the control study initially chose the community next door, next door to Spring Valley. One doesn't have to be a physician to know that's not the way to begin. So we have incompetence and even excavation to find out if there is—how remediation should be done. Are we beginning with incompetence for whatever health survey has already been initiated? Dr. Walker, was it you who testified and who——

Mr. WALKER. Yeah. And let me comment on that, Ms. Norton. At our first meeting of the Science Advisory Panel, we had a number of presentations, and one was from the District of Columbia government. The epidemiologist on our Science Advisory Panel felt that if the control population was too close to the Spring Valley community, then there was a high probability that that population may, and I underscore "may," have been exposed, and therefore to get a, quote-unquote, nonexposed population to the Spring Valley contaminant, we suggested that they select another community at some distance——

Ms. NORTON. Dr. Walker, that was your testimony. What I'm trying to find out is who selected the community right next to Spring Valley in the first place? Whose idea was it that the way to do a control study was to get folks who might have also been affected by the same toxic waste and use them as a control study?

Mr. WALKER. I don't think that we could characterize it as a control study. I think it was just an analysis of two adjacent communities.

Ms. NORTON. I see.

Mr. WALKER. And we are calling for the——

Ms. NORTON. Was D.C. doing that analysis? Who was doing that analysis?

Mr. WALKER. D.C. has the Cancer Registry, and their initial thrust was to look at two adjacent communities.

Ms. NORTON. I see. This is why I believe—not only do I want somebody other than the Army to certify when the remediation is done, that in fact has been commonly done. I'm not sure that without additional help we can depend upon whatever health survey is done, and I still don't know who is supposed to do the health survey. Dr. Walks, perhaps you can tell me that.

Dr. WALKS. The Department of Health is supposed to monitor, oversee, and certify the results of any health survey. We are ultimately responsible, working as the Mayor's agent, to ensure that District residents are safe and have safe homes.

Ms. NORTON. Why hasn't a health survey been started? Are funds necessary to do it?

Dr. WALKS. Funds are in fact necessary. And one of the struggles that we have at the Department of Health, and this is true in other environmental contamination cases, we think that if our District environment is contaminated by an outside agent, it's incumbent upon them to pay while we supervise the work being done independently, and we have requested additional funds. Now, we have gotten positive responses thus far and we are going forward with an investigation.

Ms. NORTON. You have gotten funds from where?

Dr. WALKS. We have gotten technical assistance, and to me that's—those are resources from ATSDR. We are continuing to request additional assessment resources from them.

Ms. NORTON. I am very grateful for what HHS and ATSDR has done. We will have later witnesses from CDC who I think become very important as we look at what kind of health survey is adequate and how it can be done rapidly.

Dr. WALKS. Let me——

Ms. NORTON. Dr. Gordon, did you have something to——

Dr. WALKS. Let me just add before, Mr. Gordon speaks, one of the things that we would like is additional resources so that we can do the sampling ourselves. I think that it's incumbent upon the District to be able to satisfy our residents that we are able to certify these findings. We currently don't have the resources in our lab to do the samples ourselves, to do the testing ourselves, and we'd like to be able to do that, and so we are requesting those additional resources.

Ms. NORTON. Who's doing it now? Who is——

Mr. GORDON. The sampling is being done by the Army Corps of Engineers and the U.S. Environmental Protection Agency. We have a grant from the Department of the Army to perform the oversight of this whole Spring Valley area.

Our grant originally was $250,000, and in 1997 that grant was cut by the Department of the Army by $80,000. We need additional scientists on our staff to assist in the monitoring of the expanded areas and points of interest that are going to be remediated over the next years.

I have sent a letter to the Assistant Secretary of the Army, requesting reinstatement of that $80,000, and with part of that money we will be able to do some sampling. Under the Federal authorization, we are only permitted to use 10 percent of that grant toward sampling of the site, the pulled split samples.

Certainly we would want to be, Congressman Norton, in the position of pulling split samples to verify the accuracy of the information that's being collected by the Army and the U.S. Environmental Protection Agency.

Ms. NORTON. But there's nobody monitoring them and they are primarily responsible for this problem in the first place.

Mr. GORDON. That's right.

Ms. NORTON. Why did they limit the amount of money from the grant you could spend on your own sampling?

Mr. GORDON. I think it's in the law; it's in the actual law that authorizes them to provide us with the funding to do the oversight. That's what we've been told.

Ms. NORTON. Ms. Shapley had a——

Ms. SHAPLEY. May I offer just——

Ms. NORTON. Yes.

Ms. SHAPLEY [continuing]. To pitch in a little bit on this? One of your concerns expressed at the outset was the question of timing and pace of things. One of the things that I'm certainly going to be bringing before the Advisory Board for us to discuss—and I've shared this with the U.S. Army Corps of Engineers—is the need for a clear, what I call "big block critical path time line" that covers these two very distinctly different tracks of effort and the one track is the testing for cleanup. That's the soil sampling that's going on. That's the sampling that's going on in the central testing area, in the high-use areas where you get all those high spike numbers because they were high-use areas. And then you have the surrounding community.

It's important to distinguish we have high-use areas and we have the peripheral areas. That initial testing provides the only empirical data on which Dr. Walker and the Health Department can proceed with any health survey. That's how they identify, in fact, how to construct a statistical sample for any of the—and there are actually several—components to this health survey question.

So I want to make clear, there is a relationship between these two tracks of effort; and you have to get to an end point in one, intersect it with the other, and then you can go forward to stage two.

I don't want to belabor this too much, but I think that needs to be the essential context to take away from this. We have 1,200 households. We have less than 700 that have signed up for right of entry to do the first round of testing.

Ms. NORTON. Why are less than 700 signed up?

Ms. SHAPLEY. Well, I think part of it is that there was a great flood of interest—and the Army can testify to that—that got the response to an appeal for people to send in their right-of-entry forms which the Army mailed out to every household. And then I think there was so much information flowing through the mail slots that people, in effect, they got set aside by a number of people. And I know the Army is struggling with how to now push up that number so that they get the 1,200 rights of entry, because if they don't have that, they can't get the 1,200 unit data set, which is what we all need for, in effect, any of this assessment to go forward. And certainly the community board is very concerned about this progress.

I want to make one last remark on timing here. There are seasons of the year where it's appropriate to do outdoor field work. We are now down to August 1, prime time, running past us to do outdoor field work.

We don't have enough people signed up. We are not getting through enough, in my view, of this stage 1 testing, so that when I look at the big picture of the calendar, what I'm looking at is what's going to get accomplished in the prime time's field work seasons versus what gets done during the down time in-house—indoor seasons, so to speak. And so that becomes another controlling limit as far as I understand it, on, in fact, accomplishing these various things you're talking about.

Mrs. MORELLA. The gentlewoman's time has expired. Mr. Platts.

Mr. PLATTS. Thank you, Madam Chairman. I again want to thank all panelists for your testimony and the very merit-based arguments you make for the need for very timely and responsible action to be taken. And it's long past being overdue. It needs to move forward very quickly.

I have one specific question, Dr. Walks, on the assessments you have done. And I understand you're still developing the comprehensive, but for the Child Development Center you mentioned testing the children at the center. How, I guess, long has the center been in operation at that facility and did you test adults who work at the facility who have worked there for any length of time, more than—the children kind of rotate through the center for a year or two, I would imagine, versus employees that have been there for many years, if it's a longstanding facility. I'm not sure it is.

Dr. WALKS. We did, in fact, pull hair samples for the children to test them. And I'm not sure if we did test the adults there. I don't think we did. Did we?

Mr. GORDON. That is being handled through American University. They have hired their own toxicologist, and we have provided them with the data. We not only collected hair samples, but we also did urine samples as well, because arsenic has a tendency to collect in the urine, particularly of younger people. That all came back negative. We advised the American University of this data and they were proceeding with their own employees and own separate testing of the workers at the Child Development facility and other maintenance workers as well.

Mr. PLATTS. At this point from the adults who maybe have more years of exposure at the facility, we don't have any data available——

Dr. WALKS. We actually do have some. That's why it's nice to have a team of senior scientists running around behind you. We did offer testing to the adults who worked in the day care facility. Four of them did agree to participate, and their test results came back clean. And American University did also offer testing for their grounds keepers. Thus far, both the children and the adults that we tested came back with a clean bill of health.

Mr. PLATTS. OK. Thank you, Madam Chairman.

Mrs. MORELLA. Thank you Mr, Platts. Ms. Watson is recognized for questions.

Ms. WATSON. Thank you, Madam Chairman. And I want to say hello to Dr. Walks, and it's good to see you again.

I have some questions that run along the same lines as my colleagues. Is there a plan to do long-term studies? Because sometimes the contamination doesn't show up, and over a period of years there will be a development. So what is your plan in terms of long-term studies?

Dr. WALKS. We actually do have that, and I think that Dr. Walker can maybe speak to the Scientific Advisory Panel's efforts in that area. But, clearly, when you're looking at cancer-causing agents, short-term studies only show you exposure. Long-term studies show you effects. So you're going exactly where you need to go, and maybe Dr. Walker can talk about some of those recommendations.

Mr. WALKER. Well, I think that the recommendations of the Scientific Advisory Panel includes doing further studies. But I think the most important——

Ms. WATSON. On that point, on the same population that you have taken samples, are you going to do further studies on the people whose samples you've already taken?

Mr. WALKER. It is our recommendation. Now, there's always two approaches when you're dealing with environmental issues. You can start with the disease and work back and look at the environment, or you can start with the environment and work back and look at the disease.

Ms. WATSON. It's the human element I'm concerned about.

Mr. WALKER. Yes. Here we have said let's see what the soil samples, soil analysis, show; and then let's determine from that where we need to do biomonitoring to determine what may be in the bodies of those people who live on those sites. The Cancer Register, that is, under the supervision of the District of Columbia government, will give us some indication as to whether or not the incidence of cancer in the Spring Valley area is higher or lower than in some other community where there is a similar socioeconomic profile. We have to match these by socioeconomic profiles.

Let me further add that this is a complex issue because the primary concern has been arsenic, and it's very difficult to characterize arsenic as a single element. There are many forms of this kind of compound, and we have asked—recommended that the Corps of Engineers try to sort out what specific component arsenic component we're talking about here, because these components vary. And unless we are able to specify which form we are talking about, we may reach some conclusions that are not valid, so——

Ms. WATSON. Dr. Walker and Dr. Watson, anyone else that can respond, will you be recommending long-term studies on the population that were tested in an ad hoc way? Now, when you finally decipher what you're testing for, arsenic or any other chemical that contaminates, will there be long-range studies on the same people that were tested: children, adults, or whoever?

Mr. WALKER. From the Science Advisory Panel standpoint, I don't think we have a sufficient amount of data to be able to make that determination now. I think we need more——

Ms. WATSON. Thank you. You just answered my question. Is there any concern about doing fetal monitoring, women who are in their childbearing years, women who are pregnant? Is there any

concern about them, and will they then be tested while they're pregnant?

Mr. WALKER. Again, we need to be more specific about the form of arsenic we're talking about.

Ms. WATSON. So I guess the answer is no?

Dr. WALKS. Let me answer the question this way.

Ms. WATSON. Please.

Dr. WALKS. We have come into this whole Spring Valley issue, I think, years late. The Department of Health first had resources to investigate this only in late 1995, as has been previously testified to. Assessments at the site were safe on more than one occasion.

We are beginning to understand the severity of this problem that we have, and we are committed, and I know that the Mayor of the District of Columbia is committed to each resident feeling safe in their home at all times. We will investigate exactly what compounds we have, and when we determine the best scientific course of action, we will take it. We will take it aggressively. We will aggressively seek funding to support those efforts. And any individual who is at risk, we will give that individual the opportunity to be checked now and to be followed, and we will advise them of what they need to be concerned about down the road, so if they move out of the area they will have information.

To that end, we are publishing a quarterly Spring Valley Committee Advisory newsletter to let them know of our findings, and we have held several community meetings and will continue to meet with them. The concerns you raise are the same concerns we share at the Department of Health and we will address those.

Ms. WATSON. You then will be developing a protocol. I would like to suggest that we do long-term studies on the Spring Valley residents, all of them.

You talked about the need for 1,200 right of entry, and I was concerned about the outreach. You just told me that you're publishing every quarter. I think we need to get public health personnel involved, to go into communities, go into homes, interpret what's in that flyer.

Dr. WALKS. You're exactly right. This is not Field of Dreams: If you build it, they will come.

And the Department of Health has a clear understanding of the need to be out of our offices in the community. To that end, our senior scientists including, Dr. Albright, Dr. Stokes, who is here in the audience with us today—we have been in that community at several community meetings, and we are available not just for technical assistance to other scientists, but if community members have questions, they can call the Department of Health. We will come to a meeting of 2 people or 200 people to help people understand best how to stay healthy in the District.

Ms. WATSON. Sometimes community people don't even know the questions to ask. So you have to take a proactive approach and answer questions before they ask.

Dr. WALKS. Absolutely.

Ms. WATSON. The Cancer Registry is after the fact. We need to study the people who lived in that area, be able to identify—you're going to do your scientific research, but you need a protocol and

you also need to start looking at the effects on women during their childbearing years, so the fetal monitoring comes in.

Let me just end with this. I have seen the same situation happen throughout the world when we have abandoned bases. I just came back from Bermuda where we abandoned our naval base there. We abandon and leave it like it is when we leave. We don't treat it. And I would think that we need to go the next step, too, and look at all of our abandoned bases and set up a protocol of plan. It is affecting the population there.

So here I would like to see, when you finish your scientific discussion and you identify what the contaminants are, and you are able to trace some effects, that we set up a treatment modality also. I always hear about the testing, but I don't hear about the followup. And so I would suggest that in the District of Columbia, that your concerns—and I want to compliment the Mayor, but I think your concerns ought to be out there, and there ought to be recommendations to other departments, and please identify what you see as a treatment modality for those who have been exposed.

Dr. WALKS. If you'll permit me just to expand on one thing that I'm confident, that you were alluding to.

Ms. WATSON. Please.

Dr. WALKS. This goes beyond letting people know if they have been exposed to a chemical that may burn their skin or injure their lungs or may cause cancer. There is a psychological component which is absolutely included in a comprehensive health approach to people who feel that their community is not safe, their home is not safe, their children can't play outside in the yard. And we are absolutely focusing on that as well, and I want to thank you for bringing up that comprehensive approach, because with the District's Department of Health, we have moved out of our offices. We are out in the community. We have taken experts to the community to answer questions for individuals. We will continue to do so and I appreciate your support in that effort.

Ms. WATSON. Thank you.

Mrs. MORELLA. Thank you, Ms. Watson.

I'd like to ask Dr. Walker, as chair of the Mayor's Scientific Panel on Spring Valley, I'd like to ask you what the status is of each of the recommendations that the scientific panel made. I do not notice any timeframes, but I trust from what we know and what we have learned that there is urgency in implementing the recommendations.

Mr. WALKER. Thank you, Madam Chairwoman. The recommendation for biomonitoring—the District of Columbia government has contacted the Federal Agency for Toxic Substance and Disease Registry, because this is the agency that is capable of providing the necessary support to do that; so that is underway.

The District of Columbia government, on our recommendation to select another control population that is not so close to Spring Valley, they have now—the government has now contacted the State of Maryland to ask their assistance in identifying a community in the State of Maryland that may be of similar socioeconomic status that they can use as a control population. It's our understanding that the risks—I'm sorry.

Mrs. MORELLA. Just any time line on that, on identifying that Maryland community that has some similarities, but again I hope would not be so close that it would be identical——

Mr. WALKER. That process is well underway, and I've had a verbal report that the data are beginning to come back from the State of Maryland. So that's well underway.

Mrs. MORELLA. The other recommendations?

Mr. WALKER. The other recommendation was one that the Corps of Engineers began to look at specifying, identifying specific arsenic components, since arsenic is one of the compounds that has caused much concern, for obvious reasons. It does cause cancer.

The Corps of Engineers is beginning to move to make some specific identifications with respect to that recommendation. I should point out that we did want to make sure that the agency, the three agencies, District of Columbia government, Corps of Engineers, and EPA, worked with the community to help the community understand this whole problem.

We know that there was concern there about reproductive and developmental problems, but as we looked at epidemiological literature, there is no evidence to suggest that arsenic may cause any productive effects. So we believe that these three agencies should help the community understand what we know about the health effects of the various contaminants and it's our belief that is underway.

We have not scheduled a second meeting, another meeting of the Scientific Advisory Panel, because we wanted to have the Corps of Engineers soil sampling results before we called a second meeting. Some members of our panel are from out of town, and we're trying to make sure we make maximum use of their time. So if we ask them to come back for a second meeting, we'd like to have as much data as possible. So I think it's fair to say that progress is being made on our recommendations. We have not had a formal report that says we are doing X, Y and Z on these recommendations, but I understand from the District officials that report will be forthcoming to our panel.

Mrs. MORELLA. We'd be very interested in seeing that, and I'm just trying to promote the sense of urgency, and sometimes when we set time lines we tend to follow them a bit more closely.

I would like to ask the District of Columbia officials as well as the community to agree to work with this subcommittee as we move along and am hoping that you would respond promptly to any of our inquiries and keep us informed of what's going on, knowing of our interest.

I know that you'd love to make a comment, Mr. Harrop, and I'd like to recognize you.

Mr. HARROP. Thank you, Madam Chairman. I want to say that I'm disappointed that, as I said earlier, one of the major problems in Spring Valley is a lack of uncertainty, a feeling that people have. They don't have the information, they don't know how badly they or their families may have been affected by these chemicals.

I thought that Mrs. Norton's question about when we're going to get on with the health studies was really not very satisfactorily answered. The answer was that it's a very complicated problem; that there seems to be an argument among the Army and the Agency

for Toxic Study and Disease Registry and the District as to who's going to pay for it.

I simply cannot accept that it's difficult to locate, say, in Montgomery County, in your constituency, a community which is very similar to Spring Valley. This is a small community. It's not a very difficult problem. What people would like to know is that a study is going on. I mean, we've asked Maryland for suggestions as to a comparable community. I just don't think that's a very good answer. I think there's no reason why a study can't go on very expeditiously and satisfy people as to what the incidence of the problem is. I hope we can do that.

Mrs. MORELLA. I appreciate very much your representing the urgency of it. And that's one of the objectives of this subcommittee is to move it forward, to get the time lines to make sure that we do have the study done as quickly as possible.

Yes, Dr. Walks.

Dr. WALKS. If I may, Madam Chairperson, we have worked very closely with the State of Maryland. Georges Benjamin, who is my counterpart for the State of Maryland, has been extremely supportive. We have identified a community in Potomac, MD to use as a control community. That study has in fact been completed, and we will be turning those results over to the advisory panel Dr. Walker chairs so they can review that at their next meeting.

So things are underway. Things are moving. I am never going to be satisfied that they're moving fast enough. I'm sure you will not be either. We will move with as much deliberate speed as we can, and every opportunity to increase that speed, we will ask you to support us and be happy to work closely with you.

Mrs. MORELLA. We want to very much. And, Dr. Walker, when is the next meeting.

Mr. WALKER. I'm sorry?

Mrs. MORELLA. When is the next meeting of——

Mr. WALKER. We would hope that we could convene the next meeting in September, early September, after the summer vacation, bearing in mind that we have some academic types on our panel and some are off in foreign countries doing some work. But we would hope by the first of September we would at least have some of the results of the Corps of Engineers' soil sampling, as well as a report of the District of Columbia government, so we can determine what are the next steps, and whether or not what has been done is sufficient to provide the information to draw some conclusions about the health and environmental effects——

Mrs. MORELLA. If the members of the subcommittee would indulge me just one moment, I would like to ask maybe Mr. Gordon and Dr. Albright, we have this aerial map here; I wondered if you might just point out to us what some of those sites are, where there are the munitions and where there is the danger of contamination.

Mr. GORDON. Madam Chairperson, I'd also like to point out that we have received a letter from Dr. Henry Faulk, the Assistant Surgeon General with the Agency for Toxic Substance Disease Registry, committed to continue biomonitoring of the residents of Spring Valley and working with the District of Columbia Department of Health. That letter is dated July 21, 2001.

Mrs. MORELLA. Excellent. Good. They don't know whether they can dig, whether they can go into the yard, what's safe and what is not. Thank you.

Yes, sir.

Dr. ALBRIGHT. Madam Chair, Delegate Norton, my name is Richard Albright. I'm the District's remedial project manager for this site. I have counterparts from the Army Corps of Engineers and EPA, also called remedial project managers.

This is a 1918 aerial photograph, taken on August 17 of that year, showing the site. The first thing I'd like to call to your attention is the great number of buildings. This was the world's second largest chemical weapons facility at that time. It had 1,200 scientists and engineers, 700 support personnel; and the adjacent site, Camp Leach, which I will indicate here, trained 100,000 engineers during the 2 years it operated, during the 2 years of World War I.

Some key features—the main labs, were located in this area on the American University campus. One of the key features that was found in 1986 was this probable pit here. We believe this is the hole called Hades, although we can't definitively prove that, but we're still searching for this particular pit.

There are also two sets of circles up here. These are circular trenches. They were meant to simulate the trench warfare in Europe. They were built in a circle so that when they detonated a shell with gas, it wouldn't matter which way the wind was blowing, it would get to the trench. That's why they're in a circular fashion. They would detonate from 1 to 24 shells at a time. They would stake dogs out in the trenches at 10 foot intervals and then see the effects on the animals of the poison gas. There is a smoke test going on as we speak. That was a major offensive that was planned for the Spring of 1919. We were going to burn 4 million smoke candles. We had the prevailing wind to our backs across the trench in Europe, and the theory was this smoke would blow into the enemy's positions. It would penetrate the——

Mrs. MORELLA. Where is that located? I mean, tell me where—I see that, but tell me where—give me more of a graphic——

Dr. ALBRIGHT. Between 52nd Street and Dalecarlia Parkway, approximately. We know exactly where it is. We have a map of the area that has that site specifically located. But that smoke contained arsenic, most likely, because of the spring offensive that was planned. The major smoke testing that was done was done at the Montgomery County Country Club, and the big site was in Berlin, MD.

Perhaps a large number of those smoke candles were buried there in Maryland. The little knob off on the northern trenches is where the original 141 munitions were found back in 1993 by a contractor, employee of Miller Co., putting in, I believe, a water main to a new house that was under construction at that time.

Mrs. MORELLA. Mr. Miller, did you know about anything before 1993 about any exposures from munitions?

Mr. MILLER. [Indicating no.]

Dr. ALBRIGHT. OK. Great. Thank you. Continue.

Dr. ALBRIGHT. This is the Sedgewick trenches down here. This is an area where we're looking very intently for a similar burial

site of munitions. We think we have now located a probable location for that.

A few other features. You see these little squares? These are persistency test areas where chemical warfare material was sprayed on the ground to see how long it would last. Generally from aerial photographs, light colored areas denote disturbed ground. It might just be an area where cars travel. Or it might be an area where somebody dug something to bury something, or it might be an area of contamination that prevents the grass from growing again, as in these persistency test areas. The person who probably prepared this for your committee is probably one of the top people in the world, Terry Slonecker of the EPA. He's been working with us for the last year or so——

Mrs. MORELLA. Thank you.

Dr. ALBRIGHT [continuing]. Putting in an inordinate amount of time to try to identify various areas.

Mrs. MORELLA. Thank you, Dr. Albright. That gives us a pretty good idea of the contaminated areas.

Ms. Norton.

Ms. NORTON. Thank you, Madam Chair. I see a problem here that I think we're going to have to get ahold of. When it comes to the cleanup, I want to make sure that nothing interferes with the cleanup and the remediation itself. So that is done by the Federal Government; it would be very hard for the Federal Government to side step that. You know, they did it. They have to clean it up. And they can't look to the D.C. government, they can't look to Mr. Miller. They know they did it. Only they have the expertise and they're doing it. OK.

Ergo, let's then look at a problem for which the Federal Government is equally responsible: the health effects on the community. Now, there, even though the arrow points in exactly the same place it did when it came to the contamination, there we do not have the same focus as we had, because it's just one step removed. It's in the population. You don't know where it is. And, therefore, we do not have the same Federal focus on the people as we have on the sites. That is dangerous. What we do instead is we leave it to the D.C. government to catch as catch can, get grants, seek technical assistance, but depend mostly on its own resources to deal with that health track of this problem.

One thing this hearing has revealed to me is that the Federal Government has accepted its responsibility on one track and not entirely accepted its responsibility on the other track. That concerns me. And I believe we have an obligation not to simply look to the Department of Health and say what are you doing now and have them scramble among the agencies to do what needs to be done on the health effects for which the Federal Government is equally and exclusively responsible, while the Federal Government, having been unable to move away from the contamination itself, shucks and jibes on the health effects.

I am very grateful to what the HHS has done to the ASTDR because they have been very forthcoming in that regard. We will hear testimony from the CDC. I am certainly going to be meeting after this hearing with the agencies involved, because I think that without a single appropriation from the Congress, that there is an ex-

isting obligation, once the Federal Government has accepted responsibility for the contamination, to accept responsibility for the health effect. I mean, it follows like night and day, and we just have to make sure that the logic is understood.

As to the health—what the city is doing now to try to scramble to get the personnel and to get the money, my own sense is that we simply must do it fast, do the health survey fast, and make sure that it is done independently. And we may not be able to wait until the District is able to hire all of the independent experts it should. And what I'd like the District to help me do is to figure out what is the fastest way to get an independent health survey initiated immediately.

Now, I have a question for the District. Mrs. Morella asked about other communities that may have been involved, and we have heard about other communities, and I indicated in my opening statement that I did not believe that the Federal Government went like a laser beam to American University and might not have done damage elsewhere.

In your testimony we heard that at least there is some reason to look at at least three other areas: Camp Simms, some areas near UDC that were vaguely named, and areas near Catholic University. Now, there is no need to unduly panic any other community, and one of the ways to keep from panicking a community is to systematically look at what has happened so that people know that there's no reason to be panicked.

I would like you to describe what is being done now, exactly what is the nature of the effort now at Camp Simms in which you're about to do a whole big number, a whole big project that's been outstanding for years—Camp Simms, the area near UDC, and Catholic University—what is being done and who is doing it?

Mr. GORDON. Go ahead, Richard.

Dr. ALBRIGHT. I'll respond to that. Camp Simms, first of all, we got in that site when the Federal parkland was being remediated. We had a partnering effort with the Corps and the EPA. I believe we successfully remediated the Federal park there called Oxen Run Park. We removed 36 ordnance items out of that site. That was the target area.

Ms. NORTON. When was that done? When were those ordnances removed?

Dr. ALBRIGHT. From 1995 on. In fact, the first week I came to work on this project I was out there. We removed substantial quantities of lead from the backstop areas for the small arms ranges out there; and areas that we could not remove the lead, we covered up in such a way that children can no longer be exposed.

The other portion at Camp Simms is owned by the District of Columbia government. There are some reported burials there. That work was done before the District was involved with the project. We were not satisfied with the work that was done. We've gotten back to the Corps of Engineers on that. We have a good partnering relationship with them. In the past 2 months they have reanalyzed the data from the metal detectors that were used over that area. We have located and come to agreement on 13 more potential areas of munition burials up there, and talks are underway now as to try to excavate those areas.

With respect to UDC, that was formerly the Harry Diamond Fuse Laboratory where, among other things, our proximity fuse, which was very effective in World War II, was developed. We know that there were many contaminants up in that area, and ordnance was found up there when they built the engineering building at UDC. We are going to be looking at that site. EPA has promised to fund the preliminary assessment for that site. I believe that preliminary assessment has already been done in draft form. We have not seen it yet. We expect it within a week or two. From that document, we will then go on to do whatever soil sampling magnetometer work, metal detector work is necessary.

Catholic University was a small research spin-offsite from American University. Two very toxic chemical warfare agents were developed there, lewisite and ricin. They had approximately 35 chemists working there. From their reports we suspected that there may be some contaminants left. Anecdotally, we've been told that jugs of chemical warfare material were left in the chemistry building when the site was closed. These were found some number of years later. They were then buried near the chemistry building up there. A number of years later again, putting a walkway through, they hit one of the jugs with a pick-ax while digging a foundation.

We have been unable to get any more information on that site. But there's a dump site already near there. We have already done some preliminary aerial photo recon work on that site, and we'll be looking to take some soil samples in that area as well.

Ms. NORTON. Are these all the areas that could conceivably have had munitions dumped?

Dr. ALBRIGHT. Yes. We have approximately 33 sites in the District of Columbia that we're looking at. According to the Department of Defense, the District of Columbia ranks 10th among all States for potential buried ordnance sites, not necessarily in any way the amount of ordnance, but rather just purely numbers of sites. Our site might be 30 rounds. Some other State's site may be 3,000 rounds, but in numbers of sites we rank 10th among all States.

Ms. NORTON. I think the Chair also asked about water. I do know that over and over again, we're told that the District of Columbia has one of the highest cancer rates in the country. It always ranks way above anything anyone would expect. Could you tell me, I want to know first what is being done, specifically what is being done—we were told something was being done—to look at the water supply and whether you think so many areas where buried munitions are located might have contributed to a higher rate of cancer in the District of Columbia that we see here than in other places.

Dr. WALKS. I think we absolutely have those concerns in a State that is 70 square miles and ranks 10th in States with respect to number of sites. That means we have probably a lot more sites per square mile than maybe any other place. We do have a high cancer rate. We have a cancer registry. That's a tremendous step in the right direction with respect to our ability to track it.

But as a physician, you don't want to track cancer. It means that you're waiting until people are ill and then identifying a level of illness.

We want to protect health. The Mayor's goal is to make the District the healthiest city in America. We share that mission, we share that vision. And the extent of the work that Dr. Albright has outlined is, I think, evidence of that. We do have to stretch our resources, but that's OK. We will stretch and do whatever we can to identify potential health hazards in the District and mitigate those health hazards. Part of our purpose today is to impress upon you that commitment and ask for your support with respect to additional resources, but we——

Ms. NORTON. Dr. Walks, what is being done on the water supply right now with respect to effects of these munitions around the District of Columbia?

Dr. WALKS. We actually do check groundwater, and we check groundwater contamination in a lot of different areas for a lot of different chemicals. Though we don't use groundwater, we're exposed to it and we're exposed to soil. That's why when we talk about collecting samples, we talk about comprehensive sampling collection, doing split samples. We can't afford to trust other people to do the work that we have to do in the District to keep District residents safe. It's our responsibility, and we want the ability and the resources to do those split samples and be able to look District residents in the eye and tell them that they're safe in their homes.

Ms. NORTON. Dr. Gordon.

Mr. GORDON. Yes. As Dr. Walks has indicated, we have no evidence, based on the review of drinking water data, that there's any contamination levels of our drinking water with arsenic, none whatsoever.

We have requested that the Corps of Engineers do groundwater testing for us to determine if there are concentrations of arsenic in our groundwater. One would say, why do you want to test the groundwater, because we don't drink the groundwater? We never know at what point in time we're going to have to access that groundwater. If we had a bioterrorist attack and it affected our drinking water system, we may have to rely on our groundwater.

So, therefore, we've requested to the Baltimore District that in the Spring Valley area we test the groundwater to determine if in fact it is contaminated, and we're waiting for a response from the Corps. But there is no evidence—and I want to repeat, no evidence—whatsoever of our drinking water being contaminated with arsenic.

Ms. NORTON. It's very important for the community to understand that.

Mr. Miller, could I ask you whether or not this very desirable neighborhood, as you called it, with very high property values, meaning you pay a lot of taxes to the District of Columbia and to the Federal Government—may I ask whether or not property values have been affected by this controversy?

Mr. MILLER. Based on the real estate data that I've been able to collect from the Multiple Regional Information System, which is the warehouse of real estate sales in Spring Valley, the answer is no. Property values have gone up, and gone up significantly in the last 5 years.

Ms. NORTON. That's very good news.

Finally, Mr. Harrop, you made a statement that I wish you would explain when you were assessing this controversy. You indicated that American University may have been complicit along with the Federal agencies. I note that American University has sued, which doesn't tell us all we need to know, of course. But what made you think that American University has been—may have been, sorry—complicit?

Mr. HARROP. Well, under the Superfund legislation, the owners or operators of property which may have possible contamination are required to report that formally to EPA, which triggers an articulated series of remedial actions.

In 1986, the American University as well as the Army Corps of Engineers clearly knew that, because they had information from their historical survey of the records and their review of overhead photography which showed that there was this potential problem.

And yet they decided not to report it—as the law required them to—to the EPA. That is what I meant by complicit.

Ms. NORTON. Thank you, Madam Chair.

Mrs. MORELLA. I want to thank the panel. We've kept you for a long time. You have been great in terms of telling us about the actions. I reiterate that we do want to work with you so that we recognize the urgency and come about with some resolve for the safety and security of the citizenry. And so we thank you. Thank you very much for being with us, Dr. Walks, Mr. Gordon, Dr. Albright, Dr. Walker, Ms. Shapley, Mr. Harrop, and Mr. Miller. Thank you.

So, now the second panel. We will not spend quite as much time with the second panel. We have two people who will be presenting: Thomas Voltaggio, the Acting Regional Administrator, the Environmental Protection Agency, Region III; and Rear Admiral Robert Williams, Director of the Division of Health Assessment and Consultation, the Agency for Toxic Substances/Disease Registry.

Before you sit down, I'm going to have you stand to be sworn in. Mr. Voltaggio and Admiral Williams, if you'll raise your right hands.

[Witnesses sworn.]

Mrs. MORELLA. Thank you for your affirmative responses. We'll now commence.

Well, Admiral Williams, since you are sitting to my left, the right of the audience, would you like to begin, then?

STATEMENTS OF REAR ADMIRAL ROBERT WILLIAMS, DIRECTOR, DIVISION OF HEALTH ASSESSMENT AND CONSULTATION, AGENCY FOR TOXIC SUBSTANCES AND DISEASE REGISTRY; AND THOMAS C. VOLTAGGIO, ACTING REGIONAL ADMINISTRATOR, ENVIRONMENTAL PROTECTION AGENCY REGION III

Admiral WILLIAMS. Thank you. Good morning, Madam Chairwoman and members of the subcommittee, I am Bob Williams, the Agency for Toxic Substances and Disease Registry, and I thank you for this opportunity to provide you with testimony on the activities of the Agency for Toxic Substances and Disease Registry [ATSDR], at the Child Development Center at the American University, a day care facility.

ATSDR is an agency of the U.S. Department of Health and Human Services. It is the lead public health agency responsible for implementing the health-related provisions of the Comprehensive Environmental Response, Compensation, and Liability Act [CERCLA]. ATSDR's mission is to prevent exposure and adverse health effects and diminished quality of life associated with exposure to hazardous substances from waste sites, unplanned releases, and other sources of pollution present in the environment.

On January 18, 2001, ATSDR participated in a conference call with the U.S. Environmental Protection Agency, the U.S. Army, and the District of Columbia Department of Health. The Army indicated that elevated concentrations of arsenic were detected in surface soil samples recently collected from the playground of the Child Development Center at American University, which I will call AU-CDC. Parents of children attending the day care facility were notified of this finding, and they expressed concern for the health of their children. The Department of Health asked ATSDR for assistance in addressing the parents' concerns.

ATSDR reviewed the request as we would a proposal for the Agency to conduct an exposure investigation. An exposure investigation is one approach that the Agency uses to better characterize potential exposures to hazardous substances, generally through biomedical testing. The request was evaluated against ATSDR's criteria for conducting an EI, which include the following: One, can an exposure population be identified?

Two, does a data gap exist that affects the ability to interpret whether or not a health hazard exists?

Three, can the data gap be addressed by an EI?

And, four, how would the results of an EI impact public health decisionmaking.

ATSDR determined that the request met the Agency's criteria for conducting an EI, and, accordingly, agreed to conduct an EI for the children currently attending AU-CDC. In addition, ATSDR agreed to include the adult staff at the AU-CDC in its EI.

Officials at American University had relocated the AU-CDC to another location on campus as soon as the contamination was brought to their attention. Therefore, children and AU-CDC staff had no known current exposure to arsenic at the time of the EI request. After a person is exposed to arsenic, the arsenic is rapidly metabolized and excreted in the urine within a few days. Because the children had no known recent exposure to arsenic, it would not be useful to test their urine samples for arsenic.

Arsenic is deposited in the hair root as the hair grows. Therefore, measuring the arsenic concentration in a length of hair provides an indication of arsenic exposure over the life of the hair. ATSDR collected 2-inch lengths of hair from the EI participants, which corresponds to approximately 5 months' of hair growth.

With the assistance of the Department of Health and AU-CDC staff, written informed-consent forms were signed by parents or guardians of the children. The children ranged from 2½ through 5½ years of age. About half of the children that attended AU-CDC for 7 months or less; the remainder had attended for a year or more.

During January 31st through February 1, 2001, ATSDR staff collected hair samples from 28 children and 4 adults at the AU-CDC. Approximately one-half gram of hair was cut from the back of the head, at the nape of the neck. These samples were sent to a clinical medical laboratory for analyses; results were available in March 2001. Of the hair samples tested, none were found to have elevated levels of arsenic.

AU-CDC staff and parents of children who participated in the EI were notified of the test results, and ATSDR staff were available to those participants at a March meeting. The ATSDR issued a written public report which summarized the findings of the EI.

ATSDR has since been petitioned to conduct a public health assessment for the Spring Valley site, and we have also been requested by the government of the District of Columbia to assist them with an expansion of our previous exposure investigation. We are collecting information needed to respond appropriately to both of these requests.

Madam Chairwoman, this concludes my testimony, and I would be happy to answer questions that you may have or those of your fellow subcommittee members.

Mrs. MORELLA. Thank you, Admiral Williams.

[The prepared statement of Admiral Williams follows:]

DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

Agency for Toxic Substances
and Disease Registry
Atlanta GA 30333

Testimony by

Robert C. Williams, P.E., D.E.E.

The Agency for Toxic Substances and Disease Registry

U.S. Department of Health and Human Services

Provided to the
Subcommittee on the District of Columbia
Committee on Government Reform
United States House of Representatives

Washington, D.C.

July 27, 2001

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Madam Chairwoman, this concludes my testimony. I would be happy to answer any questions you or your fellow committee members may have.

Mrs. MORELLA. Now, Mr. Voltaggio.

Mr. VOLTAGGIO. Good afternoon, Chairwoman Morella and members of the committee. I am Thomas Voltaggio. I am the Acting Regional Administrator for EPA's Mid-Atlantic Regional Office. I'm pleased to be here today to discuss EPA's role in the Spring Valley cleanup.

EPA's active involvement with Spring Valley started when Region III, in conjunction with the Army, conducted an emergency response to Spring Valley in 1993. Since then, the Agency has provided critical skills and technical expertise in what is an extraordinarily complex cleanup effort. The Agency has decided to test for a full suite of possible contaminants, and this decision helped in eventually uncovering the arsenic problem. Our efforts to promote keeping the site open for further investigation and gathering the right data for an accurate risk assessment have also been important factors in the cleanup effort.

In January 1993, a utility contractor working in the Spring Valley development encountered buried ordnance. A textbook emergency response followed, with the Army, EPA, and the District government responding. DOD sent an emergency response team that removed 141 ordnance-related items in what became known as the phase I cleanup. The Corps was ready a month later to start a phase II longer-term cleanup effort.

Arsenic is a breakdown product from some of the chemical weapons that were used at American University. The Corps did not sample for arsenic, however, because there are other unique compounds that would provide a clearer indication of warfare agents. EPA, however, decided to test for all hazardous substances, including arsenic. It wasn't until much later in the history of Spring Valley that this decision would prove important.

By 1995, hundreds of properties have been investigated, but only a few more ordnance pieces were found, and there have been no discovery of burial pits. More than 250 soil samples have been tested, but no chemical or explosive agents were found. A few metals were identified, but a risk assessment concluded that additional cleanup was not required.

An investigation of suspected mustard gas in the soil was still underway at what was called the "Captain Rankin" property. The Corps proposed that all the other locations in Spring Valley be considered as Operable Unit 1, and that the Captain Rankin area be classified as Operable Unit 2. The Army then concluded that no further action was required with respect to chemical warfare materials or munitions for Operable Unit 1. The Corps documented this rationale and put it out for public comment. Both EPA and the District supported this decision.

As the work on Operable Unit 2 continued, that is, the Captain Rankin property, D.C. government undertook an independent archival search that turned up new information, including a possible mislocation of a burial pit. In the spring of 1997, the Corps, EPA and D.C. agreed to form a Spring Valley project team, and EPA wrote to the Corps, noting that closeout of the entire Spring Valley site should be deferred until resolution of the concerns raised by the District of Columbia.

By January 1998, the Corps became convinced that D.C. was correct about the location of the possible burial pit. It created, then, an Operable Unit 3 to focus on the Korean ambassador's residence, including a soil sampling plan. At the same time, the EPA prepared a plan to sample and resample adjacent properties.

Several different strands of the story were finally starting to converge. Using D.C.'s information, the team found the burial pit on the Ambassador's property, and an intensive and gradually expanding circle of soil sampling was finding arsenic and leading to the eventual decision to assess every property in Spring Valley.

As part of the massive sampling and resampling efforts that currently are underway at 1,200 locations, every homeowner will be mailed a copy of the results from his or her property within 45 days of the sample being taken.

EPA's original photographic interpretation work is still helping to guide our work today. I would also like to acknowledge the work of other organizations that have been involved in the cleanup effort.

From the time that I arrived at the site in 1993—and I arrived there on January 6th, the day after the ordnance was found—I have been extremely impressed by the hard work and dedication of the Corps in the Spring Valley cleanup. They have provided a high level of expertise to this effort. The District of Columbia also deserves special praise. The research conducted by some of its staff in 1995 and 1996 has given other team members extremely valuable information.

Thank you for the opportunity to testify. I'll be happy to answer any questions at the appropriate time.

[The prepared statement of Mr. Voltaggio follows:]

Testimony by

Thomas C. Voltaggio
Acting Regional Administrator
Mid-Atlantic Region
U.S. Environmental Protection Agency

Provided to

Subcommittee on the District of Columbia
Committee on Government Reform
U.S. House of Representatives
Washington, DC

July 27, 2001

Good morning, Chairwoman Morella and Members of the committee. I am TomVoltaggio, Acting Regional Administrator for the EPA's Mid-Atlantic Regional Office. I am pleased to be here today to discuss EPA's role in the Spring Valley cleanup.

EPA's active involvement with Spring Valley started when Region III, in conjunction with the Army, conducted an emergency response to Spring Valley in 1993. Since then, the Agency has provided critical skills and technical expertise in what is an extraordinarily complex cleanup effort. The Agency has decided to test for a full suite of possible contaminants and this decision helped in eventually uncovering the arsenic problem. Our efforts to promote keeping the site open for further investigation and gathering the right data for an accurate risk assessment have also been important factors in the cleanup effort.

In January, 1993, a utility contractor working in the Spring Valley development encountered buried ordnance. A textbook emergency response followed, with the Army, EPA and District government responding. DOD sent an emergency response team that removed 141 ordnance-related items in what became known as the Phase I cleanup. The Corps was ready a month later to start Phase II, the long-term cleanup effort.

Arsenic is a breakdown product from some of the chemical weapons that were used at American University. The Corps did not sample for arsenic, however, because there are other unique compounds that would provide a clearer indication of chemical warfare agents. EPA, though, decided to test for all hazardous substances including arsenic. It wasn't until much later in the history of Spring Valley that this decision would prove decisive.

By 1995, hundreds of properties had been investigated, but only a few more ordnance pieces were found and there had been no discovery of burial pits. More than 250 soil samples had been tested, but no chemical or explosive agents were found. A few metals were identified,

but a risk assessment concluded that additional cleanup was not required.

An investigation of suspected Mustard Gas in the soil was still underway at the "Captain Rankin" property. The Corps proposed that all the other locations in Spring Valley be considered Operable Unit 1, a term we use to designate a study area, and that the 'Captain Rankin' area, be classified as Operable Unit 2, or OU #2. The Army then concluded that no further action was required with respect to chemical warfare materials/munitions for OU #1. The Corps documented its rationale and put it out for public comment. Both EPA and the District supported this decision.

As the work on OU #2 continued, DC government undertook an independent archival search that turned up new information. EPA was unaware that DC was involved in such an effort until November, 1996 when DC called us to express concerns about several issues including possible mis-location of a burial pit.

In the Spring of 1997, the Corps, EPA, and DC agreed to form a Spring Valley project team, and EPA wrote to the Corps noting that "close-out of the entire Spring Valley site should be deferred until. . . resolution of the . . . concerns . . . raised by the District of Columbia."

By January, 1998, the Corps became convinced about the location of an additional burial pit and created OU #3, to focus on the Korean Ambassador's residence, including a soil sampling plan. At the same time, EPA prepared a plan to sample – and resample – adjacent properties.

Several different strands of the story were finally starting to converge. Based on information developed to that date, the team found the burial pit on the Ambassador's property and an intensive and gradually expanding circle of soil sampling was finding arsenic and leading to the eventual decision this Spring to assess every property in Spring Valley.

As part of the massive sampling and resampling effort that is currently underway at 1200 locations, every homeowners will be mailed a copy of the results from his or her property within 45 days of the sample being taken.

Conclusion

EPA's original photographic interpretation work is still helping to guide our work today. I would also like to acknowledge the work of the other organizations that have been involved in this cleanup effort. From the time I arrived at the site in 1993 to present, I have been extremely impressed by the hard work and dedication of the Army and the Corps in the Spring Valley cleanup. They have provided a high level of expertise to this effort. The District of Columbia also deserves special praise. The research conducted by some of its staff in 1995 and 1996 has given other team members extremely valuable information.

Thank you for the opportunity to testify. I would be happy to answer any questions.

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Mrs. MORELLA. Thank you very much, Mr. Voltaggio. I'll start off with you and ask you a question that probably is a simple one for you, but I think important to our discussion. And that is what is a Superfund site, in your definition, and why isn't Spring Valley classified as one?

Mr. VOLTAGGIO. A Superfund site—and I have some background in this in my—for 17 out of the last 20 years, I was director of the region Superfund program and had responsibility for all the cleanup projects in our 6-state—5-state plus the District region.

A Superfund site is any site that is contaminated with hazardous substances that rises to the level of contamination that necessitates Federal cleanup to be done; Federal identification, assessment, and remediation to occur.

There are various types of Superfund sites. It's not just one type of thing. There are immediate cleanup sites, immediate removals, where the levels are so high that one can't wait; one has to do the remediation right away. There are other sites where they are more widespread or lower level of contamination, where sufficient time can be had to do an appropriate study to determine the true degree and extent of the contamination. These are remedial Superfund sites.

Superfund also provides different responsibilities to different people to do things. It provides responsibility and authority to EPA to do cleanup sites for most of the sites that are found in the country. It also provides that it's the responsibility of the Department of Defense to clean up sites that it caused the contamination for, the theory being that if the U.S. Government caused the contamination, it didn't want to use tax money to provide the cleanup. That was funded by, for instance, the chemical industry.

So there are lots of different facets of the answer, and I hope I've been able to answer at least what is a Superfund site. And I forgot the second part of your question; I'm sorry.

Mrs. MORELLA. Why doesn't Spring Valley——

Mr. VOLTAGGIO. Spring Valley——

Mrs. MORELLA [continuing]. Qualify?

Mr. VOLTAGGIO. Spring Valley is a——

Mrs. MORELLA. It is a Superfund site?

Mr. VOLTAGGIO [continuing]. Superfund site. The responses are undertaken pursuant to the CERCLA law, the Comprehensive Environmental Response, Compensation, and Liability Act, called Superfund. And it does assign a number of responsibilities to the President. The President then delegates that responsibility to either the EPA or, in this case the Army, or the Army and EPA, depending upon the nature of how the contamination was found there. So it is Superfund, and it is currently the responsibility of the Army to perform the cleanup work, but it must maintain consultation with the EPA to be sure that the environmental consequences are appropriately looked at and considered properly.

Mrs. MORELLA. Is that happening?

Mr. VOLTAGGIO. Yes. It definitely is. Ma'am, I said I started on the site in 1993 as director of the hazardous waste cleanup program, and I've been involved in it ever since, and I've had many, many, many areas of involvement, as well as with my staff, to be sure that we are comfortable with the cleanup that is underway.

Mrs. MORELLA. I'll get back to you for other questions. But let me ask, Admiral Williams, when you talk about the Child Development Center and the testing that is done with the hair, explain to me how that happens. What if the hair grows out? Does this mean that there is no more arsenic problem?

Admiral WILLIAMS. Well, that is an important consideration: When was the last time the hair was cut, and how much of the hair was available? In this case, we were able to obtain enough hair samples from each of the students and the adults. The sample was taken closest to the scalp. Usually when you get a haircut, it is a little bit farther out. The concentration of arsenic in the hair root is in equalibrium with the arsenic in the blood stream. So we believe we would see it, as the hair grows out.

Mrs. MORELLA. But it means if you use that kind of testing, you can only use it for a certain period of time.

Admiral WILLIAMS. Yes, ma'am.

Mrs. MORELLA. No duration would be adequate or appropriate.

Admiral WILLIAMS. That is correct, ma'am. Usually a period of anywhere from 2 to 12 months is about all that hair analysis could be used for.

Mrs. MORELLA. So how would you do the appraisal or the assessment of the adults that work there over a long period of time?

Admiral WILLIAMS. Well, we——

Mrs. MORELLA. They would have to still be working there?

Admiral WILLIAMS. Yes, ma'am. We were looking for indications of exposure, and basically what it tells you is that there was no current exposure, or within a relatively short period of time. It doesn't tell you whether or not people have been exposed in the past.

Mrs. MORELLA. Uh-huh. I'm going to defer now to the ranking member and get back to you.

Ms. NORTON. Thank you very much, Madam Chair. Mr. Voltaggio, why did the EPA not reveal the results of their photographic analysis in 1986?

Mr. VOLTAGGIO. Well, I can tell you the history of our involvement at that site at that time. On April 24, 1986, American University wrote to EPA about a possible problem of World-War-I-era buried chemical munitions. The letter noted that the Army was investigating the matter. After confirming that the Army was engaged, EPA wrote back to AU, indicating that the Department of Defense was responsible for the cleanup of munitions and that further inquiries should be directed to them. It is a letter of 1986 from EPA back to American University.

At the same time in 1986, the Army had contracted with EPA's Environmental Photographic Interpretations Center, called EPIC. These are the people that made that drawing. EPIC serves as a governmentwide expert on photo interpretation. The report of July 1986 to the Army noted that significant features identified include shell pits, trenches, possible test area, possible burial pits. The Region's referral to the Army that I discussed, and the Army's contract with EPIC, were the extent of EPA's involvement at Spring Valley in 1986. So it was a contractual relationship between the Army and our photographic lab, who does governmentwide contracting for its services to do this very specific type of photo inter-

pretation. Other offices of EPA were not given that report and had no knowledge of it.

Ms. NORTON. Mr. Voltaggio, have you ever heard of the Nuremberg trials?

Mr. VOLTAGGIO. Yes, I have, ma'am.

Ms. NORTON. I don't know if EPA regarded itself as, quote, following orders, but your answer terrifies me because it seems to say that if EPA knows something that the world should know, it is going to act as if it were a private contractor. And rely exclusively upon a peer agency to reveal information that the EPA, and only the EPA, found.

Can we trust the EPA, then—well, let me ask you this. Is that your continuing view that if—are you still contracting with agencies?

Mr. VOLTAGGIO. EPIC, I believe so, yes.

Ms. NORTON. Is that the continuing policy of the EPA, that the matter is secret unless the Agency reveals contamination or other matter?

Mr. VOLTAGGIO. No, it is not——

Ms. NORTON. What is the policy of EPA today?

Mr. VOLTAGGIO. We are governed by the Freedom of Information Act, just like all the other Federal agencies are.

Ms. NORTON. Well, that means if somebody finds out enough to ask a question, a FOIA can be put in. I want to know if you discover that there is harm done to American citizens or others in this country, whether EPA has an obligation, if the Agency does not reveal it, to reveal it to the appropriate parties?

Mr. VOLTAGGIO. EPIC did not make conclusions as to whether or not there was any health risk from what it found. It simply interpreted photographs and provided that interpretation to the person who contracted with them.

Absolutely, Congresswoman, if we have indication to indicate that there is a health impact or environmental contamination from any source, it is the Agency's obligation and responsibility and total intention to be sure that the people who are impacted know about that.

Ms. NORTON. So you say that EPIC, when it made those photographs, had no knowledge of what those photographs meant?

Mr. VOLTAGGIO. No. They simply interpreted what type of disturbances they found in those photographs, and indicated what it believes could be reasons for the disturbances that it finds.

Ms. NORTON. When did EPA have reason to believe that there was contamination in Spring Valley? When did you first have reason to believe that?

Mr. VOLTAGGIO. January 5, 1993, when the utility contractor found the shell, and we were called in in an emergency response.

Ms. NORTON. Did EPA have any reason to believe, dating as far back as 1986, that any information that dates from 1986 might have informed it of contamination in Spring Valley?

Mr. VOLTAGGIO. We were contacted by a representative from American University, who indicated that they believed there might be buried munitions at that location and notified us of that. We responded to that individual and told him that under the responsibilities for cleanup of munitions, that the Army was the authority

who would deal with that information and who should be properly contacted, and, in fact we subsequently found out, was. And we directed that response back to the Army, saying any problem that occurred from munitions in Spring Valley would be the responsibility of the Army, and we informed them so they could contact the appropriate person.

Ms. NORTON. Did you kind of put 2 and 2 together with the 86 aerial photographs which you had——

Mr. VOLTAGGIO. No, ma'am—well, the Agency had, ma'am. The person who received the letter from American University was a regional administrator of EPA in Philadelphia, and that person did in fact respond to the letter, saying that anything that is occurring with regard to munitions that could be causing an environmental problem, should be directed to the Army. EPA's EPIC laboratory in Virginia was the one who was separately contracting with the Army, and that went on without the knowledge of EPA's regional administrator, since it was a contract job, which many others were, with EPIC at that time.

Ms. NORTON. Are you convinced that the cleanup going on in Spring Valley is state-of-the-art?

Mr. VOLTAGGIO. We don't have a competence with regard to evaluating that for finding buried munitions. I can comment, however, we do have a competence with regard to environmental contamination going on: the investigation for environmental contamination, such as arsenic. And I am convinced that it is a very thorough and competent and dedicated effort by the Corps of Engineers. I think you have to ask folks with experience with regard to finding munitions that question, because that is outside my area of competence.

Ms. NORTON. Admiral, first of all, I thank you for the way in which your Agency has been so forthcoming and helpful to the District of Columbia. You indicated that you had done—and I thank you for the very important exposure investigation that you have done of a limited population, the children of the day care center, the adults of the dare care center, apparently.

Are there others in the community who should have such exposure investigations made available to them from a health point of view? I'm not talking about who does it now. I'm talking about others in the community, who live in the community or work in the community, who ought to also have exposure investigations done for them the way the children and the day care adults had.

Admiral WILLIAMS. As was testified earlier today, we are using the results of the ongoing characterization of the properties to help make that decision. So the answer is, at this time it is unknown. But as we determine where contamination is located, look at what the potential for exposure to that contamination is, then we can determine what type of biomonitoring would be necessary.

Ms. NORTON. But, of course, there has been exposure near homes other than the day care center. There have been other sites where people live. Why are those who live in those homes or near those sites not proper subjects for exposure investigations?

Admiral WILLIAMS. We are just beginning to look at the data. We have not received all the current round of sampling data, and that's why I can't answer about those particular homes. Should we find levels that are elevated and the potential for exposure exists,

we would move toward some sort of the biomonitoring or further exposure characterization.

Ms. NORTON. Thank you very much. Who are you depending upon to give you the data you speak of?

Admiral WILLIAMS. We're working with the District of Columbia Department of Health, and as they get the data, we will work with them on that.

Ms. NORTON. You have given the adults and the children in the day care community a clean bill of health for now, and we appreciate that was done quickly and that they had some of that anxiety removed from them.

Is the exposure investigation you do limited only to short-term—is the exposure you do limited only to immediate effects? Should these children, should these adults, have similar investigations and similar medical checkups done for them as time goes on; more so, for example, than they might if they lived in Virginia or if they lived in some other area of the district?

Admiral WILLIAMS. The exposure investigations that we do look at current exposure; so, the immediate or current contact with contamination. For these children and for these adults, since we did not see elevated arsenic levels in their hair, we don't believe any additional followup is necessary other than the routine yearly checkup that children would have.

Ms. NORTON. That is indeed comforting.

Mr. Voltaggio, you spoke of a textbook response when you were called in. I appreciate that EPA has been available now. I am concerned that you have had to behave like something on the order of an emergency squad. If you get sick, then you call an ambulance. When there has been the kind of exposure that has been documented here, would not EPA expect a systematic plan of the entire community to be forthcoming, without waiting for excavations that accidentally take place, for example, because people are building something or otherwise the matter is accidentally discovered in people's backyards?

I mean, how would EPA suggest that the Army Corps of Engineers proceed, knowing that munitions were buried all around this community?

Mr. VOLTAGGIO. Well, any environmental contamination that would occur would be the result of exposure. And to determine what exposure exists, one has to find where the contamination is and where is the pathway for that exposure to get to folks, to get to the environment, to get to the public. And we rely on sampling efforts in order to do that.

There are many thousands of sites, tens of thousands of potentially contaminated waste sites across the country. The Army has its own number of—I assume it's in the thousands of potential FUD sites, and it is looking at the worst sites first in a step-wise fashion, and determining what contamination is found that governs the action that needs to be taken.

We don't want to attack sites on a first-come, first-served basis. We want to do them on the worst-sites-first basis. And what we found in 1993 was this was a bad site. So you know it was kind of an action.

Ms. NORTON. We've finally gotten to the point where 1,200 homes need to be tested.

Mr. VOLTAGGIO. Correct.

Ms. NORTON. Now, is that a representative sample, or are those all homes that need to be——

Mr. VOLTAGGIO. Those are all the homes in the Spring Valley area. I might add that it is hugely atypical for a site that is 660 acres to have every single residential property sampled. I'm not aware of any other site in the country, at least in our region which I'm responsible, where that has actually been done. So it is an extraordinary effort.

Ms. NORTON. But I mean it is the appropriate way to handle that, isn't it, given that we're talking about the second-worst site for these munitions in the United States of America?

Mr. VOLTAGGIO. Well, pretty much prior to 1996, 1997, the indications were that with the exception of the munitions that were found in the emergency response back in 1993, there wasn't much of anything else found.

Ms. NORTON. Well, let me just stop you right there. That's what bothers me, because it looks as though what EPA is saying and what the Army is saying is there was no way, once there had been accidental unearthings of these contaminants, to do the kind of sampling that would have gotten us to where you finally got when you have now decided that every home needs to be tested.

Mr. VOLTAGGIO. Congresswoman——

Ms. NORTON. Why couldn't that have been decided much earlier, so the community would have known you're going to get to all of us, and let's go about our business?

Mr. VOLTAGGIO. That is a fair question, Congresswoman. The fact is that up until roughly the late nineties, 1997, 1996, 1997, 1998, this was a munitionsite and it was not an arsenic site. Arsenic wasn't indicated to be a problem until the late nineties. It was at that time, that because the potential for arsenic contamination to be more widespread based on the information we received from the District and what we received from the subsequent sampling by the Korean ambassador's residence that, it appeared to change in shape; it appeared to change in nature what was——

Ms. NORTON. That was a surprise, that it was arsenic? Munitions were not a surprise?

Mr. VOLTAGGIO. No.

Ms. NORTON. Arsenic, which is often part of munitions was a surprise?

Mr. VOLTAGGIO. Well, we didn't find arsenic in the roughly 150 to 200 samples that were taken prior to 1997. There were only three samples that showed any level of arsenic background, and that for us led us to believe that this was a munitions site.

Ms. NORTON. But hasn't there been evidence that the Army Corps of Engineers weren't digging deep enough to find the arsenic, and if they had done a competent investigation, they would have found the arsenic earlier?

Mr. VOLTAGGIO. Having been there at the time, I can tell you, Congresswoman, that by far the biggest concern that people had in 1993—and I was on the ground there—was chemical agents and

live rounds, and live rounds with chemical agents, and that was what took 98 percent of everyone's concern—and rightfully so.

And then when they moved into the second phase, then, from the 1993 to 1994 to 1995 time period, when they did sampling, and EPA had split the samples with the Corps to determine all the hazardous constituents, not just the products of decomposition from the chemical warfare agents, and we didn't find anything out of the ordinary.

Three out of roughly 200, 150 to 200 samples, showed arsenic and really not much of anything else. We assumed that this is what it was, and that is why we took the tack that we did. If it wasn't for the District coming to us in late 1996, early 1997, and said they had more information that they were able to find that indicated that one of those pits, one of those points of interest that the Army thought was looked at and sampled that didn't have a problem, was mislocated by 150 feet. It was—and then when they sampled there, we opened up a new Operable Unit and sampled it. That is when we started finding the arsenic, and that is when arsenic became an issue, and that is when now it morphs from a munitions site to a chemical contaminationsite that we are expert in.

And we then stepped a little more to the floor and advised the Corps a little more strongly with regard to what additional sampling would have to be done, and they stepped up and they did the sampling that we asked, as well as the District.

Ms. NORTON. I'm very disturbed that the District had to make that finding, because I'm aware of—particularly at the time—it was 1995, was it not?

Mr. VOLTAGGIO. Late 1996, early 1997. I myself met with D.C. In January 1997, where we talked about this.

Ms. NORTON. At that time, the District would have been engaged in a heroic effort, because that was at the bottom of the District's fiscal crisis when the city was insolvent.

Mr. VOLTAGGIO. It was a heroic effort. They found something that no one else found.

Ms. NORTON. And, of course, the expertise to find this is why we have a Federal Government. I don't know how the District was able to find it. I appreciate that EPA has quickly moved to take responsibility.

And, Madam Chair, I will end my questioning here.

Mrs. MORELLA. Thank you, Ms. Norton. I have a couple of questions I would like to pose. In terms of the testing, I think elevated levels were found at the AU athletic field. How many adults, workers, students, were tested? How many volunteered to be tested? How was that conducted? And what were the results?

Admiral WILLIAMS. There were 28 children and 4 adults tested. We opened it up to any of the adults who wanted to be tested for——

Mrs. MORELLA. This is the athletic field, not the Child Development——

Admiral WILLIAMS. Oh, I'm sorry. I'm not aware of how that testing that was done. That was not done by us.

Mrs. MORELLA. But that's interesting, 28 children and 4 adults.

Admiral WILLIAMS. Right. For the Child Development Center, I'm not aware of the other testing protocols.

Mrs. MORELLA. Were there a lot that did not——

Admiral WILLIAMS. I don't believe so. There may have been a couple, but it wasn't that many.

Mrs. MORELLA. The children were required to be tested.

Admiral WILLIAMS. They weren't required, but all of them did participate.

Mrs. MORELLA. They did all participate?

Admiral WILLIAMS. Yes, ma'am.

Mrs. MORELLA. I would be curious, maybe someone else would be able to answer that for me later. But it seemed to me that the testing that was done at the AU athletic field would also be important to know who was tested, what the results were there, too.

Going into that EPIC photo, Mr. Voltaggio, does it include all the test sites, all the test——

Mr. VOLTAGGIO. There were a number of photographs that were used by EPIC at different times. In 1986, I believe there were three separate time periods that were looked at. Basically what EPIC does is they go to photographic archives, and they find any maps they can possibly find from any different year, and then they compare maps from year to year to determine what, if any, changes have occurred. And they are the ones that are truly expert with regard to kind of what they did and how they did it.

But my understanding is that—then subsequent to 1986, we have—we are directly working with EPIC now, and there are more maps that were looked at subsequently. So there are at least five or six maps they know that I know that they're looking at and that are helping us further refine the subsequent sampling that is going on now.

Mrs. MORELLA. Uh-huh. So that there will be probably more data——

Mr. VOLTAGGIO. Yes.

Mrs. MORELLA [continuing]. On the next map that you will superimpose upon this one.

Mr. VOLTAGGIO. Absolutely.

Mrs. MORELLA. So we can see that there are additional ones.

I'm wondering also Mr. Voltaggio, in terms of the role of EPA and Spring Valley, does EPA have access to the Army's secret files?

Mr. VOLTAGGIO. I don't know what you mean by secret files. We did have——

Mrs. MORELLA. All Army's files?

Mr. VOLTAGGIO. I've never asked for that, so I don't know. But I can say that with regard to Spring Valley, that we did have access to the 1986 report. That was done. As a matter of fact, we got that in 1993, along with most everyone else. In fact, it was 1993 that I think people first recognized, people other than the Army and AU, first recognized that there was this 1986 report. We have that report. We have all the records. We've gotten everything we've asked for with regard to that.

Again, the purpose of the historical research was to better identify where they should sample for munitions, and we are in a situation now where between what the Army has and what EPIC has, we feel very comfortable that—and also what D.C. found—we are very comfortable that we have as good as one could get for some-

thing that happened 70 years ago with regard to being able to determine what the level of contamination is.

I would also say that you can never be certain that there is not something that couldn't have been missed.

Mrs. MORELLA. What is EPA's determination as to the current risks to residents and those who work in Spring Valley?

Mr. VOLTAGGIO. Well, there is current risk. That is why we are taking all of the time and effort to continue to look to find where all the levels of arsenic are. We have had a number of formal risk assessments. We have consulted with ATSDR. We have held out signing any final documents until we got most all of the information that we could. Careful precautions are being taken right now for the work that's being done, and that helps to prevent risk.

There is risk out there. That is documented in our year 2000 risk assessment. But it is a small risk, and it is being aggressively addressed. The best measure of safety maybe is, you know, would I be comfortable living there? And the answer is absolutely yes. I think that the risk is being very well managed, and every day it's being reduced by the efforts that are ongoing by the tremendous level of work by the Corps, by the District, and by EPA.

Mrs. MORELLA. There are 1,200 residences. How are you going about sampling or assessing them? Is it, like, voluntary on their part? And how many have already been sampled?

Mr. VOLTAGGIO. Those answers should best be directed to the Corps, who in the first part, is directly contacting the residents. We are overseeing their work. There is a protocol that is being used. They are requiring there to be consent before they go on the property. Beyond that, I really recommend, Congresswoman, that you ask the Corps.

Mrs. MORELLA. Which will be the next panel that we'll have before us.

Are you all satisfied that there is this partnership taking place with the Army Corps, with EPA, with the District Government, with AU, with all parties?

Mr. VOLTAGGIO. Absolutely yes, ma'am. I am very assured, I'm very comfortable with the level of effort that the Army has given, with the level of openness that the Army has with us, and the level of response that they have given to us when we ask them to do things that are in our area of expertise and they have the people in the field to do.

The District has been a hands-on player for many, many years, and I am very comfortable that from here on out, you are going to continue to see, I think, what you've seen for the last several years. That is, a joint effort to be sure that this community is made safe.

Mrs. MORELLA. The District indicated they might need more resources. Do you see that as a need from your perspective?

Mr. VOLTAGGIO. From what I was able to ascertain, the area of health studies is an area that they must indicate their need. The most appropriate source for them to go to would be to HHS, would be to ATSDR. I think that might best be addressed to them. When it comes to any technical support with regard to environmental contaminations that we are the experts on, we will give the District any support that they need to ensure that the site is made safe.

Mrs. MORELLA. It's interesting, we haven't heard from the Korean Embassy, and I've gotten no communication from the Ambassador, because——

Mr. VOLTAGGIO. Well, there's a lot of time and effort being spent to make sure that site is safe. It's had quite an excavation project done on it.

Mrs. MORELLA. Because we have Dr. Ladner who's here, who lives next door. Thank you very much. Thank you.

Ms. Norton.

Ms. NORTON. Thank you, Mrs. Morella. I have really only one more question. Given your expertise, Admiral Williams, is it your belief that a thorough epidemiological study should be done in the Spring Valley community at this time?

Admiral WILLIAMS. Excuse me, ma'am. It's too early to tell. We need to look at the unfolding environmental data that is coming in at this time and make our determination based on that, based on what we see in terms of exposures and the various types of chemicals that may be out there. So it's too early, but that is something that will be considered as we move forward.

Ms. NORTON. We're to the point now where we're trying to bring closure to the outstanding questions in the community. Now, at what point do you think one should begin the kind of health study I just asked you about?

Admiral WILLIAMS. I'm sorry?

Ms. NORTON. We're already trying to go into 1,200 homes. Is it at that point, when we've gone into and have the data from those homes, that it would be appropriate to do the epidemiological study?

Admiral WILLIAMS. Well, what we could do is as the information becomes available for those 1,200 homes in terms of the environmental contamination, we look at the exposures, the potential for exposure, and what that means to health; and then the next step would be followup health studies as needed. So, it would be in phases.

Ms. NORTON. All right. So that argues for getting the 1,200 homes as quickly as possible so that we could then move to the next step?

Admiral WILLIAMS. Yes, ma'am.

Ms. NORTON. Thank you very much. Thank you, Mrs. Morella.

Mrs. MORELLA. I want to thank the second panel for being so patient, waiting for your turn up on the deck, and for doing such a good job. We hope, also, to get back to you with questions, additional questions that we may want you to respond to. And any of your suggestions about what more can be done with working out this partnership would be valued.

Admiral Williams, thank you very much. Mr. Voltaggio, thank you, sir.

I'll ask the third panel to come forward.

If you can find your spot, you may want to remain standing for just a moment: Dr. Ladner, Mr. Walker, Mr. Reardon, accompanied by Mr. Kiefer and Colonel Fiala. Gentlemen, would you raise your right hands.

[Witnesses sworn.]

Mrs. MORELLA. Thank you very much. The record will show the affirmative response. Again, following through about a 5-minute maximum testimony so we can ask some questions, and, again, I preface your testimony by thanking you for being so patient. It's tough to be the last panel, but I appreciate your all being here to have heard also the testimony and the questions and answers.

Dr. Ladner, welcome. Thank you, sir. We'll start off with you.

STATEMENTS OF BENJAMIN LADNER, PRESIDENT, AMERICAN UNIVERSITY; LEWIS D. WALKER, FORMER DEPUTY ASSISTANT SECRETARY OF THE ARMY, ENVIRONMENT, SAFETY, AND OCCUPATIONAL HEALTH; FRANCIS E. REARDON, AUDITOR GENERAL OF THE ARMY, U.S. ARMY AUDIT AGENCY, ACCOMPANIED BY STEPHEN KIEFER, DEPUTY AUDITOR GENERAL, U.S. ARMY AUDIT AGENCY; RAYMOND J. FATZ, DEPUTY ASSISTANT SECRETARY, ARMY, ENVIRONMENT, SAFETY AND OCCUPATIONAL HEALTH, ACCOMPANIED BY COLONEL CHARLES J. FIALA, ARMY CORPS OF ENGINEERS

Mr. LADNER. Thank you, Madam Chair, Delegate Norton, and distinguished members of the panel. My name is Benjamin Ladner. I have been President of American University since July 1994. I reside at a site that is currently being investigated by the Army Corps of Engineers.

American University, as we all know, offered its campus to the Federal Government in April 1917 in support of the United States' entry into World War I. It's interesting to point out that approximately nine other owners of wooded properties in Spring Valley contiguous to the University also leased their land to the government for use in military operations.

In November 1918, after the armistice with Germany, the War Department began closing its facilities on the AU campus. During the final stages of dismantling, the Army entered into an agreement with the University and accepted responsibility for cleaning up the remains of their operations and restoring the AU campus to its prewar condition.

In 1986, while preparing for the construction of an athletic facility, AU discovered a 1921 student newspaper article, claiming that the Army had buried munitions along the campus perimeter during the cleanup and dismantling process. To ensure the safety of its campus, AU sought confirmation from the Deputy Secretary of Defense that no munitions and ordnance were present on campus property, and it also invited the Environmental Protection Agency to participate in the assessment.

Also in 1986, in response to a request from the University, the Department of Army conducted archival research and undertook the munitions survey of the constructionsites. Army testing to depths of 15 feet revealed no suspicious items. The Army also sent an explosive ordnance disposal support team to be onsite during excavation of the construction area. Recognizing the need to keep the AU community informed about the Army's activities on campus, the University distributed campus communications about these operations, which were also reported in the student newspaper at the time.

Several months after the University's initial inquiry, the Army concluded that, "the source that says munitions were buried is historically suspect." And also, "there is no official evidence of any such burial."

In June 1986, the EPA advised the University that it had no firsthand information about the presence of hazardous waste in the vicinity of our campus, and it indicated that investigations of hazardous waste at these locations were the responsibility of the Department of Defense due to its prior use. Several years later, in 1993, a construction worker digging a utility trench uncovered unexploded ordnance and munitions on what is now 52nd Court, Northwest.

This led to the Army Corps' 1993 to 1995 investigation and cleanup known as Operation Safe Removal. The AU campus was one of nine regions within Spring Valley targeted for this investigation. The Army completed its operations and issued a record of decision in June 1995. It concluded that conditions at the site, "did not pose unacceptable risks to human health and the environment. Therefore, no further remedial action is necessary."

However, a year and a half later, in January 1997, the Army Corps began a new investigation of the area in response to inquiries from the Washington, DC, Department of Consumer and Regulatory Affairs. They determined that burial sites for old munitions might be located on property adjacent to the AU campus, formerly owned by the University and now belonging to the Republic of Korea.

In the fall of 2000, the Army Corps notified the University that it wanted to test soil on the AU campus as a result of findings at the Republic of Korea property. Preliminary tests on the south side of our campus registered elevated levels of arsenic in the soil near the University's Child Development Center; elevated levels were also registered in the area of the athletic fields and our admissions office.

In January 2001, more intensive tests confirmed even higher levels of arsenic in the soil at the CDC. Upon receiving these test results, literally within 90 minutes, the university took steps to safeguard the health of the campus community by immediately closing the CDC facility and relocating its operations.

We subsequently closed the intramural fields as well, and they remain closed today until a remediation plan can be developed.

While taking steps to compile complete and accurate information, the university implemented an open communication approach to its constituency regarding the activities of the Army Corps on campus.

University officials have met with CDC parents as well as AU students, faculty, grounds and maintenance staff at significant times during the project to provide information and to address their concerns. Numerous regular updates have been provided and an information line established to enable people to ask questions and get information. A project-specific Web site has been set up with information about the project and links to other sites, including the Army Corps and the D.C. Health Department Web pages.

The university is working cooperatively with the DC Department of Health, the Army Corps and the EPA to develop a thorough remediation plan for the entire campus. Despite these efforts Amer-

ican University has suffered severe disruption and other damages and faces the prospect of incurring additional damages in the future. For this reason, the university did file an administrative claim with the Army on July 13, 2001, seeking damages arising from the Army's activities.

Thank you for allowing me to address the District committee. I'd be pleased to answer questions.

Mrs. MORELLA. Thank you, Dr. Ladner.

[The prepared statement of Mr. Ladner follows:]

House Subcommittee on the District of Columbia
The Honorable Constance Morella, Chair
Testimony of Benjamin Ladner
July 27, 2001

My name is Benjamin Ladner. I have been President of American University (AU) since July 1994. I reside at 4835 Glenbrook Road in the Spring Valley neighborhood of northwest Washington, DC, a site currently being investigated by the Army Corps of Engineers. On behalf of the University, I would like to thank the Committee for the opportunity to testify before you today. I appreciate your holding these hearings and share your goal of working together to reach a solution that protects the health and well being of the Spring Valley community, now and in the future.

American University offered its campus to the federal government in April 1917 in support of the United States entry into World War I. The War Department accepted the offer and established Camp Leach and the American University Experiment Station on AU property. Approximately nine other owners of wooded properties in Spring Valley contiguous to the University also leased their land to the government for use in military operations.

In November 1918, after the armistice with Germany, the War Department began closing its facilities on the AU campus. During the final stage of dismantling the AU site, the Army entered into an agreement with the University and accepted responsibility for cleaning up the remains of their operations and restoring the AU campus to its pre-war condition.

In 1986, while preparing for the construction of an athletic facility, AU discovered a 1921 student newspaper article claiming that the Army had buried munitions along the campus perimeter during the clean-up and dismantling process. To ensure the safety of its campus, AU sought confirmation from the Deputy Secretary of Defense that no munitions and ordnance were present on campus property, and also invited the Environmental Protection Agency (EPA) to participate in the assessment.

Also in 1986, in response to a request from the University, the Department of the Army conducted archival research and undertook a munitions survey of the construction sites. Army testing to depths of fifteen feet revealed no suspicious items. The Army also sent an explosives ordnance disposal support team to be on site during excavation of the construction area. Recognizing the need to keep the AU community informed about the Army's activities on campus, the University distributed campus communications about these operations, which was reported in the student newspaper.

Several months after the University's initial inquiry, the Army concluded that "... the source that says munitions were buried is historically suspect... ."; and also that "There is no official evidence of any such burial." In June 1986, the EPA advised the University that it had no first-hand information about the presence of hazardous wastes in the vicinity of the campus. The agency also indicated that investigations of hazardous wastes at these locations were the responsibility of the Department of Defense, due to its prior use.

Seven years later, in 1993, a construction worker was digging a utility trench and uncovered unexploded ordnance and munitions on what is now 52nd Court, NW. This led to the Army Corps' 1993-1995 investigation and clean-up, known as "Operation Safe Removal." The AU campus was one of nine regions within Spring Valley targeted for investigation. The Army completed its operations and issued a "Record of Decision" in June 1995, concluding that conditions at the site did not "... pose unacceptable risks to human health and the environment. Therefore, no further remedial action is necessary... ."

However, a year and a half later, in January 1997, the Army Corps began a new investigation of the area in response to inquiries from the Washington, DC Department of Consumer and Regulatory Affairs. They determined that burial sites for old munitions might be located on property adjacent to the AU campus, formerly owned by the University and now belonging to the Republic of Korea. In the fall of 2000, the Army Corps notified the University that it wanted to test soil on the AU campus, as a result of findings at the Republic of Korea property. Preliminary tests on the south side of campus registered elevated levels of arsenic in the soil near the University's Child Development Center (CDC),

athletic fields, and admissions office. In January 2001, more intensive tests confirmed even higher levels of arsenic in the soil at the CDC.

Upon receiving these test results, the University immediately took steps to safeguard the health of the campus community. We immediately closed the CDC facility and relocated its operations, literally overnight. We subsequently closed the intramural fields as well; they will remain closed until a remediation plan is developed. Because of the health threat that arsenic in soil could pose, especially to children, AU began gathering the best, most accurate data possible about the extent of the contamination. It sponsored health testing for employees, student athletes, and CDC staff and students. We were relieved and gratified to learn that almost all test results to date have shown non-detectable levels of arsenic.

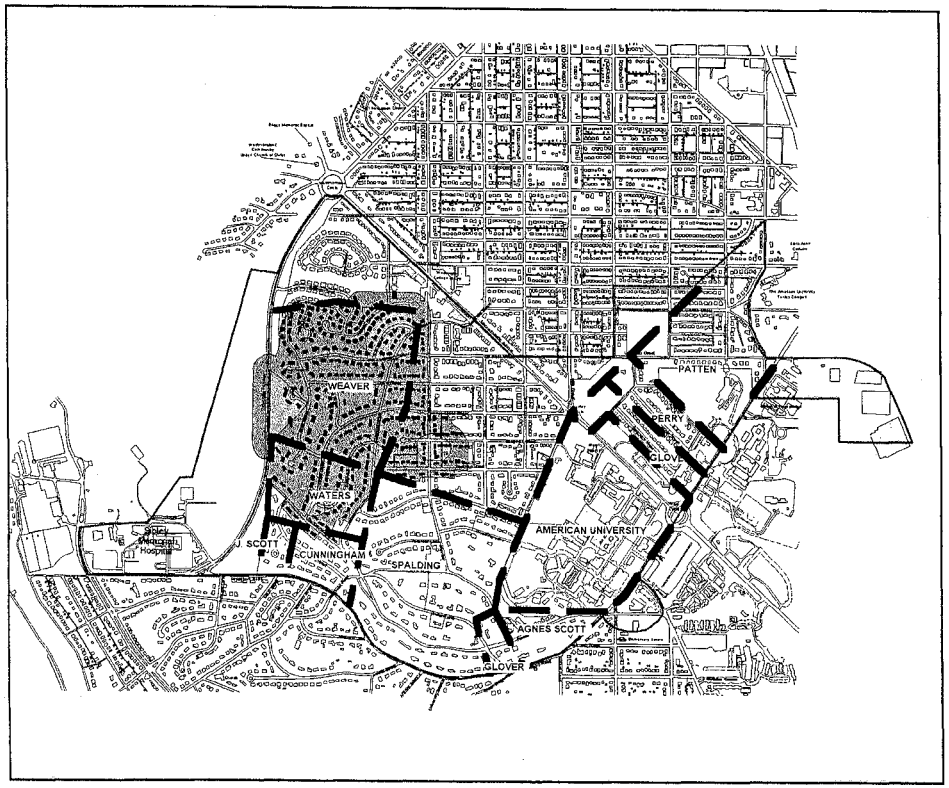
Equally important, while taking steps to compile complete and accurate information, the University implemented an "open communication" approach to its constituencies regarding the activities of the Army Corps on campus. University officials have met with CDC parents, as well as AU students, faculty, and grounds and maintenance staff at significant times during the project to provide information and to address their concerns. Numerous, regular updates have been provided and an information line established to enable people to ask questions and get information. A project-specific web site has been set up with information about the project and links to other sites, including the Army Corps and D.C. Health Department web pages.

Although the University has suffered injury as a result of the War Department's failure to live up to its commitment to return our campus to its original condition, the Army Corps has assured us that there is no imminent danger and that AU community members are safe. Nevertheless, the University has assembled its own team of expert toxicologists, staff, and expert consultants to assist in compiling and verifying reliable data that can be used to design an effective clean-up operation. As part of our commitment to achieve a solution that fully protects the health and well being of the AU campus community, the University is working cooperatively with the DC Department of Health, the Army Corps, and the EPA to develop a thorough remediation plan for the entire campus.

Despite these efforts, American University has suffered severe disruption and other damages, and faces the prospect of incurring additional damages in the future. For this reason, the University filed an administrative claim with the Army on July 13, 2001 seeking damages arising from the Army's activities.

We hope this hearing and members of Congress will assist the University, our Spring Valley neighbors, and all other affected parties by taking all necessary steps to ensure that the Army's remediation efforts are swift, comprehensive, and fully effective.

Thank you for allowing me to address the District Committee. In addition to this testimony, I have submitted written testimony and supporting documents. Please feel free to contact me if American University can further assist the Committee. I would be pleased to answer any questions at this time.



Spring Valley
Comprehensive Sampling Area

Legend

- Comprehensive Sampling Area
- Spring Valley Boundary
- Roads
- Buildings
- Properties Within Central Testing Area
- POIs
- Central Testing Area
- OU4 - American University
- OU4 Residences

1000 0 1000 Feet

SPRING VALLEY HISTORIC LEASEHOLDERS

REPRODUCED AT THE NATIONAL ARCHIVES

OS--3523

WAR DEPARTMENT,
OFFICE OF THE CHIEF OF STAFF,
WASHINGTON.
November 4, 1918

ASST. SECY. OF WAR
NOV 5 1918
WAR DEPT.

6011. Camp Leach. D.C.

MEMORANDUM FOR THE ASSISTANT SECRETARY OF WAR.

SUBJECT: Purchase of American University Property, Washington, D. C.

I. Herewith are two files relating to the above subject, from which it appears that under date of April 30th, 1917, the following communication was sent to the President:

April 30, 1917.

"To His Excellency,
Woodrow Wilson, President of the United States.

Sir:

In behalf of the Board of Trustees of the American University, located in the District of Columbia, I am authorized to extend to the United States Government the use of ninety-two acres of land lying within the District and composing the campus of the University, together with the use of the College of History Building containing twenty-one large and commodious rooms, and also the McKinley Auditorium, not quite completed, which could be made available as a barracks, or for such purpose as the Government may desire.

The campus may be used either for a camping ground for troops, for guarding and raising products for the Army, or for such other purpose as you may elect.

There is a bountiful supply of city water on the premises, and the grounds are easily accessible by means of the Washington City trolley service.

The character of the land is such as would make it available as an aviation ground.

Respectfully,
B.F. Leighton,
President, Board of Trustees, American University."

This offer was accepted, and the American University property was thereafter turned over by the President to the War Department, which gave the use of the property to the Chief of Engineers, who caused the erection of Camp Leach on that part of the property nearest Massachusetts

Jane 3.

Exhibit #11
P1

The American University Courier

Entered as second-class matter February 27, 1909, at the Post Office at Washington, D. C., under Act of July 16, 1894

Volume XXVII Washington, D. C., April, 1921 No. 3

PRESIDENT WARREN G. HARDING

PRESIDENT HARDING ACCEPTS TRUSTEESHIP.

The following correspondence has taken place between the Chancellor of the American University and the President of the United States:

The American University.

Bishop John W. Hamilton, Chancellor

The Honorable Warren G. Harding,

Washington, D. C.

My Dear Mr. President:

You were unanimously elected a member of the Board of Trustees of the American University at the

President McKinley was a trustee when the University was founded, and President Roosevelt had been a trustee at the time of his death for nearly fifteen years.

We will be pleased to receive your letter of acceptance for the records of the University.

Yours sincerely,

JOHN W. HAMILTON.

703 Stoneleigh Court,

The White House, Washington, April 8, 1921.

My Dear Bishop Hamilton:

I have received yours of April seventh, notifying me of my selection on the Board of Trustees of the American University, and am writing to advise you of my acceptance of the position. I do this with some misgiving as to the measure of active service I may be able to render because public duties in other directions are extremely engrossing. I shall hope, however, to be of some service and am taking this opportunity to assure you of my good wishes for the institution.

Most sincerely yours,

WARREN G. HARDING.

Bishop John W. Hamilton,
703 Stoneleigh Court,
Washington, D. C.

CONVOCATION DAY.

The University is making special, unusually special, preparation for Convocation Day, Wednesday, June 8th. The exercises will be most attractive and highly interesting. The meeting of the Trustees will be held in the College of History at ten-thirty o'clock in the forenoon. Luncheon for the Trustees will be served at one o'clock sharp in the University building.

The exercises will begin with the flag raising. Some one or ones—"sure," no doubt about it—will furnish that flag. Major General William Mason Wright will preside. The presiding officer will make a brief address and request a representative of the Fixed Nitrogen Division to raise the flag. One of the city clergymen, assisted by others as aides, will act as chief marshal.

The Chancellor will preside in the outdoor auditorium. Representative clergymen from the different denominations will conduct the devotions. Addresses will be delivered by the Honorable Warren G. Harding, President of the United States; the Honorable J. J. Jusserand, the French Ambassador, and the Honorable N. W. Rowell, King's Counsel and leader of his party in the Canadian Parliament. The music for the occasion will be furnished by the United States Marine Band. Arrangements are being made for extra trolley cars to run from the city to the University during the afternoon.

DR. FREDERICK JUCHHOFF.

Dr. Frederick Juchhoff, the dean of the new graduate School of Business Administration, comes to us from the historic old College of William and Mary, in Virginia, where, during the past two years, he has been professor of economics and head of the school of business administration. During the summer sessions of 1915, 1916, 1917, 1918, 1919 and 1920 he served as professor of economics and finance in the University of Virginia.

Dean Juchhoff is a graduate of Kansas City University, where he took the bachelor's and doctor's degrees, of the law schools of Ohio Northern University and the University of Maine, receiving the LL. B. and LL. M. degrees, and of the school of commerce of Northwestern University. He also pursued graduate courses in the University of Chicago for several years.

The career of Professor Juchhoff as an educator has been unique. Beginning in 1906, he was for two years instructor in commerce in Berea College, Kentucky; for five years he was a teacher in the public high schools of Chicago, at the same time instructing in several of the evening law schools, of one of which he was elected dean. For one year he was associate professor of commerce and finance in the James Millikin University, Decatur, Illinois, and the following two years was head of the department of accountancy of the municipal University of Toledo, Ohio. In addition to the academic appointments mentioned, he has for several years held a number of professorial lectureships, among which is that in economics in the Richmond School of Social Work and Public Health and in jurisprudence in the Medical College of Virginia. He has been a regular lecturer in our school of Diplomacy and Jurisprudence since its opening. For several years he served as editor of the accountancy and law departments of the Business Journal, of New York.

Dean Juchhoff is the unusual combination of the sound scholar, progressive educator, and keen business man. His practical business experience was obtained in the practice of public accountancy and in connection with one of the banking houses in St. Louis. He has been on the directorate of several corporations.

The new school of business administration is, like the other schools already established, a professional-graduate school, open to men and women who have received their bachelor's degree from an accredited college. The work of the school is divided into a number of major study groups, among which are accountancy, transportation, finance, banking, economic theory, foreign trade, etc. The staff of the school includes a number of the leading specialists and economists in the country, each devoting a few hours a week to teaching his specialty. Among these men are found former professors in the University of Nebraska, Tulane University, Columbia University, University of Maryland, Dartmouth College, University of Kansas, and Northwestern University.

The new school begins its work October third under most favorable conditions; already a number of applications for admission have been received.

Ex 11
p3

DEAN FREDERICK JUCHHOFF

DR. BARTLETT L. PAINE

WE MUST HAVE ANOTHER FLAG.

There is a firm and durable flag pole set in eight or ten feet deep of cement, on the campus of the American University. It is nearly one hundred feet high. During the occupancy of the grounds by the United States Army the soldiers permitted the national colors to float in all weathers until the colors were all gone and the national emblem was badly worsted. They came to the University then and asked the loan of a fine large bunting flag, promising to care for it better than they had done for their own. But when that promising contingent was ordered to France, they were succeeded, time after time, by some fresh troops —very fresh—and they, having made no promises, had forgotten to bring their obligations to the University, and one morning they brought the flag back with several more than thirteen stripes in it; but the additional ones were openings nearly the length of the flag and all of them had been made for the accommodation of the weather; and instead of keeping the flag intact, they had divided the red and white stripes from each other, and the whole emblem was only fit to "stop a hole to keep the wind away." The boys were sorry, but claimed they were utterly unwilling because "unable to be held responsible for the winds." There you are; that flag cost twenty-five dollars, in the good old times, "befo' the war." That was not all of the story. "The boys" pulled so hard at the cord they broke it. Now we must get a steeple-chaser to carry up this time a *wire* rope, adjust it to the pulleys, and make ready for the colors. All this we will do. But who will give us the money for another flag? Please let enough of our readers speak up—at least, to take a share in its purchase, if no one feels patriotic enough, or all are too poor for any one to give us the whole flag. If we should get two flags, one from the North and another from the South, that will be all right: we ---d one for week days and another for Sundays.

RECENT GIFTS OF MONEY.

Acknowledgment of sums less than $5.00 is to be regarded sufficient receipt therefor.

Bishop Hamilton Lectureship Fund—$25.00, W. R. Wedderspoon; $3.00, A. C. Stevens.

General Fund—$60.00, Estate of Mary and Susan Bayard; $4.00, A. L. Wiley; $1.00, Dr. Isabel H. Lamb.

McKinley Memorial Hall—$10.00, J. L. Gardiner, $5.00, Wm. B. Anderson, Jas. A. Huston; $3.00, C. E. Hill, A. S. Watson, C. C. Jordan, Benjamin Rowe; $2.00, S. E. Shafer, E. B. Thompson, J. O. Taylor, E. L. Trotter, L. Bennett, O. L. Chivington, W. M. Brooks, F. J. Beisel, C. S. Dopp, Claude Young; $1.00, Cameron Harmon, C. M. Yost, O. L. Sample, G. A. Law, G. E. Tifft, P. C. Wolf, C. A. Hughes, J. C. Jackson, G. F. Cramer, J. E. McCloud, S. D. Kilpatrick.

Asbury Memorial Fund—$15.00, Don A. Allen.

Franklin Hamilton Memorial—$5.00, E. O. Jones, C. E. Allen, E. J. Westfall; $2.00, W. C. Hartinger; $1.00, Perry Robinson, J. B. Workman, L. B. Bowers.

Chancellor's House Fund—$17.00, G. W. Taylor; $10.00, W. D. Reed, $6.00; Bernard Gibbs, J. W. Campbell; $5.00, John F. Black, C. E. Allen, C. W. Flesher, C. E. Goodwin, Daniel Westfall, H. P. Magill; $4.00, W. J. Vaughn, C. E. Dalley, B. F. Newman; $3.00, H. H. Barr, E. C. Rickenbrode, H. B. Workman; $2.00, J. P. Burns, E. D. Hulse, L. B. Bowers, Roy McCuskey; $1.00, J. B. Neff, C. F. Anderson, F. J. Raab, V. W. Doolittle, P. L. Flanagan, H. A. Coffman, W. L. Gearhart, Maurice Monroe, C. H. Frampton, W. M. Shultz.

Americanization School—$5,000.00, Mrs. Annie M. Swift; $1,000.00, John C. Letts, W. S. Corby; $400.00, George F. Washburn; $100.00, W. H. Morgan; $50.00, W. E. Massey; $25.00, Wm. H. Chadwick, Oscar P. Miller, Wm. T. Rich, Edgar C. Linn, John T. Lord, Sewell S. Watts, J. H. Pfister; $10.00, Wm. A. Quayle, H. A.

Moses, Mrs. Jeannie R. Field, W. O. Hoffecker, Mrs. M. H. Kinney, J. Luther Taylor, C. S. Woolworth, Albert R. Kerr, G. W. Crabbe; $5.00, Lloyd Dorsey, Jr., W. L. Caswell, S. B. Goff, Jr., N. B. Fiske; $4.00, Mrs. J. E. Fisher; $3.00; E. M. Thomas, J. S. Whittington, W. J. Carr, Mrs. Rosa Badgely, Lee M. Bender, J. Milton Patterson, $2.50, G. E. Hiller; $2.00, W. C. Winotsky, Roxa King, Mary A. Lewis, H. H. Eldridge, J. W. Cochran, O. R. Higgins, G. Russell Matthews, Mrs. Belle C. Williams, Nellie D. Chatfield, J. D. Chadder, Frederick Cramer, L. F. Mulhall, S. S. Hall, Jr.; $1.00, E. G. Bond, J. H. Guyton, F. W. Huth, Mrs. W. F. Kein, Mrs. G. T. Leach, J. R. Macauley, C. M. Snyder, M. B. Warwick, B. W. Welbourn, P. L. Whittington, Ida R. Bentley, G. O. Sapp, Mary H. Frost, G. H. Hyde, Virginia Moore, L. F. Garfield, W. H. Alderson, Granville Hooper, S. O. Neal, L. A. Bradley, Mrs. Minnie House, M. E. Wheatley, Geo. M. Osborne, Harry Titus, Emma P. Bruce, F. A. Armitstead, W. R. Davenport, Mrs. A. L. Norton, J. W. Keller, Orinda Bryant, John A. Ames, Vinnie L. Hall, E. O. Taylor, A. B. Taylor, Mrs. A. B. Taylor, Mrs. W. O. Baughman, Mrs. John Dendel, A. W. Prentiss, G. E. Pomeroy, Lloyd Dent, Harry E. Miller, O. M. Wenrich, Mrs. A. F. Smith, Phil Foot, Florence E. W. Carpenter, G. M. Towle, J. H. Smith, Mrs. J. Howard Creamer.

LAWYERS NOT HEIRS—A GOOD AND GREAT WILL.

Lawyers are as much entitled to their living as the preachers where both make it the same way. There is no more reason why the lawyer should not be a good man than the preacher. It is a mistake to say that there are conditions and circumstances in which a lawyer who is honest cannot earn a livelihood.

The law is an honorable profession and calls for honorable men, and it is a violation of trust to dishonor the calling. Honor always "breasts the blows of circumstance." The courts and the daily walks of life have provided versatility of employment adequate to all kinds of talents and times and places in the law as certainly as in other vocations. No profession is ever so crowded that there never "is no room at the top," and well up in the middle.

The prolific source of temptation to good conduct seems to be round and about wills. "Wheresoever the body is, thither will the eagles be gathered together." Certain lawyers make a practice of running down wills for the purpose of becoming joint-heirs in the large sense of the inheritance. Great sympathy with lucrative promises furnish the approach to the broken hearts and untutored minds of the beneficiaries. Of such partners in the testament it may well be said "The weeping of an heir is laughter under a mask."

Some account is given in another column of the "Courier" of the great and good will recently probated at Lincoln, Nebraska.

The Department of Jurisprudence in the American University was created as an offset to cheap lawyers with their practice of lawyering. To find the moral quality of the law and establish the moral character of the lawyer is the aim of the instruction given by the high-minded Dean and Faculty.

DOCTOR BARTLETT L. PAINE.

The American University is not without friends in distant parts. A contribution was received within a few days from Walla Walla in Washington. The Chancellor had written to a German brother soliciting a small sum toward the purchase of a reference library for the school; the response came with double the amount requested.

Now comes the news that a good friend, who had assisted the Chancellor from time to time, as far away as Lincoln, Nebraska, has shown his confidence in the University by the munificent remembrance of the institution in his will by making a gift to it of nearly or quite $50,000. The last expression of his kindness before this great gift was a message to the Chancellor from Florida, accompanied by a basket of beautifully and carefully selected fruit from his large grove of young trees just come into bearing.

Doctor Bartlett L. Paine, this friend worth having, was not simply a man of large means, but a brother beloved whose money was a good servant and ran on many a Christian errand for his Master. He was a devoted churchman and gave his service to St. Paul's Church in Lincoln until he became distinguished, for his name is in all the churches.

His death is lamented by many a person, little and unknown, as well as the circle of friends which included many more than resided in his own city. His will is said to be one of the most remarkable ever probated in the western country. The original draft consists of 135 paragraphs and nearly every one provides for a separate bequest. Two codicils are added containing 35 paragraphs. His personal gifts are many. The bequests are scattered so widely, the ends of the earth will speak his name gratefully. Nearly or quite a million dollars is loosened for world-wide service. "The residue of the estate is thought to be more than $400,000. Of this amount the American University received two-twelfths."

THE NEIGHBORS WITHIN OUR GATES.

Sydney Smith usually mixed a grouch with his smart sayings, but he always managed to get no little common sense in his growls. He had a good agricultural notion in his head when he said, "Whoever can make two ears of corn or two blades of grass grow where only one grew before deserves better of mankind, and does more service to his country than the whole race of politicians put together."

When the armistice was signed, and the Chemical Warfare Service removed from the campus of the University, the War Department asked the privilege of the University Trustees to permit the Fixed Nitrogen Research Division to occupy the chemical laboratory, used hitherto for war purposes temporarily, and the buildings connected therewith, for giving to every Cincinnatus who returned to his plow the ability to grow the two grains of corn for the previous one, and likewise the two blades of grass.

The Fixed Nitrogen Research Laboratory was founded by an order of the Secretary of War, dated March 29, 1919, and has been operated with a budget of $500,000 a year from funds which were made available to the President of the United States by the National Defense Act of June 3, 1916.

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The laboratory has a total personnel of between 110 and 120 persons, fifty of whom are chemists. The total equipment for purposes of chemical researches has a value of approximately $300,000.

The following outline and personnel of the plant in the Ohio or McKinley building will give some idea of the technical task in hand, and the able and skillful workmen who are devoting their gifts to taking from the air and nature's chemistry—an inexhaustible resource—a never-failing supply not only for fertilizing the soil, but for numerous other purposes.

Arc Section.

Dr. S. Karter, Ph. D. in Physics, University of Illinois, is Chief of the Arc Section. The fixation of nitrogen by the Arc Process is of fundamental importance, and in event of national emergency nitrogen may be obtained quickly by this process. For the advancement in the improvement of this method involves a more complete knowledge of the processes which take place in the path of the electric arc. For that reason the work at present is confined largely to a thorough fundamental and scientific study of the chemical actions which take place in the path of an electric discharge.

Cyanamid Section.

Dr. J. M. Braham, Ph. D. in Chemistry, University of Illinois, is Chief of this section. The work in the Cyanamid Section involves the perfecting of processes as well as the utilization of products from the huge nitrate plant built in the State of Alabama during the war. Many interesting and valuable discoveries benefiting the industrial nitrogen interest, more specially agriculture, have been developed in this department.

Haber Section No. 1.

Dr. A. T. Larson, Ph. D. in Chemistry, Harvard, is Chief of the Haber Section No. 1. The work consists mainly in the developing and testing at low pressures of catalysts used in the manufacture of ammonia which is the fundamental step in the fixation of atmospheric nitrogen by the Haber Process. A large amount of technical and scientific information on catalysis has been obtained. Dr. Larson is accredited with being America's expert in this line of research.

Business Office.

Mr. H. M. Frampton, Business Manager. The work consists of handling anything not of a purely scientific nature at the Laboratory.

General Shops

Mr. F. J. Berchtold in charge. The work involves repair, maintenance and specially constructed parts of chemical apparatus.

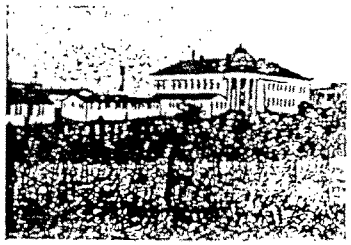
Machine Shop.

Mr. L. F. Kirk, in charge. The work involves purely machine work of high grade, thus requiring exceptional skill.

Haber Section No. 3.

Dr. R. O. E. Davis, Ph. D. in Chemistry, University of North Carolina, is Chief of Haber Section No. 3. This section is investigating methods of recovery of ammonia from the mixture of hydrogen and nitrogen gases after they have passed over the catalyst in the ammonia synthesis operation. The method must be adapted to suit the catalyst and no substance deleterious to the catalyst introduced into the gases, while at the same time the removal should be as complete as possible. A number of solid and liquid absorbents for ammonia are being investigated.

Dr. R. C. Tolman, Ph. D. in Chemistry, M. I. T., is Director of the Laboratory. He was formerly head of



McKinley Memorial Hall from Southeast

istry and physics, including a book on the theory of relativity. He is the discoverer of the theory of the relativity of size.

The Haber Catalyst Testing Plant has involved a Government investment of some hundred thousand dollars and has been built to test Haber catalyst for the combination of nitrogen and hydrogen to form ammonia at pressures of 1,500 pounds to the square inch and at temperatures of from 800 to 1,100 F°. The plant is complete with hydrogen and nitrogen manufacturing installation, holders, compressors, high pressure purification system, and eight reaction bombs for testing. The plant operates twenty-four hours per day and has operated without a break-down for a year. There are no other similar installations that are known to have operated more than a week continuously.

The Section under which this high pressure development and testing work comes is in charge of Mr. R. S. Tour, formerly Chief of the Technical Department of U. S. Nitrate Plant # 1, built at Sheffield, Alabama, during war, for the Haber synthesis of ammonia, and later a member of the U. S. Fixed Nitrogen Commission, investigating the Processes of Nitrogen Fixation in Europe.

There is also located at the American University grounds another branch of the Nitrate Division, which employs draftsmen, engineers, mechanics, computer, etc., and which has for its purpose the engineering redesign and development of U. S. Nitrate plant # 1 at Sheffield, Alabama. In case emergency should require, or national policies desire that Plant # 1 should again be brought into operation, it is hoped that this section will have the necessary plans and organization for the reconstruction and operation.

This branch of the Nitrate Division at the Laboratory is directed by Mr. R. S. Tour, who has been mentioned above in connection with the U. S. Fixed Nitrogen Laboratory Section for High Pressure Experimentation.

Mr. E. J. Fox, B. A. Chemistry, Richmond College, Chief. Work in this section involves analytical work for all the research sections of the Fixed Nitrogen Research Laboratory. Between two and three thousand samples are handled

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Name.	Designation.	Degree.
Lamb, Arthur B.	Director	Ph. D.
Tolman, Richard C.	Research Chemist	Ph. D.
Braham, Jos. M.	Research Chemist	Ph. D.
Karrer, Sebastian	Asst. Ionic Physicist	Ph. D.
Larson, Alfred T.	Catalytical Chemist	Ph.D., P.S., M.S.
Allison, F. E.	Research Chemist	Ph. D.
Bartlett, Edw. P.	Soil Biochemist	Ph. D.
Krase, Herbert J.	Chem. Engr., Gr. II	B.S.
Goddard, W. J.	Asst. Catalytical Chem.	M.S.C.
Haggard, Roy S.	Jr. Mechanical High Pres. Ap.	B.S.
Test, Chas. D.	Analytical Research Chem.	BME, El. Eng., A.C.
Guernsey, E. W.	Chem. Engr., Gr. II	B.S.
Krase, Norman W.	Asst. Explosives Chem.	B.S., C.E.
Richardson, C. N.	Associate Chemist	B.S.
Bright, Arthur C.	Asst. Catalytical Chem.	B.S., E.Ch.E.
Clennon, Wm.	Glassblower	None
Goldstein, Edwin J.	Chem. Engr., Gr. II	S.B.
Hetherington, H. C	Research Chemist	A.B.
Huisken, A. H.	Assistant Chemist	M.S.
Kuentzel, Ward E.	Chem. Engr., Gr. II	B.S.
White, Ernest C.	Jr. Catalytical Chemist	A.B.
Burgin, Chas. B.	Jr. Catalytical Chemist	B.S., C.E.
Brooks, Adin P.	Associate Chemist	A.B.
Gang, Wm. H.	Control Chemist	None
Hartmann, A. A.	Jr. Mechanical High Pres. Ap.	None
Hoenshel, H. D.	Organic Chemist	B.S., M.S.
Vanick, Jas. S.	Research Opr. in Metall.	B.S.
Coe, Dana G.	Junior Chemist	A.B.
Dodge, Ralph L.	Junior Chemist	A.B.
Fox, Edw. J.	Chemist	B.A.
Gittings, L. D.	Junior Chemist	A.B.
Jacob, K. D.	Chemist	B.S.
Lundstrom, F. O.	Jr. Catalytical Chemist	None
McCormick, J. A.	Chemist	B.S.
Newton, Wm. L.	Chemist	A.B.
Whittaker, C. W.	Junior Chemist	B.S.
Barker, F. A.	Junior Chemist	B.S.
Black, Chas. A.	Chemical Engineer, Gr. II	A.B.
Blair, Jas. S.	Junior Chemist	A.B., A.M.
Carpenter, J. R.	Junior Chemist	None
Clarkson, Fuller	Junior Chemist	B.S.
Moore, A. R.	Jr. Physicist	
Smith, Alvin D.	Junior Chemist	B.S.
Wulf, Oliver R.	Junior Chemist	B.S.
Yee, Jew Yam	Junior Chemist	B.S.
Hohl, H. E.	Ordnance Draftsman	B.S.
Houghton, J. D.	Ordnance Draftsman	None
Hawkins, Walter	Asst. Chemical Engineer	None
Gaddy, V. L.	Chemist	None
Pinck, L. A.	Junior Chemist	B.S., Ch. E.
Johnston, E. H.	Chemical Laboratorian	None
Smith, Louis	Junior Chemist	Ph.B. Brown
Young, Chas. H.	Junior Chemist	B.S.
Brown, Chas. W.	Junior Chemist	B.A.
Sherman, M. S.	Junior Chemist	B.S.
Kelly, Mary A.	Junior Chemist	B.S.
Kebler, Mabel A.	Junior Chemist	A.B.
Camburn, C.	Copyist Draftsman	None

CONGRESS BEGINS WELL.

Say a good word for the Democrats! We have heard so much of how things have been going wrong, let us say in honor to whom honor is due that there are numbers of men in the minority who are honoring the new administration as one that is no longer a partisan administration, but a government of the people, to whom all the people owe their allegiance. The example set in the House of Representatives was very properly a religious one to begin with. When the party of the majority announced the candidate for the Chaplaincy, immediately a Representative from Georgia arose and moved that the election be made unanimous and for the first time, as far back as the writer can recall, no such instance is to be found in the Congressional Record. We congratulate the new Chaplain sincerely and assure ourselves by what we know of him that he will be a religious adviser whose devotions will be in the interest of every member without so much as to entertain any thought of differences. But as highly as we esteem the distinguished divine, let it be said we honor not a whit less the highly honored gentleman from Georgia who has brought to himself and the party for which he has spoken a worthy and honorable distinction by this noble example. "Harmony is always understood by the crowd."

ONE OF OUR TRUSTEES.

The Reverend A. J. Palmer one of the earlier, as well as the present, members of the Board of Trustees of the American University, who has just rounded out his fifty years in the ministry, with three or four years additional in the army during the Civil War has been commemorating his remarkable career with a Memorial Address, delivered before the New York Annual Conference pursuant to a vote of that body. The address is so well written, racy and rich in the recital of historic associations and incidents that it is running as a serial in the New York Christian Advocate. The Doctor holds the primacy of having been the youngest soldier enlisted in the Union Army, being only fourteen years, six months, and twelve days old, and serving with distinction as a private during the Civil War. The story reads like Abbott's History of Napoleon, graphic, exciting and entertaining. He was one of "Strong's Fighting Brigade" that assaulted Morris Island and was decimated at Fort Wagner. He was included in the twenty-eight who had been abandoned in the bastion after they had captured it, but who were surrounded by the Confederates, taken prisoner and sent from one prison to another until only six survived. After nine months of confinement he managed to escape from Libby Prison and to furnish Secretary Stanton and President Lincoln with valuable information. His associations with Chaplain McCabe, officers of the War Department, General Grant, and the President, make interesting reading. Some account is given of the origin of the Doctor's famous lecture entitled "Company D, the Die-no Mores" which, with Chaplain McCabe's "Bright Side of Life in Libby Prison" and General John B. Gordon's "The Last Days of the Confederacy," was heard from ocean to ocean. Doctor Palmer is now Annuity Secretary of the Board of Foreign Missions.

A HUNDRED YEARS IN WASHINGTON.

We do not know of any man or woman who has lived in Washington a hundred years. But there are some other living interests beside the Congress of the United States which have been in the city so long. Instead of bringing to them a second childhood the years have added to their activities, prestige and influence. And they are highly honored for their long life and increasing usefulness.

George Washington University lays claim to this distinction. On the mathematics of the husband and wife who declared they were both one hundred years old because the two were one, the Institution has established the validity of its claim. The old gentleman said he was sixty-seven years old and his wife was thirty-three; if that doesn't make them a hundred, what does?

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The old gentleman in this instance was a Baptist until he married, and since he married outside the fold he went with his wife out in the wide, wide world and at present they have no affiliations. But they are highly esteemed for their work's sake. Their children rise up in great numbers to call them blessed. They are in good society and have many of the best of friends. The President is in the thought of many persons eminently qualified to sit in the council of the nations.

As announced in a previous number of the "Courier," that it would be, the anniversary of the University was observed on its one hundredth birthday and was celebrated with becoming exercises and orderly stateliness. President Collier appeared at his best to direct the exercises and confer honors on the distinguished guests who represented a number of different nationalities and included some of the noblest men and women in their respective walks in life. Twenty-seven degrees were generously bestowed with gracious hospitality and the recipients thus made honorary members of the Alumni Association. The addresses in the several convocations were all of a very high order and reflected great credit upon the University, as well as upon the speakers themselves, all of whom recognized the dignity and importance of the occasion. We congratulate the highly honored President and his distinguished Faculty and Board of choice Trustees.

OUTSIDE SCHOOLS ON THE CAMPUS.

The American University has entertained on the Campus during the last four years schools of great celebrity. The one hundred thousand soldiers quartered first and last on the grounds during the war were in training from the day they arrived until they were called to the colors. They were at school. Here were the civil engineers, the foresters, the camouflage, and the Chemical Warfare Service. This last came into existence to match the wits and savagery of the Germans. The Bureau of Mines was granted the free use of the Ohio or McKinley Building to manufacture gas. Then gas masks followed with explosives. A few chemists were selected from the universities and manufacturing chemical laboratories with which to begin. When the armistice was signed two thousand chemists, with their assistants, were employed in the largest laboratory this side of the sun or other burning stars. There were munitions on hand, including multiplex gas and an invented explosive many times dynamite, valued at $800,000. When it was ascertained for a fact, after the first announcement, a false alarm, that the fatal stop or proceedings in the field was actually on paper, and the Commander-in-Chief, so near to a crushing victory, had given away to his feelings, as was reported, and the armies of the aliens were going home singing "We were not whipped; we'll up and at 'em again," disarmament began at the University. It was begun by the destruction of munitions? The numerous collections on hand, just ready to go overseas, was valued at nothing now but the expense of putting them away. As "this was to be the last war," permission was given to go far back on the University acres, to dig a pit deeper than the one into which Joseph was cast, bury the munitions there and cover fervent heat, when the earth and the works therein shall be burned up.

When the Chemical Warfare Service was removed from the grounds of the University the War Department asked to have the Nitrate Division occupy the Ohio Building and temporary structures round about for an experiment station. A glowing account of the School and plant is given by Mr. H. O. Bishop in the Washington Star. We reproduce a part of his paper here. He says:

It sounds mighty like a fairy story to say that it is possible to reach up into the sky and pluck something out of it that men can put into their gardens and farms that will make the ground richer and the crops greater. Nevertheless, that's exactly what is going to take place in every nook and corner of this vast and beautiful country of ours.

Here in Washington is located the greatest nitrogen research laboratory on the western hemisphere for the investigation and discovery of the cheapest and most effective methods of procuring nitrogen fertilizer from the skies. This world-famed laboratory is housed in the buildings of the American University. It is technically known as the fixed nitrogen research laboratory and was founded by an order of the Secretary of War, March 29, 1919, by authority of the National Defense Act.

It is generally conceded that the scientists at the head of this institution are the ablest men in their line of work that America has thus far produced. The present director is Dr. Richard C. Tolman, formerly head of the Division of Physical Chemistry of the University of Illinois. During the war he served as a major in the chemical warfare service. He is the man who developed the famous toxic smoke candle, planned to be used by the allied armies in the spring drive, but which was unnecessary on account of the signing of the armistice. Four millions of these candles were in process of manufacture when the war ended.

The first director of the laboratory was Dr. Arthur B. Lamb, now professor at Harvard. He is still connected with the laboratory in the capacity of consulting engineer. Dr. Alfred T. Larson, who knows more about ammonia catalysis than any man on earth, is the head of the catalyst division. The chief of the cyanide section is Dr. Joseph M. Braham. Capt. R. S. Tour conducts the catalyst testing plant. Dr. Sebastian Karrer is in charge of the electric arc section, and H. M. Frampton is the business manager in charge of the entire outfit.

It costs about $300,000 annually to operate this laboratory, but the ultimate value of the discoveries of this notable group of scientists can only be estimated in terms of billions. Their job is to learn how to harness nitrogen and make it work for us in the years to come, just as the Franklins, Edisons and others learned how to harness electricity.

The first chemical used in warfare seems to have been gunpowder—or a combination of potassium nitrate, sulphur and charcoal. This use first occurred about the year 1250. It was revolutionary in its effect upon munitions. The chemical development was at first slow, but gradually increased until today. The strength of an army is not measured by its man power alone, but in great measure by its power to inflict damage through the intelligent and up-to-date use of chemical ordnance.

Today the various branches of the Army, or the infantry, artillery, cavalry and air service, all rely in great measure for their offensive power upon the tremendous force turned loose on the enemy by the detonation of the explosive charge contained in the shell or bomb or by the momentum of the bullet developed by the burning of smokeless powder. The Navy is similarly dependent.

It is doubtful if any man in the United States has given the subject of nitrates and fixed nitrogen, for use both in times of war and peace, more careful study than Col. J. H. Burns of the Nitrate Division of the Ordnance Department of the United States Army. Here is a remarkably interesting statement from him [illegible]

The statement has been made that nitrates and fixed nitrogen are indispensable for strictly military purposes in the manufacture of powder and explosives, and for peace purposes in the manufacture of fertilizers and chemicals.

It is, therefore, apparent that powder, explosives and chemicals are the heart of munitions, and it can be truthfully stated that fixed nitrogen is the heart of powder, explosives, and chemicals.

After giving a technical and scholarly account of the "slight affinity existing between nitrogen and other elements furnishing a peculiar character to its compounds," he states further:

The demand for fixed nitrogen for peace pursuits can be divided into two main classes—fertilizers and the chemical industry.

Nitrogen for fertilizers: The three essential elements of a complete plant food are fixed nitrogen, phosphoric acid and potassium. And of these three, nitrogen is claimed to be the most important, and it is the most expensive.

Fertilizer has, of course, since the earliest days of human history, been used in the growing of plants. As chemical development has progressed, study has been made of just what elements are needed and in what form they should be used to properly sustain and develop plant life. And as a result of this, knowledge has been gained as to the inorganic or mineral materials that can be used to augment as fertilizers the organic substances previously used. And one such substance is fixed nitrogen in one form or another.

Chemists have long recognized the atmosphere, of which four-fifths is nitrogen, as the huge reservoir that must ultimately be relied upon to supply our needs in the way of nitrates or other fixed nitrogen compounds. The very aloofness of nitrogen or its refusal to combine or stay combined with other elements, which gives it so much value in explosives, on the other hand, causes tremendous difficulty relatively in harnessing it. The artificial fixation of atmospheric nitrogen by chemical or electro-chemical means has, however, been developed in recent years, and several methods are in actual operation.

In all cases it is necessary to force the combination of nitrogen with some other material. This combined nitrogen can then be manufactured chemically, so as to produce the desired material.

There is every reason to believe that the Government will eventually increase the size of the nitrogen research laboratory out on Massachustts Avenue, until it becomes the greatest institution of its kind not only on the western hemisphere, but in the entire world.

TAKING OFF OUR HATS.

Every number of the "Courier" which goes out to the readers brings some interesting responses, showing that there is no little interest in the success of the American University. We have never printed any of these letters, but that the friends of the institution may know that there are readers who enjoy every bit of news concerning the advance movements of the school, and at the risk of enjoying a bit of commendation in public, we print the following letter from among the many that enter the office of the editor:

THE METHODIST BOOK CONCERN,
Oliver S. Baketel, Editor.
150 Fifth Avenue, New York.
April 20, 1921.

Bishop John W. Hamilton, D. D.,
Stoneleigh Court, Washington, D. C.

My Dear Bishop:

I have read with much interest almost every line in the recent number of "The American University Courier," and enjoyed it greatly. It certainly looks as if you were doing something with the prospect of doing more. You are surely to be congratulated on the purchase you have made in the downtown section.

I hope the work will continue to grow, and that you will see before you die that institution in such a position and doing such work as was hoped for by those who were its founders.

Wishing you much success in everything you undertake, I am sincerely yours.

O. S. BAKETEL.

TABLE TALK.

Mrs. Henry Baker, whose husband was one of the retired and venerable preachers of the Baltimore Conference, died recently and in her modest will left her piano to the University.

The large brick house occupied during the last Administration of the Government by the Postmaster General is given over to school purposes. The first floor is occupied by the University for lectures and recitations. The unusually large drawing room, which will accommodate nearly or quite one hundred persons, is admirably adapted to the varied uses of the school. The second story and basement, which is finished in rooms, are occupied by the Bureau of Commercial Economics, that offers illustrated lectures in the large lecture room in almost every department of knowledge—trade, politics, science, letters and religion. The upper story is furnished for the residence of students where a half dozen can be very comfortably accommodated.

The American University Courier

PRO DEO ET PATRIA—FOR GOD AND COUNTRY.

PUBLISHED QUARTERLY BY THE AMERICAN UNIVERSITY.
Massachusetts and Nebraska Avenues, Washington, D. C.
ALBERT OSBORN, Editor
25 Cents a Year—Free to Contributors of University Funds

Form for Will.

I give and bequeath to "The American University," a corporation in the District of Columbia, the sum of (insert amount), and the receipt of its Treasurer shall be a sufficient discharge to my executors for the same.

APRIL, 1921.

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This agreement made this 11th day of March, 1920, by and between Amos A.Fries, Lieutenant Colonel, Chief, Chemican warfare Service, acting for and on behalf of the United States of America hereinafter called the "Government", and the American University of Washington, D.C., hereinafter called the "University", WITNESSETH, that:

WHEREAS, the Government during the World War has occupied and used the buildings and grounds of the University situated in the District of Columbia, and is now occupying and using a portion of such buildings and grounds, all pursuant to agreements made and entered into from time to time between the Government and the University, under which agreements the Government is under obligation to the University upon the termination of its occupancy to restore the buildings and grounds so used as near as may be to the condition the same were when taken over by the Government; and

WHEREAS, the University desires to retain building No. 21, which is the uncompleted Laboratory Building, together with temporary buildings numbered 4,6,9,10,26,32,36,37,38,45,52,56,93,94, 121, 122, 123, Boiler House B.H., G. G.T. and 35, shown on map attached hereto, erected on said premises by the Government provided the Government will pay to the University the estimated cost of the removal and restoration thereof, after deducting from said cost the salvage value of such property if removed, in lieu of the actual removal and restoration of said buildings by the Government.

NOW, THEREFORE, in consideration of the premises, and the mutual covenants and agreements herein contained, it is agreed by the parties hereto as follows:

1. Upon the termination of its occupancy of the buildings and grounds of the University, the Government agrees:

a. To tear down and remove all buildings erected by it with the exception of the uncompleted laboratory building and the buildings numbered 4,6,9,10,26,32,36,37,38,45,52, 56,93,94,121,122,123,B.H., G.,G.T., and 35 on the map attached hereto, vacate the premises and restore the grounds to the condition they were when taken over by the Government except such grounds as are occupied by the aforesaid buildings.

b. To restore the McKinley Building, with the exception of the permanent improvements, to the condition it was when occupied by the Government, reasonable use and wear thereof excepted.

c. To restore the History Building to the condition it was when occupied by the Government, reasonable use and wear thereof excepted.

2. In lieu of the removal of the uncompleted Laboratory Building and the said buildings numbered 4,6,9,10,26,32,36,37,38,43,52,56, 93,94,121,122,123,B.H., G., G.T., and 35, shown on the attached map and in lieu of restoring the McKinley Building and the History Building as specified in Paragraph 1 hereof and the restoration of the grounds, occupied by the aforesaid buildings, to the condition they were when taken over, the Government agrees to pay the University the sum of One Hundred Twenty-one Thousand, Three Hundred Eighty-two and Seventy-five One Hundredths (121,382.75) Dollars, which said sum is the amount it would cost the Government to remove and restore said buildings and grounds after deducting from said cost the salvage value of such property if removed.

3. The University agrees that the Government may continue to occupy any of the buildings and grounds of the University until the 30th day of June, 1920, and for such reasonable time thereafter as may be necessary to enable the Government to fulfill its part of this agreement.

4. The University hereby waives and releases the Government from any and all claim and obligations, whether for damages, rental, or otherwise, arising out of the occupancy or use by the Government of all or any of the buildings and grounds of the University, except such claims as may arise out of the failure of the Government to carry out the agreements or meet the obligations imposed or required by Paragraph 1 and 2 hereof.

5. This agreement shall be binding upon and inure to the benefit of

REPRODUCED AT THE NATIONAL ARCHIVES

IN WITNESS WHEREOF the University has caused these presents to be executed by its duly authorized officers, and the Chief of the Chemical Warfare Service, acting for and on behalf of the Government, has hereunto set his hand the day and year first above written.

THE AMERICAN UNIVERSITY

ATTEST:

By _____
President

_____
Secretary

APPROVED:

FOR THE UNITED STATES OF AMERICA.

_____

_____

_____

_____
Amos A. Fries,
Lieut.Col., Chief, Chemical Warfare Service

Special Board appointed by
Secretary of War, Dec. 20, 1929.

Approved:

War Department Claims Board

By _____
Member

Date

REPRODUCED AT THE NATIONAL ARCHIVES

WAR DEPARTMENT
OFFICE OF THE CONSTRUCTION DIVISION OF THE ARMY
WASHINGTON, D. C.

NO: June 21, 1920.

FROM: Chief, Construction Division.

TO: Captain H. O. Godwin, Constructing Quartermaster, American University.

SUBJECT: Authorization to execute contract.

1. You are hereby authorized to sign contract in behalf of the United States of America with the American University of Washington, D. C., dated June 21, 1920, modifying contract dated March 11, 1920, between the United States and the American University, Washington, D. C., for the transfer of certain buildings to the University and the release of damage claims by the University.

W. W. Whitside,
Colonel, Cavalry,
Acting Chief, Construction Division.

REPRODUCED AT THE NATIONAL ARCHIVES

MEMORANDUM OF AGREEMENT

This agreement made this 21st day of June, 1920, by and between H. O. Godwin, Captain, Quartermaster Corps, of the Construction Division of the Army, acting for and on behalf of the United States of America, hereinafter called the Government, and the American University of Washington, D. C., by Benjamin F. Leighton, President, hereinafter called the University::

WITNESSETH: That whereas, by a certain contract dated March 11th, 1920, by and between Amos A. Fries, Lieutenant Colonel, Chemical W arfare Service, acting for and on behalf of the United States of America, and The American University of Washington, D.C., certain buildings theretofore owned by the United States were transferred to the University and certain other agreements and obligations made and undertaken by the parties thereto and in Paragraph 1, Subparagraph A, specifically providing that the Government agrees "To vacate the premises and restore the grounds to the condition they were, when taken over by the Government, except such grounds as are occupied by the aforesaid buildings";

And Whereas, the University desires to retain certain buildings in addition to those covered by the contract of March 11th, 1920, aforesaid, and the University is willing to accept the buildings hereinafter named in lieu of restoration of grounds as provided for in said contract of March 11th, 1920;

NOW THEREFORE, in consideration of the terms and the mutual covenants and agreements herein contained, it is agreed by the parties hereto as follows:

(1) Upon the termination of its occupancy of the buildings and grounds of the University, the Government agrees to transfer and does hereby transfer to the University the following numbered buildings, shown on the map attached hereto, erected on said

premises by the Government to wit: 2-8-20-39-40-44-47-66-67-95 and in addition thereto the entire sewer and water system installed by the Government on said grounds and in addition thereto the barb wire fence, surrounding said grounds or portion thereof, constructed by the Government.

(ii) The Government further agrees to remove buildings and structures remaining in its' possession and not transferred by this contract or by the said contract of March 11th, 1920, to take out the foundations or other concrete work under said buildings and clean up the debris, caused by construction or demolition, on and immediately adjoining the site of each building.

(iii) The University agrees to release and does hereby release and forever discharge the United States of America from any and all claims and demands arising out of the use and occupancy of the entire tract of land, leased by the University to the United States, and particularly releases and discharges the United States of America from any obligation to restore the grounds as provided in the contract of March 11th, 1920, and agrees that it has no claims and will assert no claim against the United States for damages to the buildings or grounds of the University and hereby releases the United States from any obligation, other than to clean up the site or sites of the buildings retained by the United States.

IN WITNESS WHEREOF, the University has caused these presents to be executed by its duly authorized officers and on behalf of the Government, H. O. Godwin, Captain, Quartermaster Corps, Construction Division of the Army, has hereunto set his hand the date and year first above written.

ATTEST:

(Sgd.) Albert Osborn
Secretary.

(Sgd.) R. H. Case.

THE AMERICAN UNIVERSITY

By: (Sgd.) E. F. Leighton,
President

THE UNITED STATES OF AMERICA

By: (Sgd.) H. O. Godwin

DEPARTMENT OF THE ARMY
OFFICE OF THE ASSISTANT SECRETARY
WASHINGTON, DC 20310

Office of Deputy for Environmental
Safety and Occupational Health

2 APR 1986

Mr. David Smith
Office of Risk Management
American University
4400 Massachusetts Avenue, N.W.
Washington, D.C. 20016

Dear Mr. Smith:

Thank you for sharing your concerns with the Department of the Army about the potential burial of World War I munitions at American University. The Department of the Army is committed to assisting you in this matter.

The United States Army Toxic and Hazardous Materials Agency is searching the historical archives of Edgewood Arsenal in hope of uncovering further information on Defense Department research conducted at American University. The team is focusing its efforts toward information concerning the disposal of munitions at the university that was not available to your research team. You can expect an initial report of the team's findings on April 15, 1986.

The 57th Ordnance Detachment (Explosive Ordnance Disposal), Fort Belvoir, will provide on-site technical advice and assistance during the excavation phase of the University's construction project. The detachment will conduct construction site surveys, using metal detectors, before excavation begins at each construction site. If warranted, the detachment will provide assistance to unearth and dispose of suspected munitions.

Discovery of suspect ordnance after excavation is unlikely. However, should construction crews unearth a munition emergency explosive ordnance disposal support can be obtained, if needed, through the Army Operations Center (697-0218). The operation center will dispatch an emergency ordnance detachment to respond within 2 hours.

It is the Army's position that excavation should not begin until the contractor is notified of the potential risk in the construction area. We recommend that the University coordinate a meeting with representatives of the contractor and the Army assistance team to discuss details of the Army's involvement in the construction project.

The Army's presence on campus will require timely and factual media release to preclude public alarm and to ensure that the public is properly informed. The Army's Office of Chief of Public Affairs will assist your Director of Public Affairs in preparing media releases concerning American University involvement in early munitions research and Army participation in upcoming construction projects.

Department of the Army will continue to cooperate with American University in this matter and will expand our level of assistance should the need arise. MAJ Frank Jordan will serve as your point of contact at Headquarters, Department of the Army. He can be reached at 697-5690.

Sincerely,

John T. Nash
for

Lewis D. Walker
Deputy for Environment, Safety
and Occupational Health
OASA (I&L)

MEMORANDUM

TO: The University Community

FROM: Donald L. Myers
Vice President for Finance & Treasurer

DATE: April 4, 1986

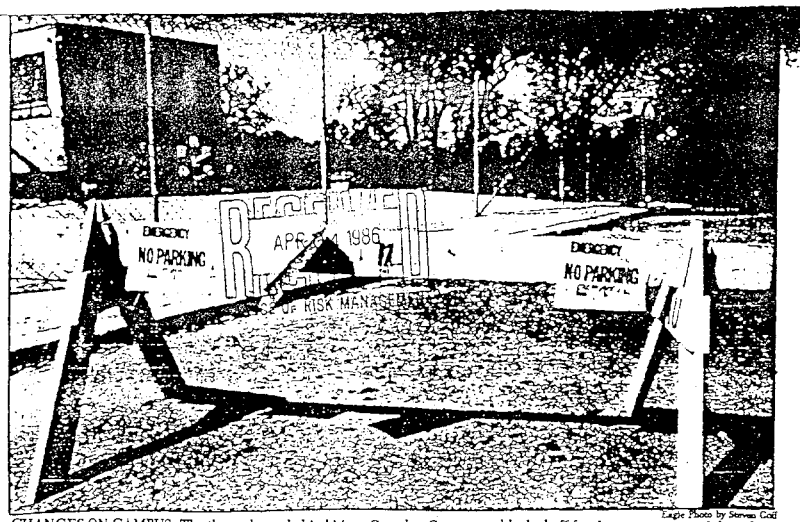
SUBJECT: Excavation for the Khashoggi Sports Center

Excavation of the Adnan Khashoggi Sports and Convocation Center is scheduled to begin next week. Due to the military use of the campus during WWI and WWII, I have requested that The Department of Army (DA) survey the area with metal detectors prior to the excavation.

The Army's Explosive Ordinance Disposal Unit does this kind of survey on a routine basis throughout the United States. The University has received full cooperation from the DA and has been assured of continued assistance as necessary.

DLM/

Vice President for Finance and Treasurer
4400 Massachusetts Avenue, N.W., Washington, D.C. 20016 (202) 885-2709



Eagle Photo by Steven Goff

CHANGES ON CAMPUS: The throughway behind Mary Graydon Center was blocked off for the construction of the Adnan Khashoggi Sports and Convocation Center.

Sports Center Update

Eagle – 4/4/86

Center 'As Originally Designed'

by David Aldridge
Eagle Staff Writer

Provost Milton Greenberg announced at the University Senate Meeting Wednesday ~~that the~~ Adnan Khashoggi Sports and Convocation Center will "be the size as originally designed," with seating capacity of approximately 4,500 seats.

Greenberg said the decision was the result of a recent meeting of the AU Board of Trustees Executive Committee.

AU President Richard Berendzen confirmed the numbers, saying that AU would "go right to the limit" of what it can put in the Center.

However, Berendzen said that the fine structure of the building— "that you get to after you build the box—" was still being designed.

Construction of the Center begins next week, following the closing of the main road connecting the north and south portions of the campus early Wednesday morning.

Director of University Relations Anita Gottlieb said the university has been "working around things" this winter, but now that all preliminary work has been done, "it's now time" to begin the second phase of construction.

The first phase of construction, which culminated with the demolition of Clendenen gymnasium, ended last winter.

The construction area was fenced off Wednesday morning. Bulldozers will begin removing the main road asphalt next week, followed by removal of the surrounding soil.

Gottlieb said that "due to the military use of the campus during World Wars I and II," university officials have requested that the Department of the Army survey the area with metal detectors prior to the excavation.

Gottlieb said that the Army's Explosive Ordinance Disposal Unit does this type of survey "on a routine basis throught the (U.S.).

"We just don't want people to be concerned," she added. She estimated that the work would be completed within three days.

Berendzen said that there will be "a little confusion at first about getting from the north side to the south side." He urged students wishing to get to the south side of campus to enter the university from that side, with students trying to get to the north side entering from the north end of campus.

Berendzen also said that final costs of the center will be agreed upon "imminently" and that a final contract with Blake Construction Co. will be signed within the next week.

Berendzen estimated final costs for building the Center in the neighborhood of $18 million.

"It's really looking pretty good. The Board (of Trustees) is happy with it," he said.

The Center is expected to be completed by the fall of 1987. It will house convocation and athletic events, as well as concerts. The Adjunct Services Building, which will connect the Center with Mary Graydon Center, will house the Campus Store and other shops.

)f Reactions

Immunizations Given
Allowing Registration

DEPARTMENT OF THE ARMY
OFFICE OF THE ASSISTANT SECRETARY
WASHINGTON, DC 20310-0103

8 APR 1986

Dr. Donald L. Myers
Vice President for Finance
and Treasurer
American University
4400 Massachusetts Avenue, N. W.
Washington, D. C. 20016

Dear Dr. Myers:

The Explosive Ordnance Disposal (EOD) team's report of April 7, 1986 is attached. This is the report of the onsite survey conducted at the construction site at American University. The report concluded that as a result of the survey no suspicious items were located at the construction site. However, the team recommended remaining onsite during the excavation and caisson drilling phase. I authorize this onsite support and request that this be coordinated directly between the University representatives and the EOD team.

Major Frank Jordan will continue to be the point-of-contact for the Army on this matter.

Sincerely,

Lewis D. Walker

Lewis D. Walker
Deputy for Environment, Safety
and Occupational Health

Attachment

THE AMERICAN UNIVERSITY
RECEIVED
APR 08 1986
VICE PRESIDENT FOR FINANCE

DEPARTMENT OF THE ARMY
57th Ordnance Detachment (EOD)
Fort Belvoir, Virginia 22060

7 April 1986

MEMORANDUM FOR COMMANDER, 549TH ORD DET (EODCC), FORT MEADE, MARYLAND 20755-5320

SUBJECT: American University Mission

1. American University was used by the military during World War I and II. American University requested that the Department of the Army survey the area prior to the construction of the new sports center located behind the Mary Graydon Center (see Incl 1). The construction site is approximately 600 feet by 500 feet.

2. The 57th Ord Det (EOD) was tasked by the 549th EODCC to survey the construction site utilizing the Mark 22 Mod 0 (Surface Ordnance Locator). The EOD team consisted of CPT Mark C. Steenburn and SGT Jordan A. Wolf. On 050900 April 1986, the EOD team was met by the University representatives on site with the blueprints for the area. The survey was conducted on the 5th of April from 0930 to 1430. The search of the construction site met with negative results for any suspicious items. Limitations of the Surface Ordnance Locator is its maximum search depth is approximately 15 feet. The surface ordnance locator won't work properly within 15 feet of existing building and fences. The construction area was intersected by numerous buried sewer, water, electrical, and telephone lines which would mask any items located near these lines.

3. To the best of the EOD team and equipment ability, no suspicious items were located in the construction site. Recommend that an EOD team be tasked to be on site while the initial construction for the foundation of the sports center is built to render safe any hazardous items that may be encountered.

1 Encl

MARK C. STEENBURN
CPT, OrdC
Commanding

CF: HQDA-DACO-SMA-EOD

ROPES & GRAY
1001 TWENTY-SECOND STREET, N.W.
WASHINGTON, D.C. 20037
(202) 429-1600

CABLE ADDRESS "ROPGRALOR"
TELEX NUMBER 940519
TELECOPY (202) 429-1629

IN BOSTON
225 FRANKLIN STREET
BOSTON, MASSACHUSETTS 02110
(617) 423-6100

April 24, 1986

Mr. Lee Thomas
Administrator
Environmental Protection Agency
401 M Street, S.W., A-100
Washington, D.C. 20460

Dear Mr. Thomas:

I am writing to you on behalf of The American University to advise you of the possible existence of a subsurface environmental problem located on or near American University's campus in the District of Columbia. We have as yet been unable to determine with any degree of confidence that any hazard actually exists, but are writing you to apprise the Environmental Protection Agency of our suspicions and actions to date.

The possible problem stems from the activities of the Army's Chemical Warfare Service on American University's campus during and immediately after World War I. At the outset of the United States' involvement in the War, the Trustees of the University, with the patriotic intent to support our nation's war effort, tendered the use of its 92-acre campus to President Wilson for use in the war effort.

The campus was used first by the Bureau of Mines and then the Army's Chemical Warfare Service as an experimental research station for the development of various types of munitions, including munitions loaded with chemical substances. The Army also used a 150-acre tract of privately owned land adjacent to the University campus (obtained through the cooperation of various landowners), and the two tracts were together referred to as "Camp American University." The Chemical Warfare Service was formed in response to the chemical warfare atrocities being committed against Allied forces by the German Army.

Representatives of The American University recently discovered a 1921 article (enclosed), published in The American University Courier, which states that munitions were buried by the Army after the War. Since learning of this article, University representatives have conducted an intensive search of the University's own records and archives, and of unclassified government records available

at the National Archives and elsewhere, to determine whether the statement was true, and if so, the type and location of any buried munitions. Notwithstanding this search, we have been unable to find a single corroborating reference to the burial of munitions.

The University has also contacted the Department of Defense, whose record search, we are told, has revealed nothing to date. The Army has assembled a team of specialists currently investigating the matter. Some limited on-campus testing has been done, with further testing planned during school vacation.

At this point the facts are still very much a mystery. Neither the University nor the Department of Defense can say with any certainty that a problem in fact exists. We have not engaged in any public disclosures because, at this stage, we believe it would be irresponsible to alarm the University's students or neighbors.

The University has sought to act in a reasonable fashion and to ensure that appropriate action is taken to determine whether a problem exists so as to protect the interests of its students and the public. Your agency may wish to participate in these efforts. We would be happy to work with you, and suggest that you may want to contact Mr. Lewis Walker, who is coordinating the activities of the Department of Defense relating to this matter.

Very truly yours,

Edward A. Benjamin

EAB/dv

cc: Mr. Lewis D. Walker
Deputy for Environment, Safety
and Occupational Health
Office of the Assistant Secretary of the Army (I&L)
Washington, D.C. 20310

Mr.Donald Meyers
Vice President
The American University
4400 Massachusetts Avenue, N.W.
Washington, D.C. 20016

DEPARTMENT OF THE ARMY
OFFICE OF THE ASSISTANT SECRETARY
WASHINGTON, DC 20310-0103

20 May 1986

Dr. Donald L. Myers
Vice President for Finance
and Treasurer
4300 Massachusetts Avenue, N. W.
Washington, D. C. 20016

Dear Dr. Myers:

As you know, Mr. Benjamin, of Ropes & Grey, contacted our office by letter of April 24, 1986, requesting indemnification for any losses resulting from your construction. I am pleased that the Department of the Army has been able to assist you in determining whether any environmental problems exist while you proceed with your construction. I regret that I have no authority to indemnify the University for damages that might result during this construction. The government's ability to indemnify contractors from unusually hazardous risks is limited to those situations in which there presently exists a contract between the contractor and the Department of Defense.

However, I want to stress our continued commitment to assisting American University in determining whether, indeed, any danger does in fact exist. If I may be of further assistance, please do not hesitate to contact me.

Sincerely,

Lewis D. Walker

Lewis D. Walker
Deputy for Environment, Safety
and Occupational Health
OASA (I&L)

THE AMERICAN UNIVERSITY
RECEIVED
MAY 29 1986
VICE PRESIDENT FOR FINANCE

DEPARTMENT OF THE ARMY
OFFICE OF THE ASSISTANT SECRETARY
WASHINGTON, DC 20310-0102

13 JUN 1986

THE AMERICAN UNIVERSITY
RECEIVED
JUN 17 1986
VICE PRESIDENT FOR FINANCE

Dr. Donald L. Myers
Vice President for Finance
and Treasurer
American University
4300 Massachusetts Avenue, N. W.
Washington, D. C. 20016

Dear Dr. Myers:

The Army has suspended active research to find further details concerning the burial of ordnance at American University and Spring Valley following World War I. Not unlike American University, a current lack of manpower, time, and funding preclude additional examination of U. S. Army Military Institute records found at Carlisle Barracks. We are prepared to consider Army support to a joint research effort.

We do not feel that continuation of the archives research effort is warranted considering USATHAMA's assessment of the Carlisle find. The Carlisle collection is unlikely to reveal a direct answer to the location and specific items allegedly buried at American University. Furthermore, the apparent level of detail in archive documents cannot prove or disprove the existence of a burial site. The issue of burial can only be resolved by an actual discovery of munitions.

Should we opt to continue, the archives research project must compete with many others of equal or higher priority for manpower, time, and monetary resources. It is probable that such an effort would not be completed until long after completion of the university's construction project.

Department of the Army's support effort is directed toward coping with an actual find of munitions at American University or in Spring Valley. We will continue to support the university throughout your construction project. A draft support plan providing for continued support is being finalized at this time. Attached is a copy for your review and comment. Please provide your comments by June 30, 1986.

Sincerely,

Lewis D. Walker

Lewis D. Walker
Deputy for Environment, Safety
and Occupational Health
OASA (I&L)

Attachment

SUBJECT: American University Support Plan

1. BACKGROUND.

a. On 20 March 1986, American University contacted the Deputy Secretary of Defense to express concern that chemical munitions, bulk containers of chemical agent, and other chemical material were buried at the university or in adjacent Spring Valley following World War I. This concern is based on two magazine articles. The American University Courier, April 1921, states that permission was given to bury munitions on university property. American School and University - 1956-57, states that discovery of a bomb halted construction of the university's television station in the early 1950s. An exhaustive research effort, by the university, to locate a World War I munitions burial site proved inconclusive.

b. American University has begun the largest construction project in the university's history. University officials are concerned that the potential burial of munitions on campus could affect this project. Three construction sites (sports complex, television tower lightning arrester system, and dormitory), located near the university's television station, are of immediate concern. There are two other construction sites planned for this project, a new arts theatre and an addition to

the Beeghly Chemistry Building.

c. The university has requested Army help to determine if buried World War I munitions might pose a hazard during the construction project.

d. On 5 April 1986, the 57th Ordnance Detachment (EOD), Ft. Belvoir, surveyed the sports complex construction site. The survey did not reveal any suspicious items to a depth of fifteen feet. The survey report contained a recommendation for on-site explosive ordnance disposal support during excavation for the sports complex.

2. PURPOSE. This plan outlines a concept of continued support to the American University construction project.

3. SCOPE OF SUPPORT. Department of the Army support to the university construction project will include technical advice and assistance during pre-excavation, excavation, and post-excavation phases at each of the five planned construction sites.

a. A search of historical archives will be initiated in an attempt to find documents relevant to the possible burial of World War I munitions and chemical material at American University or in Spring Valley.

b. Army public affairs support will be provided to the

university's public relations staff.

c. A pre-excavation survey using a metal detector (surface ordnance locator) will be performed at each of the five proposed construction sites.

d. Explosive ordnance disposal personnel will be stationed at construction sites during excavation to provide appropriate emergency response.

e. Emergency response support will be on-call during the post-excavation phases of construction.

f. If the location of a burial site is confirmed, Headquarters, Department of the Army, will perform a detailed hazard assessment and determine a plan of action to reduce public risk to the hazard.

g. Army response to an actual chemical hazard at American University or Spring Valley will follow existing Chemical Accident and Incident Response and Assistance (CAIRA) procedures. These procedures provide for medical support, chemical detection and decontamination, and disposal of chemical hazards.

h. Support will continue until completion of the university's construction project or until it is proven that a burial site does not exist, whichever occurs first.

4. SUPPORT PLAN.

a. Headquarters, Department of the Army Support Team.

(1) All support rendered to American University will be coordinated by:

Position	Name	Office	Telephone
HQDA Coordinator	MAJ Frank Jordan	DAMO-NCS	697-5690
Public Affairs	Ms. Linda Zorich	OCPA	697-5081
EOD Coordinator	Mr. Bob Bailey	DALO-SMA-EOD	695-9417
Archives Search	MAJ Jeff Wilson	AMCCN-C	274-9463

(2) This team will be augmented as needed.

b. Archives Research. The U.S. Army Toxic and Hazardous Materiel Agency, under the direction of U.S. Army Materiel Command, will search the archives at Edgewood Arsenal. This search will be directed towards uncovering facts relevant to the alleged burial of munitions at American University. Findings will be evaluated to determine if this effort should be expanded beyond Edgewood Arsenal.

c. Public Affairs.

(1) American University Media Relations Department will provide information to the public regarding Army support to the university. The university will retain responsibility for media coverage until a munition is found. The Army will assume media responsibility at that time for Army activities at the university. American University will retain responsibility for explaining university programs.

(2) The Office, Chief of Public Affairs, will provide technical support to American University Media Relations Department. Direct coordination is encouraged.

(3) In the event a conventional munition is found during construction, media coverage will be provided by the Office of Public Affairs, Military District of Washington. The Office, Chief of Public Affairs, will provide support tasking to the Military District of Washington.

(4) In the event a chemical round is found, the Office, Chief of Public Affairs will assume full public affairs responsibilities for Army activity.

d. Explosive Ordnance Disposal Support. The 57th Ordnance Detachment (EOD), Ft. Belvoir, will provide on-site explosive ordnance disposal support during the pre-excavation and

excavation phases of construction and on-call emergency response during post-excavation phases.

(1) Pre-excavation Support.

(a) Each construction site will be surveyed with an ordnance surface locator to identify potential buried munitions or to certify the area safe within the limits of the equipment's capability.

(b) A report for each site survey will be prepared identifying how the survey was conducted, significant findings, conditions adversely affecting the survey, and a subjective evaluation of the probability of buried munitions. These reports will be forwarded through the EOD coordinator to the Headquarters, Department of the Army, coordinator.

(2) Excavation Support.

(a) A two-man support team will be on-site during all excavation operations. This team will be equipped to resurvey excavation sites and to provide appropriate emergency response to include emergency first aid and decontamination

support.

(b) In areas where excavation exceeds the optimum depth of detection equipment (approximately 15 feet), the team will resurvey the area of excavation. The contractor will be required to clear the area of construction equipment.

(c) If there are areas where substantial evidence of buried munitions exists, the team will direct the excavation crew to dig to within a safe standoff distance. From this point, the team will assume excavation responsibilities. The team will dig by hand to assess and render safe any hazard.

(d) Should a massive burial dump be found, the area will be recovered immediately and a meeting called between Headquarters, Department of the Army, and American University officials to discuss future courses of action.

(3) Post-Excavation Support. The 57th Ordnance Detachment (EOD) will provide on-call support upon completion of on-site excavation support. In the event that a munition is found by construction crews, American University will request support directly from the 57th Ordnance Detachment (EOD).

5. COORDINATING INSTRUCTIONS.

a. All correspondence to American University regarding this

issue will be routed through Headquarters, Department of the Army, coordinator and the Office of the Assistant Secretary of the Army (Installation and Logistics)(Environment, Safety, and Occupational Health).

b. Should the location of a munitions burial site be confirmed, consideration will be given to transfer response actions to the Defense Formerly-Used Site Restoration Program.

c. Day-to-day on-site support scheduling will be coordinated directly between the 57th Ordnance Detachment (EOD) and the contractor for the American University construction project.

d. Pre-excavation survey schedule for future construction sites will be coordinated between American University and the on-site support team.

e. American University will request post-excavation emergency support directly from the 57th Ordnance Detachment (EOD) (703-664-1186/4168).

f. In the event chemical munitions are found, the 57th Ordnance Detachment (EOD) is responsible for notifying the Army Operations Center (AOC) to activate Chemical Accident and Incident Response and Assistance forces. On-site personnel will provide emergency first aid and decontamination support until the arrival of the emergency medical team and the decontamination

team.

g. The Army and American University will jointly coordinate with local authorities should the need for emergency evacuation arise.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
841 Chestnut Building
Philadelphia, Pennsylvania 19107

JUN 30 1986

Mr. Edward A. Benjamin
Ropes & Gray
1001 Twenty-Second Street, N.W.
Washington, D.C. 20037

Dear Mr. Benjamin:

Thank you for your letter of April 24, 1986 to Mr. Lee Thomas, Environmental Protection Agency (EPA) Administrator, regarding the Army Chemical Warfare Service's activities at the American University.

EPA has never conducted any assessments or inspections at the American University or its immediate vicinity. Therefore, we have no firsthand information regarding the presence of hazardous wastes at this location.

Because of an agreement between the Department of Defense (DOD) and EPA, hazardous waste investigations at sites formerly owned or used by DOD are the responsibility of the DOD.

My staff contacted personnel at the DOD's Formerly Used Site Restoration Program, which is responsible for conducting these investigations. DOD officials conducted file searches, met with American University representatives, and performed field testing in an attempt to locate any munitions. They were not able to identify any of the munitions that are suspected of being present at this location.

Because DOD has the responsibility for this program and has already conducted investigations, further inquiries should be directed to them. You may contact Mr. Dave Palmer, of the Formerly Used Site Restoration Program, at (202) 694-3434.

Sincerely,

James M. Seif
Regional Administrator

cc: Dave Palmer
HQ Dept. of Army
Attn: DAEN-ACE
Washington, D.C. 20310-2600

DEPARTMENT OF THE ARMY
OFFICE OF THE ASSISTANT SECRETARY
WASHINGTON, DC 20310

5 AUG 1986

THE AMERICAN UNIVERSITY
RECEIVED
AUG 07 1986
VICE PRESIDENT FOR FINANCE

Dr. Donald L. Myers
Vice President for Finance
and Treasurer
American University
4300 Massachusetts Avenue, N.W.
Washington, D.C. 20016

Dear Dr. Myers:

The Department of the Army's support plan for American University's construction project has been finalized and approved. Enclosed is a copy per your request.

Sincerely,

Lewis D. Walker

Lewis D. Walker
Deputy for Environment, Safety
and Occupational Health
OASA (I&L)

Enclosure

AMERICAN UNIVERSITY SUPPORT PLAN

1. BACKGROUND.

a. On 20 March 1986, American University contacted the Deputy Secretary of Defense to express concern that chemical munitions, bulk containers of chemical agent, and other chemical material were buried at the university or in adjacent Spring Valley following World War I. This concern is based on two magazine articles. The American University Courier, April 1921, states that permission was given to bury munitions on university property. American School and University - 1956-57 states that discovery of a bomb halted construction of the university's television station in the early 1950s. An exhaustive research effort, by the university, to locate a World War I munitions burial site proved inconclusive.

b. American University has begun the largest construction project in the university's history. University officials are concerned that the potential burial of munitions on campus could affect this project. Three construction sites (sports complex, television tower lightning arrester system, and dormitory), located near the university's television station, are of immediate concern. There are two other construction sites planned for this project, a new arts theatre and an addition to the Beeghly Chemistry Building.

c. The university has requested Army help to determine if buried World War I munitions might pose a hazard during the construction project.

d. On 5 April 1986, the 57th Ordnance Detachment (EOD), Ft. Belvoir, surveyed the sports complex construction site. The survey did not reveal any suspicious items to a depth of fifteen feet. The survey report contained a recommendation for on-site explosive ordnance disposal support during excavation for the sports complex.

2. PURPOSE. This plan outlines a concept of continued support to the American University construction project.

3. SCOPE OF SUPPORT. Department of the Army support to the university construction project will include technical advice and assistance during pre-excavation, excavation, and post-excavation phases at each of the five planned construction sites.

a. A search of historical archives will be initiated in an attempt to find documents relevant to the possible burial of World War I munitions and chemical material at American University or in Spring Valley.

b. Army public affairs support will be provided to the university's public relations staff.

c. A pre-excavation survey using a metal detector (surface ordnance locator) will be performed at each of the five proposed construction sites.

d. Explosive ordnance disposal personnel will be stationed at construction sites during excavation to provide appropriate emergency response.

e. Emergency response support will be on-call during the post-excavation phases of construction.

f. If the location of a burial site is confirmed, Headquarters, Department of the Army, will perform a detailed hazard assessment and determine a plan of action to reduce public risk to the hazard.

g. Army response to an actual chemical hazard at American University or Spring Valley will follow existing Chemical Accident and Incident Response and Assistance (CAIRA) procedures. These procedures provide for medical support, chemical detection and decontamination, and disposal of chemical hazards.

h. Support will continue until completion of the university's construction project or until it is proven that a burial site does not exist, whichever occurs first.

4. SUPPORT PLAN.

a. Headquarters, Department of the Army Support Team.

(1) All support rendered to American University will be coordinated by:

Position	Name	Office	Telephone
HQDA Coordinator	MAJ Frank Jordan	DAMO-SWS	697-5690
Public Affairs	Ms. Linda Zorich	OCPA	697-5081
EOD Coordinator	Mr. Bob Bailey	DALO-SMA-EOD	695-9417
Archives Search	MAJ Jeff Wilson	AMCCN-C	274-9463

(2) This team will be augmented as needed.

b. Archives Research. The U.S. Army Toxic and Hazardous Materiel Agency, under the direction of U.S. Army Materiel Command, will search the archives at Edgewood Arsenal. This search will be directed towards uncovering facts relevant to the alleged burial of munitions at American University. Findings

will be evaluated to determine if this effort should be expanded beyond Edgewood Arsenal.

c. Public Affairs.

(1) American University Media Relations Department will provide information to the public regarding Army support to the university. The university will retain responsibility for media coverage until a munition is found. The Army will assume media responsibility at that time for Army activities at the university. American University will retain responsibility for explaining university programs.

(2) The Office, Chief of Public Affairs, will provide technical support to American University Media Relations Department. Direct coordination is encouraged.

(3) In the event a conventional munition is found during construction, media coverage will be provided by the Office of Public Affairs, Military District of Washington. The Office, Chief of Public Affairs, will provide support tasking to the Military District of Washington.

(4) In the event a chemical round is found, the Office, Chief of Public Affairs will assume full public affairs responsibilities for Army activity.

d. Explosive Ordnance Disposal Support. The 57th Ordnance Detachment (EOD), Ft. Belvoir, will provide on-site explosive ordnance disposal support during the pre-excavation and excavation phases of construction and on-call emergency response during post-excavation phases.

(1) Pre-excavation Support.

(a) Each construction site will be surveyed with an ordnance surface locator to identify potential buried munitions or to certify the area safe within the limits of the equipment's capability.

(b) A report for each site survey will be prepared identifying how the survey was conducted, significant findings, conditions adversely affecting the survey, and a subjective evaluation of the probability of buried munitions. These reports will be forwarded through the EOD coordinator to the Headquarters, Department of the Army, coordinator.

(2) Excavation Support.

(a) A two-man support team will be on site during all excavation operations. This team will be equipped to

resurvey excavation sites and to provide appropriate emergency response to include emergency first aid and decontamination support.

(b) In areas where excavation exceeds the optimum depth of detection equipment (approximately 15 feet), the team will resurvey the area of excavation. The contractor will be required to clear the area of construction equipment.

(c) If there are areas where substantial evidence of buried munitions exists, the team will direct the excavation crew to dig to within a safe standoff distance. From this point, the team will assume excavation responsibilities. The team will dig by hand to assess and render safe any hazard.

(d) Should a massive burial dump be found, the area will be recovered immediately and a meeting called between Headquarters, Department of the Army, and American University officials to discuss future courses of action.

(3) Post-Excavation Support. The 57th Ordnance Detachment (EOD) will provide on-call support upon completion of on-site excavation support. In the event that a munition is found by construction crews, American University will request support directly from the 57th Ordnance Detachment (EOD).

5. COORDINATING INSTRUCTIONS.

a. All correspondence to American University regarding this issue will be routed through Headquarters, Department of the Army coordinator and the Office of the Assistant Secretary of the Army (Installation and Logistics)(Environment, Safety, and Occupational Health).

b. Should the location of a munitions burial site be confirmed, consideration will be given to transfer response actions to the Defense Formerly-Used Site Restoration Program.

c. Day-to-day on-site support scheduling will be coordinated directly between the 57th Ordnance Detachment (EOD) and the contractor for the American University construction project.

d. Pre-excavation survey schedule for future construction sites will be coordinated between American University and the on-site support team.

e. American University will request post-excavation emergency support directly from the 57th Ordnance Detachment (EOD) (703-664-1186/4168).

f. In the event chemical munitions are found, the 57th Ordnance Detachment (EOD) is responsible for notifying the Army Operations Center (AOC) to activate Chemical Accident and

Incident Response and Assistance forces. On-site personnel will provide emergency first aid and decontamination support until the arrival of the emergency medical team and the decontamination team.

g. The Army and American University will jointly coordinate with local authorities should the need for emergency evacuation arise.

DEPARTMENT OF THE ARMY
US ARMY CHEMICAL AND MILITARY POLICE CENTERS & FORT MCCLELLAN
FORT MCCLELLAN, ALABAMA 36205-5000

REPLY TO ATTENTION OF

ATZN-CM-MH

29 October 1986

MEMORANDUM FOR RECORD

SUBJECT: Camp American University Historical Search

1. Purpose. To summarize research for response to inquiry from American University.

2. Reference: Letter, USATHAMA, AMXTH-IR-A, 6 Oct 86, SAB (Enclosure 1)

3. Summary. Reference requested onsite assistance at the U.S. Army Military History Institute (MHI), Carlisle Barracks, Pennsylvania, from me, Historian, U.S. Army Chemical School to review all documents related to activites at Camp American University from 1918 through 1921. In response to this request, I went to MHI from 21 through 24 October. I met there with Mr. Conrad Swann, USATHAMA, and Mr. Jeffery K. Smart, Historian, Edgewood Arsenal. Using information that Mr. Swann and Ms. Nancy Gilbert, Librarian, MHI, had provided, we developed a research strategy to try to insure that we covered all likely sources that might indicate any burial of materials on the university grounds or immediate vicinity. By the end of the week, we agreed that we had exhausted every reasonable source at MHI and had checked possible leads we had developed in the course of this review. Following my return, I reviewed all materials we had gathered. This review reinforced our conclusions:

a. The source that says munitions were buried is historically suspect.

b. There is no official evidence of any such burial. Official correspondence from the period strongly suggests that all munitions were removed to Edgewood Arsenal.

c. If any materials were buried, they would probably have been small quantities of laboratory or experimental materials.

d. We could not disprove the possibility that some materials remain buried on or near Camp American University.

4. Research strategy. The strategy used to review materials at MHI was essentially hierarchical. We aimed first to locate any official sources likely to describe any demobilization activity at Camp American University. We next sought to find any official or unofficial sources that might suggest the nature of demobilization actions. We then sought any sources that might

indicate the types and quantities of materials at American University (AU) at the time of demobilization, and that might indicate how those materials were generally handled. We individually pursued different sources, according to familiarity with their types, to try to insure that we reviewed every available resource. We met repeatedly, throughout the week, to discuss ideas and what we had or had not found in the various sources. At the end of the week we discussed our findings and conclusions, and decided on the follow-up.

5. Types of sources identified and consulted. The sources explored covered the broadest range we could identify as having any promise. Based on the previous survey of Chemical documents transferred from the Technical Library at Edgewood Arsenal (EA) and from the Fisher Library of the Chemical School, before it was closed in 1973, we looked for any documents pertaining to the time from the start-up of Camp American University into the mid-1920s. These materials included technical reports from Camp American University, EA, and various other experimental stations and plants. There were also final reports of tests and monthly reports of the various divisions and annual reports for the Chemical Warfare Service (CWS) and EA. I reviewed indexes of the New ~~York~~ Times for the period, as well as the microfilmed card catalog from Fisher Library before 1973. We reviewed manuscript materials dealing with the CWS in the Archives Branch of MHI. These materials included the collected papers of some former Chiefs of Chemical from the interwar years and a survey, conducted within the last few years, of veterans of World War I. From these interviews I identified four who had been at Camp American University or EA about the time of the demobilization. Of those four, I was able to reach only one--Mr. Ormond H. Minton of Eau Gallie, Florida; he said he knew nothing about any disposition of materials from AU. Included in the materials veterans had sent were copies of The Retort, a newspaper that the Research Division of the AU Experimental Station published from 6 October into December 1918. The last issue discussed demobilization but dealt only with personnel. I also reviewed documents that AU provided.

6. Discussion of major points.

a. Credibility and accuracy of the source indicating burial. The sole source that says that munitions were buried is historically suspect because of when written, the contexts in which statements appear, the nature of the source, and inferences from comparisons with other sources. There are two references in issues of the AU newspaper, ~~The American University Courier~~. One reference is from an issue dated April 1921; the source of the other is undated but is from January 1921 or later. Both postdated the burning, in January 1921, of seventeen buildings that were regarded as having been too contaminated with hazardous chemicals to be salvaged. (Enclosure 2) Both refer to burying $800,000 worth of munitions at the end of the war, two and a half years earlier.

References to quantities and actions in both issues may be metaphorical; meanings are uncertain, at best. The undated reference is in an editorial, apparently answering complaints that it was a "waste" to burn the buildings. The argument of the editor is that the loss of the buildings was less than the "worth of munitions that had been manufactured in the buildings on the University grounds and had not yet been started overseas." The basic point of the editor was that "War is a waste from start to finish." (Enclosure 3) The second article is heavy with Scriptural overtones and Apocalyptic allusions.

"When the armistice was signed two thousand chemists... were employed in the largest laboratory this side of the sun or other burning stars. There were munitions on hand...valued at $800,000. ...disarmament began at the University. It was begun with the destruction of munitions? The numerous collections on hand, just ready to go overseas, was valued at nothing now but the expense of putting them away. As 'this was to be the last war,' permission was given to go far back on the University acres, to dig a pit deeper than the one into which Joseph was cast, bury the munitions there and cover them up to wait until the elements shall melt with fervent heat, when the earth and the works therein shall be burned up." (Enclosure 4)

The stylistic conventions suggest that references to quantities in both articles serve mainly to emphasize importance, not to describe facts or events accurately. The dated article quotes a "glowing account of the School" by H. O. Bishop in the Washington Star, which describes the work and staff of the Fixed Nitrogen Research Laboratory at AU, which arose out of the CWS operations, in superlatives. It identifies Dr. Richard C. Tolman, one of the researchers, as the developer of the toxic smoke candle, of which "four million...were in process of manufacture when the war ended." "It costs about $300,000 annually to operate this laboratory, but the ultimate value of the discoveries...can only be estimated in terms of billions." (Enclosure 4)

Allowing the possibility that quantitative references might be factual, we searched for and reviewed all documents that might support or discredit these articles. The repetition of the figure—$800,000—seems crucial. This figure appears in both articles but nowhere else that we could find. No other figures that we could find provided any clue as to how such a figure could be derived. The "Annual Report of the Chief of the Chemical Warfare Service for the Fiscal Year Ending June 30, 1920" included a summary of disbursements of the CWS. The total allotment to the CWS for ordnance stores and ammunition for 1918-19 was $1,196,646. (Enclosure 5) The $800,000 figure would have equalled almost two-fifths of the total for the whole CWS. This proportion is entirely out of line with the fact that production and distribution were not handled by the Research Division, which was at AU, but by other divisions, located elsewhere.

There is no reason to believe that any large burial might have been connected with the smoke candles. Even if the figure of four million "in process" at the end of the war was accurate, there is no indication of any connection between this processing and AU, other than the development. (Enclosure 4).

b. There is no official evidence of any burial at AU. Official correspondence from the period strongly suggests that all munitions were removed to Edgewood Arsenal. The key document, which was included in the inquiry from AU, was an itemized request for a shipping order to transfer munitions and related items from AU to Edgewood in February 1919. The endorsements ordered transfer in March 1919. (Enclosure 6)

c. If any materials were buried, they were probably small quantities of laboratory or experimental materials. All sources we found were inconsistent with the notion of substantial quantities of any munitions or the components for munitions existing at AU. The "Report of the Chemical Warfare Service, 1918," signed in September, described the organization and activities of the

CWS. This report said that the American University Experiment Station had been the major center of the research activities. The Research Division, located at AU, conducted experiments to solve problems. The main plant of the Gas Offense Production Division, which actually produced toxic materials on a large scale, was at EA. Some proving of munitions was done at AU; but, by September 1918, these activities were mainly conducted at Lakehurst, New Jersey. (Enclosure 7) The Chemical Production or Small Scale Manufacturing Section, working at a ratio of fifty pounds to a ton, tried to improve methods of preparation in the laboratory to where materials could be mass-produced. (Enclosure 8) Although the equipment for production plants was built at AU, including two one-ton reactors for mustard agent, there was no evidence that any production plant actually operated at AU. (Enclosure 9) Even the work to discover new toxics and to develop manufacturing methods practically ceased at AU by 1 November 1919, when all of these activities transferred to EA. (Enclosures 10 and 11) The statement in ~~The American University Courier~~ that there were large quantities of munitions ready for shipment overseas is at odds with production figures in ~~The Order of Battle of the United States~~ Land Forces ~~in the World War (1917-19); Zone of the Interior, Volume Three~~. ~~The Order of Battle~~ also discussed demobilization, including the disposal of materiel and plants having large enough quantities on hand to make salvage economical. AU was not listed. (Enclosure 12) A letter from the Director of Gas Service to the Chief of Staff, dated 28 May 1918, indicated a shortfall of toxic production, pending the construction of new plants. He estimated that this delay would last at least eight months--well after the armistice. A document attached to this letter showed 900 pounds of phosgene being shipped to AU; this quantity was out of a total in storage or produced in May of over 72,000 pounds. (Enclosure 13) A memorandum of 20 February 1920 showed that laboratory materials were being sent from AU to EA, and these samples were harmless substances--turpentine, lubricating oil, and benzene and coal oil. (Enclosure 14) The transfer of remaining materials was consistent with the peacetime mission of the CWS, defined on 28 November 1919, to maintain sufficient materiel to meet initial requirements for war. (Enclosure 12)

d. We could not disprove the burial of some materials on or near Camp American University, and subsurface ordnance could still exist from military uses of AU. An article about building the university radio station in the mid-1950s reported that an excavating crew unearthed an unexploded bomb from "when the army used the campus as a testing ground." (Enclosure 15) Test reports routinely indicated that there were duds. (Enclosures 16 and 17)

J. W. Williams

17 Encl

J. W. WILLIAMS
Historian

DEPARTMENT OF THE ARMY
US ARMY TOXIC AND HAZARDOUS MATERIALS AGENCY
ABERDEEN PROVING GROUND, MARYLAND 21010-5401

REPLY TO ATTENTION OF

AMXTH-IR-A

13 NOV 1986

SUBJECT: Camp American University Historical Search

Commander
U.S. Army Materiel Command
ATTN: AMCCN-C
5001 Eisenhower Avenue
Alexandria, VA 22333-0001

1. Reference:

a. Letter, AMC, AMCCN-C, 14 Aug 86, SAB.

b. Message, USATHAMA, AMXTH-IR, 4 Sep 86, SAB.

2. Reference 1a directed this Agency to conduct a thorough records search of Chemical Warfare Service documents at the U.S. Army Military History Institute at Carlisle Barracks, PA, for information which supports or refutes allegations of burial of munitions on the American University Experimental Station controlled properties.

3. A thorough search of relevant Carlisle Barracks records was performed. This search included records associated with the Experimental Station and activities at Edgewood Arsenal (currently the Edgewood area of Aberdeen Proving Ground) from 1917-1922. Documentation indicated that the Research Division of the Chemical Warfare Service, located at the American University, conducted small-scale experiments to improve on the effectiveness of agent deployment. The main plant of the Gas Offense Production Division, which actually produced toxic materials, was at Edgewood Arsenal. The principal part of the salvage and sales work of the Chemical Warfare Service also was carried on at Edgewood Arsenal.

4. Records reviewed produced no official documentation of the alleged burial of munitions on the American University Experimental Station properties. Records were found which documented burial of laboratory quantities of hazardous materials at Edgewood Arsenal in November 1918. Based on this authorized method of disposal, it can be inferred that laboratory quantities of toxic materials were disposed of onsite prior to or following the documented transfer of personnel and equipment from the Station to Edgewood Arsenal in November 1919.

AMXTH-IR-A
SUBJECT: Camp American University Historical Search

13 NOV 1986

5. A memorandum of the U.S. Army Military History Institute records search is provided at the enclosure in support of the above. Point of contact for this action is Mr. Conrad Swann, this Agency, AUTOVON 584-2270/3182.

6. USATHAMA - Providing Leaders the Decisive Edge.

Encl

F. A. THOMASSY
Colonel, CM
Commanding

CF (w/encl):
Cdr, AMC, ATTN: AMCEN-A (Mr. Paul Lin), 5001 Eisenhower Ave, Alexandria, VA 22333-0001
Cdr, U.S. Army Chemical and Military Police Centers and Fort McClellan, ATTN: ATZN-CM-MH, Fort McClellan, AL 36205-5000

DEPARTMENT OF THE ARMY
BALTIMORE DISTRICT, U.S. ARMY CORPS OF ENGINEERS
P.O. BOX 1715
BALTIMORE, MD 21203-1715

REPLY TO
ATTENTION OF

December 8, 1994

Spring Valley
Resident Office

Mr. Donald L. Myers
Vice President for Finance & Treasurer
The American University
4400 Massachusetts Avenue, NW
Washington, D.C. 20016

Dear Mr. Myers:

In February 1994, soil sampling was performed on your property. This soil sampling was part of the U.S. Army Corps of Engineers, Baltimore District's investigation for ordnance in the area formerly known as Camp American University Experiment Station. Before the soil sampling was performed, an individual briefing was provided to you regarding the purpose of the soil sampling. At that time, it was described to you how areas were identified for soil sampling based on archival information and how your property was then statistically selected from within that area.

Results from the soil sampling were used to characterize the soil of specific locations, or points of interest, which archival information indicated may have been used for testing at the Camp American University Experiment Station. Attached to this letter are the results from the soil sampling specific to your property, which is one of several within that point of interest, and the more encompassing point of interest report.

The results from the soil sampling at 4400 Massachusetts Avenue, Washington, D.C., have been analyzed by the Corps and reviewed by the U.S. Army Environmental Hygiene Agency and the Environmental Protection Agency, Region III. This analysis indicates that there were no chemical warfare agents, explosives or their breakdown products, or measurable levels of these compounds present in the soil samples collected. Therefore, no further action is necessary with regard to soil sampling on your property.

The soil sampling results from your property and others nearby has resulted in a complete characterization of the point of interest of which your property is a part. None of the samples collected from that point of interest contained detectable concentrations of chemical agents, explosives or their breakdown products. This characterization will be included in the Record of Decision, the closing document for the Corps' investigation of Spring Valley. The Record of Decision will provide a decision regarding any required further actions for the

entire area known as Camp American University Experiment Station. The Record of Decision will be based on the entire investigation performed by the U.S. Army Corps of Engineers, Baltimore District, since February 1993. This decision document is expected to be completed in the spring of 1995.

The enclosed point of interest report is also available at the public library repositories (Tenley Branch at Wisconsin Avenue and Ablemarle Street and Palisades Branch at 49th and V Streets) and at the Spring Valley Resident Office at 5201 Little Falls Road (directly behind Sibley Hospital).

If you have any questions regarding the soil sampling report, or if you wish to schedule an appointment to further discuss the results, please contact our office at (202) 282-1050.

We appreciate your cooperation in allowing us to perform soil sampling on your property. Your assistance will help us complete a thorough investigation of the area.

Sincerely,

Craig A. Crotteau
Lieutenant Colonel, Corps of Engineers
Deputy Federal Onscene Coordinator

RECORD OF DECISION

FOR THE

OPERATION SAFE REMOVAL FORMERLY USED DEFENSE SITE

1.0 DECLARATION

1.1 Site Name and Location

Site Name: Operation Safe Removal Formerly Used Defense Site
Site Location: Washington, D.C.

1.2 Statement of Basis and Purpose

1.2.1 This decision document presents a determination that no further action will be taken at the Operation Safe Removal Formerly Used Defense Site (OSR FUDS) in Washington, D.C. This decision document excludes the Captain Rankin Area of the OSR FUDS, as it is still under investigation. This determination was developed in accordance with the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), as amended by the Superfund Amendment and Reauthorization Act of 1986 (SARA), 42 USC Section 9601 *et seq.*, and the National Contingency Plan (NCP) 40 CFR Part 300. This no further action decision is supported by documents contained in the administrative record. The District of Columbia has concurred on the no further action determination.

1.3 Declaration Statement

1.3.1 This no further action decision is based on the baseline risk assessment conducted for the OSR FUDS, which concluded that conditions at the OSR FUDS do not pose unacceptable risks to human health and the environment. Therefore, no further remedial action is necessary at the OSR FUDS, excluding the Captain Rankin Area, to protect human health and the environment.

Lewis D. Walker 6/2/95

Lewis D. Walker
Deputy for Environment, Safety, and Occupational Health,
Occupational Health Office of the Assistant Secretary of the Army,
U.S. Department of the Army

Date

2.0 DECISION SUMMARY

2.1 Site Name, Location, and Description

2.1.1 The OSR FUDS is located in Northwest Washington, D.C., inclusive of the campus of American University. The OSR FUDS is an urban, residential area consisting of approximately 616 acres. The area is bounded by Dalecarlia Parkway from Westmoreland Circle to Mill Creek to a 400 to 800 foot strip of land west of Dalecarlia Parkway to Loughboro Road to Nebraska Avenue to Van Ness Street to 43rd Street to Warren Street to 45th Street to Van Ness Street to Massachusetts Avenue to Westmoreland Circle. This area was divided into nine zones to aid in the investigation effort. The OSR FUDS and the nine zones are shown in Figure 1.

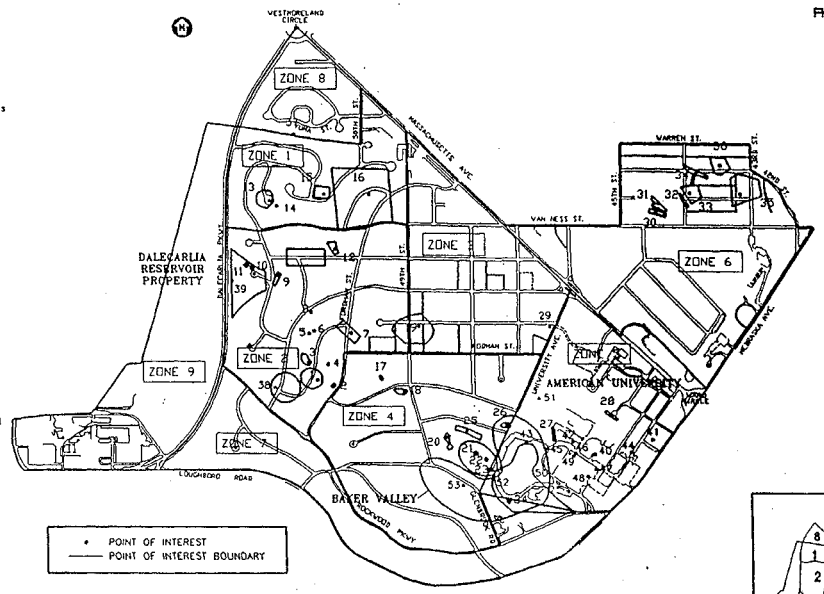
2.1.2 The Captain Rankin Area of the OSR FUDS is comprised of the shell pits located in Points of Interest (POIs) 21 and 23. The final results of the investigation of the Captain Rankin Area were not available for inclusion into the Final Remedial Investigation (RI) Report; therefore, the Captain Rankin Area has been excluded from this ROD. The Captain Rankin Area will be addressed under a separate ROD upon completion of the investigation.

2.1.3 The OSR FUDS has been developed as a residential neighborhood with some commercial and retail centers located primarily on Massachusetts Avenue. The OSR FUDS had a total population of 13,203 in 1990. The site topography indicates that surface water runoff is channeled into two intermittent streams (Mill Creek and East Creek). These streams are not used as sources of potable water. Man-made storm sewers also channel runoff over large portions of the site. Eventually all runoff at the site flows into the Potomac River. The discharge points of both Mill Creek and East Creek are approximately 1-mile downstream

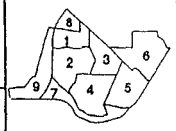
FIGURE 1

NUMBER POINTS OF INTEREST

1. Circular Trenches
2. Possible Pit
3. Small Crater Scars
4. Possible Pit
5. Possible Pit
6. Possible Target or Test Site
7. Possible Test Area
8. Possible Target or Test Site
9. Possible Firing or Observation Stalls
10. Possible Target or Test Site
11. Scattered Ground Scars
12. Possible Graded Area
13. Circular Trenches
14. Pit
15. Ground Scar
16. Chemical Persistency Test Area
17. Possible Pit
18. Small Crater Scars
19. Old Mustard Field
20. Ground Scar
21. Shell Pit
22. Shell Pit
23. Shell Pit
24. Probable Pit
25. Possible Trenches
26. Small Crater Scars
27. Probable Trench or Ditch
28. Probable Trench or Ditch
29. Ground Scar
30. Training Trenches
31. Training Trenches
32. Training Trenches
33. Training Trenches
34. Training Trenches
35. Training Trenches
36. Training Trenches
37. Mill Creek
38. Bradley Field/Major Talman's Field
39. Static Test Fire Area
40. Ohio Hall
41. History Building
42. Physiological Laboratory
43. Gun Pit
44. Chemical Research Laboratory
45. Explosives Laboratory
46. Cannister Laboratory
47. Bacteriological Laboratory
48. Disperoid Laboratory
49. Pharmacological Laboratory
50. Gun Pit
51. Fire and Flame Laboratory
52. Electrolytic Laboratory
53. Baker Valley



ZONE MAP



NAMED POINTS OF INTEREST

American University

This map was prepared for use of the U.S. Army Corps of Engineers for illustrative purposes only. This map was created using data prepared from various sources. It does not represent survey of the site. The scale, accuracy, and completeness of the data is not guaranteed. No liability is assumed as to the sufficiency or accuracy of the data collected hereon.

SOURCE:
USDA 1976

PARSONS ENGINEERING SCIENCE, INC.

APPROXIMATE SCALE
0 400 800
FEET

POINT OF INTEREST
OSR FUDS RI
OPERATION SAFE REMOVAL

JOB NUMBER
DOCUMENT NO.
DAS SHEET

US Army Corps of Engineers

PO2-46 3/1/93

of the intake for the District of Columbia water system at Little Falls Dam. Water is supplied to residents in the OSR FUDS area through the District of Columbia water supply.

2.1.4 Groundwater flow in the piedmont rocks and saprolite of the OSR FUDS is anticipated to follow the topographic gradient toward the southwest and the Potomac River. Groundwater is not used for public water supply at the OSR FUDS. No private, domestic, or commercial wells have been observed at the site during field activities.

2.1.5 A Record of Environmental Consideration for Remedial Investigations at Spring Valley was completed on January 27, 1993.

2.2 Site History and Enforcement Actions

2.2.1 The American University Experiment Station (AUES) was used by the U.S. Army and Navy during World War I to investigate the production of noxious gases, antidotes, and protective masks. Initially operated by the Bureau of Mines, the AUES was transferred to the U.S. Army and was operated by the U.S. Army until 1918, when the experiment station was closed. The land around the former AUES was subsequently developed into an urban residential neighborhood located in Northwest Washington, D.C. In January 1993, a contractor digging a utility trench uncovered buried ordnance. The U.S. Army responded with Operation Safe Removal.

2.2.2 Operation Safe Removal consisted of two phases. Phase I was the immediate emergency response after the discovery of buried ordnance in January 1993. Phase I of Operation Safe Removal began on January 5, 1993 and ended on February 2, 1993. The ordnance items included 141 intact munitions, assorted ordnance-related debris, and laboratory material. The buried ordnance items were removed by the U.S. Army. Forty-three of the

intact munitions recovered were deemed suspect chemical munitions and subjected to further on-site qualitative analysis. This analysis confirmed that the items were chemical munitions. Nine of the suspect chemical ordnance items were subjected to quantitative off-site analyses. The results of these analyses revealed that one munition contained mustard agent, five contained aqueous salt solutions, two contained fuming sulfuric acid, and one contained gun cotton. Soil, surface water, and groundwater samples were collected during the removal of the ordnance items. The analysis of the soil samples collected from the excavated area and soil, surface water, and groundwater samples collected from the vicinity of the excavated area indicated that no residual contamination was present as a result of buried munitions.

2.2.3 On January 21, 1993, the Findings and Determination of Eligibility was approved establishing the OSR FUDS. This study determined that 509 acres were eligible, with an additional 107 acres subsequently added as an addendum, as part of the OSR FUDS. An inventory project report conducted by the U.S. Army concluded that Chemical Warfare Material (CWM) hazards could potentially be present at the site. Consequently, the Army determined that it was necessary to conduct a remedial investigation (RI) to determine if Ordnance and Explosive Waste (OEW) or CWM were actually present at the site and posed potential adverse health risks. The RI was performed during Phase II of Operation Safe Removal.

2.2.4 Phase II of the RI began immediately after Phase I on 3 February 1993. Phase II included the historical records search, geophysical survey, intrusive studies, non-time critical and time critical removal actions, environmental sampling, and risk assessment necessary to determine the existence and extent of any OEW and/or OEW- or CWM-related environmental contamination within the OSR FUDS as a result of Department of Defense (DoD) activities during World War I. These activities and findings, excluding the

Captain Rankin Area, which is still under investigation, are summarized in the RI Report.

2.3 Highlights of Community Participation

2.3.1 The RI Report was released to the public on 21 March 1995. This document was made available to the public in both the administrative record and in information repositories maintained at the following locations:

- Spring Valley Resident Office;
- Washington, D.C. Public Library - Tenley Branch; and
- Washington, D.C. Public Library - Palisades Branch.

The notice of the availability of this document was published in the Washington Post and Washington Times on 21 March 1995.

2.3.2 To provide the community with reasonable opportunity to submit written and oral comments on the results of the RI for the OSR FUDS, the Army established a public comment period from 21 March 1995 through 30 April 1995. A public meeting was held on 23 March 1995 to present the results of the RI and to answer questions and receive comments. A response to the comments received during this period is included in the Responsiveness Summary, which is part of this Record of Decision (ROD). This decision document presents the determination that no further remedial action is necessary for the OSR FUDS in Washington, D.C., is consistent with CERCLA, as amended by SARA and, to the extent practicable, the National Contingency Plan. The decision for this site is based on the administrative record.

2.4 Scope and Role of OSR FUDS Response Action

2.4.1 The RI of the OSR FUDS investigated the site for the presence of OEW and CWM at the site. This ROD is the final action for addressing the potential presence of OEW and CWM at the OSR FUDS, excluding the Captain Rankin Area. The U.S. Army has concluded that there are no OEW or CWM hazards remaining at the OSR FUDS that warrant further remedial action. Therefore, no further action is required for the OSR FUDS. This ROD serves to document this no further action decision.

2.5 Site Characteristics

2.5.1 The RI of the OSR FUDS focused on areas most likely to contain OEW or to be contaminated by OEW, CWM, or their breakdown products. The RI was aided by the historical record of World War I chemical agent research, development, and testing activities of AUES, including a 1918 aerial photograph of AUES. Geophysical surveys of areas of interest four times greater than the size of points of interest (POIs) along with 10 percent of the remaining area, and follow up intrusive investigations of suspect anomalies, were conducted to find any buried ordnance remaining at the OSR FUDS from the activities at AUES. The soil investigation focused on sampling for chemical agents, associated breakdown products, and OEW residue results most likely to be present at points of interest throughout the OSR FUDS. The following subsections summarize the findings of the RI Report.

2.5.1 Ordnance

2.5.1.1 Since the initial discovery of 141 buried munitions, three intact munitions have been recovered at the OSR FUDS. One was a 75 millimeter (mm) shell found in October 1993 near the original AUES area on the surface. This round was assessed as a suspect chemical round. The second was a Livens projectile partially filled with smoke agent which was excavated under a Time

Critical Removal Action in May 1994. The third was an unfuzed 3-inch Stokes Mortar found near the Spring Valley Resident Office (SVRO) in November 1994, which was apparently an amnesty find left by an unknown individual.

2.5.1.2 Spent OEW discovered within the OSR FUDS included ten 75 mm expended projectiles and numerous fragments within POIs 10/11 and 39 and Zone 9; fuzes, fuze components, and shell fragments in the area of POIs 21/22/23 and 25; and the empty nose cone of a World War I incendiary drop bomb in the American University soccer field (Figure 1).

2.5.2 Environmental Samples

2.5.2.1 No chemical agents, CWM-unique breakdown products, explosives, or explosives breakdown products were found in soil, groundwater, surface water, or sediment samples collected from the OSR FUDS. However, several metals were detected in samples collected from all of these environmental matrices. These analytical results were initially compared to U.S. Environmental Protection Agency (USEPA) Region III risk based concentrations (RBCs) for the protection of human health. Chemicals present at concentrations exceeding screening RBCs were then statistically compared to background, i.e., naturally-occurring concentrations. If the concentration of a chemical exceeded both RBCs and background, the chemical was considered a chemical of potential concern. All chemicals of potential concern were subsequently included in a quantitative risk assessment performed for the OSR FUDS.

2.5.2.2 Results of soil sampling at four POIs in Zones 4 and 5 indicated the presence of metals at concentrations that exceeded RBCs and background concentrations (Table 1). These metals were considered chemicals of potential concern and were evaluated using a quantitative risk assessment in accordance with USEPA's Risk

Assessment Guidance for Superfund. This risk assessment indicated that no health hazard exists due to the presence of these metals.

2.5.2.3 Section 1.8 of the RI Report notes that the results of the investigation of the Captain Rankin Area were not available at the time of the final RI Report. Therefore, the Captain Rankin Area has been excluded from this ROD. The Captain Rankin Area will be addressed under a separate ROD upon completion of the investigation.

TABLE 1

METALS SUBJECTED TO QUANTITATIVE RISK ASSESSMENT
OSR FUDS ROD

POI	Metal
21/22/23	aluminum, beryllium, manganese, nickel, thallium, and vanadium
25	aluminum, selenium, thallium, and vanadium
American University	aluminum, beryllium, cadmium, nickel, and vanadium
Livens Excavation, in Zone 9	beryllium, cadmium, and zinc

2.6 Summary of Site Risks

2.6.1 Methodology and Assumptions

2.6.1.1 Detected chemicals were screened in the risk assessment with respect to background metal concentrations, the presence of essential nutrients, and USEPA Region III RBCs. Chemicals having concentrations that exceeded RBCs and that could not be conclusively attributed to background or other sources were retained as chemicals of potential concern.

2.6.1.2 Residents and construction workers were evaluated for exposure to chemicals in soil. Exposure pathways for the residential scenario included:

- Ingestion of surface soil;
- Dermal contact with surface soil while gardening; and
- Ingestion of homegrown vegetables.

Risks from ingestion of surface soil were addressed quantitatively, while risks from ingestion of homegrown vegetables and dermal contact were addressed qualitatively. Exposure pathways evaluated for the construction worker scenario included:

- Ingestion of surface and subsurface soil;
- Dermal contact with surface and subsurface soil; and
- Particulate inhalation.

Risks from particulate inhalation and ingestion of surface and subsurface soil were addressed quantitatively. Dermal contact and ingestion of homegrown vegetables were addressed qualitatively.

2.6.1.3 Chemical intake was combined with toxicity information to calculate risks. USEPA-generated slope factors and reference doses were used to evaluate carcinogens and noncarcinogens, respectively. For carcinogens, risks were estimated as the incremental probability of an individual developing cancer over a lifetime as a result of exposure to the potential carcinogen. The USEPA-acceptable risk range is from one in ten thousand (10^{-4}) to one in one million (10^{-6}). For noncarcinogens, potential health threats are evaluated by comparing an estimated exposure level over a given period to a reference level (the RfD) below which it is unlikely that even sensitive individuals will experience adverse health effects. This ratio is expressed as a hazard index; if the calculated hazard index is below one, than adverse effects are not expected.

2.6.2 Soil Sampling Results

2.6.2.1 Chemicals of potential concern were identified at POIs 21/22/23 and POI 25 in Zone 4; at American University in Zone 5; and at the LTC Bancroft Area in Zone 9. In Zone 4, the following chemicals of potential concern were identified and evaluated: aluminum, beryllium, manganese, nickel, selenium, thallium, and vanadium. Results of the risk assessment for Zone 4 indicated that no further remedial actions are necessary due to the presence of these metals. In Zone 5, the following chemicals of potential concern were identified and evaluated: aluminum, beryllium, cadmium, nickel, and vanadium. Results of the risk assessment for Zone 5 indicated that no further remedial actions are necessary due to the presence of these metals. In Zone 9, the following chemicals of potential concern were identified and evaluated: beryllium, cadmium, and zinc. Results of the risk assessment for Zone 9 indicated that no further remedial actions are necessary due to the presence of these metals.

2.7 Conclusion

2.7.1 Based on the RI, there are no risks posed by hazardous substances that exceed acceptable risk levels for human health or the environment. Consequently, no further action is needed at the OSR FUDS.

2.8 Explanation of Significant Changes

2.8.1 The RI Report for the OSR FUDS site was released for public comment on 21 March 1995. The RI Report identified no further action as the remedy for the OSR FUDS. The U.S. Army reviewed all written and verbal comments submitted during the public comment period. Upon review of the these comments, it was determined that no significant changes to the no further action determination proposed in the RI Report, were necessary.

3.0 RESPONSIVENESS SUMMARY

3.1 Community Preferences

3.1.1 At the time of the public comment period, the Army proposed that "no further action" was necessary for the OSR FUDS in Washington, D.C. Based on the comments received during the public comment period, the public supports this "no further action" proposal for the OSR FUDS.

3.2 Background on Community Involvement

3.2.1 Community interest in the OSR FUDS began when buried ordnance was discovered in January 1993 at 52nd Court, N.W. Upon definition of the boundaries of the OSR FUDS, the Army divided the FUDS into nine zones to aid subsequent investigative efforts. Because of the large number of people potentially impacted by the site, the Army then solicited members of the local community to become "Zone Captains" to facilitate communication between the Army and the residents of each of the nine zones. Briefings on the progress of the investigation was provided at weekly Zone Captain meetings held at the SVRO. Zone Captains in turn conveyed the information obtained during these meetings to the residents of their respective zones.

3.3 Integration of Comments

3.3.1 Comments raised during the OSR FUDS public comment period on the Remedial Investigation Report are summarized briefly below. Only significant comments are recounted below; other comments pertaining to minor inaccuracies or verbiage changes are not included. The comment period was held from March 21, 1995 to April 30, 1995.

1. W.C. and A.N. Miller Companies stated support for the selection of the no further action strategy for the OSR FUDS, however, they felt that language throughout the report should be amended to more strongly reflect the rationale for the Army's conclusion that no further action is required in the OSR FUDS.
   Army Response: It is stated throughout the risk assessment that the calculated risks are within USEPA's acceptable risk range. Thus, the statement that the results of the risk assessment do not support a need for further remedial action at the OSR FUDS is both accurate and appropriate.

2. W.C. and A.N. Miller Companies expressed concern that several assumptions made in the risk assessment were unduly conservative and resulted in an overstatement of actual risk. However, W.C. and A.N. Miller Companies concluded by stating that since the Army has concluded that no further action is required, it is pointless to revise the risk assessment using less conservative assumptions because the ultimate conclusion would be the same. Finally, W.C. and A.N. Miller Companies stated that, in other regards, the risk assessment is fully supported by sound science.

   Army Response: The risk assessment for the OSR FUDS was conducted in accordance with USEPA's Risk Assessment Guidance for Superfund (RAGS). The conservative assumptions that were made were in accordance with RAGS and with specific guidance received from USEPA Region III.

3. W.C. and A.N. Miller Companies states that the summary in paragraph 3.2.3.2 of the RI report of the three documents that comprise the 1986 Army report "understates the conclusions therein that other munitions could be buried in the area." W.C. and A.N. Miller Companies continue by contending that "It is disingenuous, if not deliberately misleading, to state that 'None of the documents point conclusively to any large scale ordnance burials' and that 'the possibility of buried ordnance was not completely discounted.' Moreover, the RI does not explain that the 1986 report was never disclosed to the public prior to the discovery of munitions on 52nd Court in January of 1993."

   Army Response: The statements made in the RI report and called out by W.C. and A.N. Miller Companies are an accurate summary of the 1986 U.S. Army Toxic and Hazardous Materials Agency (USATHAMA) report. In his 29 October 1986 Memorandum for Record summarizing the Camp

American University historical search, Mr. J.W. Williams, USATHAMA Historian, makes the following statements:

- "The sole source that says munitions were buried is historically suspect because of when written, the contexts in which statements appear, the nature of the source, and inferences from comparisons with other sources."
- "If any materials were buried, they were probably small quantities of laboratory or experimental materials. All sources we found were inconsistent with the notion of substantial quantities of any munitions or the components for munitions existing at [American University]".
- "We could not disprove the burial of some materials on or near Camp American University, and subsurface ordnance could still exist from military uses of [American University]".

Therefore, based on the above information, the statements cited by W.C. and A.N. Miller Companies in paragraph 3.2.3.2 of the RI report are deemed by the Army to be neither "disingenuous" nor "deliberately misleading", but instead to be an accurate summary of the major conclusions of the USATHAMA report. Finally, the RI Report has been amended to state that the 1986 USATHAMA report was not disclosed to the public until discovery of the buried munitions in 1993.

4. W.C. and A.N. Miller Companies concluded their comments by stating that it "supports the Army's conclusion that no risk to human health, safety or the environment exists in the OSR FUDS, and that no further action is therefore warranted.'

Army Response: No response required.

3.4 Remaining Concerns

There were no issues raised during that public comment period that have not been addressed by the Army.

NEWS

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American University Files Claim Against the Army

For Immediate Release: July 13, 2001
Contact: David Taylor 202-885-2146;
Todd Sedmak, 202-885-5950

WASHINGTON, D.C.--American University (AU) today filed an administrative claim with the United States Army seeking damages of $86.6 million arising from the Army's activities on the AU campus during World War I. AU is seeking damages under the Federal Tort Claims Act.

The discovery on campus of the Army's World War I chemical warfare materiel has required University officials to take significant measures to ensure the health and safety of AU students, faculty, and staff; to protect children who attend the University's Child Development Center; and to communicate timely and accurate information to the campus community.

The Army's conduct has already inflicted substantial damage on the University causing significant financial losses. AU now faces the prospect of incurring additional damages in the future for, among other things, costs related to the disruption of normal operations, temporary relocation, construction delays, potential loss of donations, and the University's academic reputation. Damages cited include:

- $8.6 million for past and future expenses for cleanup and remediation;
- $58 million for disruption of normal operations and potential damage to reputation; and
- $20 million for construction delays.

In 1986, prior to construction of the AU sports center, University officials asked the Department of Defense to conduct an investigation to determine whether there was a potential threat to members of the campus community arising from the Army's chemical weapons testing activities during World War I. The U.S. Army Corps of Engineers (USACE) concluded that there was no evidence of the burial of munitions and that no further action was necessary.

In 1993, a construction crew building homes in the nearby Spring Valley area discovered buried World War I-era munitions. In response, the USACE initiated an investigation called "Operation Safe Removal" for the greater Spring Valley area, including the AU campus. The USACE collected and tested soil samples throughout the area, including on the AU campus. In June 1995, the Army issued a Record of Decision concluding that "there are no risks posed by hazardous substances that exceed acceptable risk levels for human health or the environment" in the testing area that included the AU campus. In addition, the Army "found no chemical warfare material, breakdown products or soil contamination that required further action within the site covered by the Record of Decision."

In 1999, the discovery of buried chemical munitions on property owned by the Republic of Korea, located near the AU campus, triggered another round of soil sampling and testing. Based on those test results, the USACE conducted additional testing on the AU campus that revealed elevated levels of arsenic at several sites, including the Child Development Center and the intramural athletic fields. The Corps is continuing to test for arsenic and other chemical agents on campus.

American University's top priority is the safety of the students, faculty, staff, and children of the campus community, and to achieve this, the University has taken and will continue to take all appropriate measures.

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AMERICAN UNIVERSITY

WASHINGTON, DC

MEMORANDUM

March 1, 2001

TO: Campus Community

FROM: Benjamin Ladner BL

SUBJECT: Results of Health Testing for Arsenic

As you know, American University has been involved in an environmental investigation due to the presence of materials left over from World War I research and testing by the U.S. Army. As part of the investigation, we sponsored testing of AU staff, including grounds and maintenance staff, Child Development Center (CDC) staff, and athletes who played on our intramural fields. We also sponsored testing of current students at the Child Development Center, as well as those staff and students who attended the CDC in the past 12 months. This testing was undertaken to ensure that there were no outstanding health concerns regarding the presence of arsenic on the AU campus.

In the interest of keeping the entire campus community informed about the testing results, I have attached a memo from our expert, Dr. Paul Chrostowski, who has informed me that the tests indicate that no one in the test group had elevated levels of arsenic in their system. In most cases, the tests detected no arsenic whatsoever. In some cases, trace amounts of arsenic were detected, but these levels were within the ranges that normally occur in urine or hair among people. The American University community is gratified and relieved by this very good news.

Because we want to continue to answer any questions and address any concerns that individuals may have, we will hold meetings early next week for the individuals who were tested. University officials and Dr. Paul Chrostowski, our environmental health scientist, will attend these meetings to provide an overview of the testing results. These meetings will be opportunities to exchange information and discuss appropriate next steps.

In order to keep the campus community informed of activities regarding the Corps of Engineers project at AU, we will continue to issue periodic updates. In the meantime, please feel free to call the information line that has been set up specifically for this project at 202-885-2020 with any questions you may have. We have also established a website that contains information and University fact sheets about the Corps of Engineers Project. You can access that website at www.american.edu/usace.

CHROSTOWSKI, PEARSALL, FOSTER, DURDA & PREZIOSI

Scientific Research and Consulting

March 1, 2001

To: Benjamin Ladner
President, American University

From: Paul Chrostowski, Ph.D.

The university-sponsored testing was conducted by Washington Occupational Health Associates (WOHA) on February 10 and 15, 2001. The testing examined several groups of participants: the grounds and maintenance staff, staff and students from the CDC, staff and students who attended the CDC in the past 12 months, and athletes who play on the intramural fields. Most people supplied samples of hair to be tested. A few individuals provided urine samples.

To protect the medical privacy of the participants in the testing, the university has not, and will not, receive individual results for each participant. WOHA has, however, provided a verbal summary of the data thus far to the University. It is our understanding that most of the results showed nondetectable levels of arsenic. In some cases, trace amounts of arsenic were detected, but even these results were within the ranges that normally occur in urine or hair among people.

Based on these test results and the results of soil sampling tests near the CDC, I have concluded that testing participants were not exposed to excess levels of arsenic and, therefore, are not likely to experience adverse health effects associated with arsenic exposure. I plan to prepare additional information once I receive the written summary from WOHA.

I am available to discuss these summary results with you. I will also attend the meetings you have set up over the next week to discuss the results with the groups of participants. Please let me know if I can be of further assistance.

WASHINGTON OCCUPATIONAL HEALTH ASSOCIATES, INC.
Suite 410
1120 19th Street, N.W.
Washington, D.C. 20036

Consultants in Occupational and Environmental Health

Telephone (202) 463-6698
Telecopier (202) 223-6525

HEALTH CONSULTATION

ARSENIC EXPOSURE INVESTIGATION AT AMERICAN UNIVERSITY

WASHINGTON, D.C.

March 26, 2001

Prepared by:

Kenneth H. Chase, M.D., F.A.C.O.E.M.
Christine A. Schroeder, R.N., B.S.N.
Anish K. Ranpuria, M.P.H.

Executive Summary

The U.S. Army Corps of Engineers discovered elevated levels of arsenic in the soil in selected areas of American University (AU) including the Child Development Center (CDC). In response, the University offered testing to select groups of individuals who could potentially have been in contact with soil containing elevated levels of arsenic. The testing examined several groups of participants from the CDC, including staff and students who attended the CDC in the past 12 months, maintenance and grounds crew members, and athletes who play on the intramural fields. A total of 41 adults and 27 children provided hair and/or urine samples for arsenic testing.

Hair samples were provided by 66 individuals (39 adults and 27 children). 63 individuals had non-detectable levels of arsenic and 3 individuals had detectable levels (0.12 mg/kg (ppm), 0.09 mg/kg, and 0.12 mg/kg), but were well within the normal range (0.08 mg/kg to 0.69 mg/kg). Urine samples were provided by 4 adults. All had arsenic levels within normal reporting range (< 0.05 mg/L).

The results of the testing program at American University determined that there are no elevated levels of arsenic in the population tested.

Background

The U.S. Army Corps of Engineers has been conducting an on-site search for chemical and ordinance contaminants left behind at AU and surrounding areas during and immediately after World War I [1]. Through this search, several chemicals were discovered on campus grounds and the levels are currently being quantified. One of the chemicals of concern and in elevated concentrations was arsenic. Arsenic was initially found in composite samples at the Child Development Center (CDC) play area at 31 mg/kg. Further analysis of discrete samples revealed that the average concentration of arsenic in this soil was approximately 60 mg/kg with a range up to 498 mg/kg. Additional testing by AU has confirmed the distribution and levels of arsenic in soil adjacent to the CDC.

Inorganic arsenic is found throughout the environment. The Environmental Protection Agency (EPA) has determined that the background level of arsenic in the Spring Valley Area is 13 ppm (95th percentile). Elevated levels of inorganic arsenic may be present in soil, either from natural mineral deposits or contamination from human activities, which may lead to ingestion exposure[2]. Exposure depends on the intensity, frequency, and duration of contact with the soil as well as the bioavailability of arsenic. Biological monitoring may be used to determine if potential exposure may be translated into actual exposure. Measurement of inorganic arsenic exposure in urine is the best way to determine recent exposure (within the last 1 to 2 days), while measuring inorganic arsenic in hair or fingernails may be used to detect chronic exposures within the past six months to one year [2,3].

Reported background and elevated levels of arsenic in human urine and hair are highly variable and depend on many factors including individual diets. The Agency for

Toxic Substances and Disease Registry (ATSDR) has noted that normal levels of arsenic in hair or nails are less than 1 mg/kg[2], National Medical Services Laboratories, who performed the analysis for arsenic in hair reports a normal background level of 0.08 mg/kg to 0.69 mg/kg. Other levels have been reported as follows in the literature: urine arsenic concentrations of unexposed persons may range from 0.01-0.30 mg/L; people who ate a seafood meal developed maximal urine arsenic concentrations of 0.2-1.7 mg/L within 4 hours[4]. Concentrations in hair of normal persons are less than 1 mg/kg, whereas concentrations in subjects with chronic poisoning are often in the range of 1-5 mg/kg and may range as high as 47 mg/kg[4].

Target Population

AU conducted a comparative exposure analysis and identified three groups that had the highest possibility for potential exposure. These included children who attended CDC, grounds/maintenance crew members who work with potentially contaminated soil, and student rugby players who could come into contact with soil on the intramural fields. AU notified approximately 175 individuals belonging to these groups and offered them the opportunity to be tested.

Sixty-eight individuals had their hair and/or urine tested for arsenic exposure at AU. The sample size was comprised of 20 AU grounds crew/staff members, 27 children that currently attend the CDC or have attended the CDC in the last 12 months, and 21 AU students who play on the rugby team. Testing was offered on two separate days. One subject is currently living abroad and was tested at a local clinic in Chile.

Methodology

Washington Occupational Health Associates, Inc. (WOHA) collected hair and urine samples at American University on February 10 and 15, 2001. Sixty-six people provided hair samples. Each participant (or parent of a child participant) was provided a consent form and questionnaire to complete (*See Exhibit).* The samples were collected from a standardized protocol recommended by the ATSDR. Care was taken to ensure that participants remained comfortable during the testing.

Each technician practiced the recommended hair collection procedure:

1. Find an appropriate spot for hair collection at the nape of the neck and as close to the scalp as possible or from other sites on the head when the nape does not yield the desired length and amount of hair for testing. Tightly twist a bundle of hair, making sure that the bundle is approximately ¼ of an inch in diameter and up to 2 inches in length.
2. While holding the tightly twisted hair in one hand, cut the twisted hair bundle as close to the scalp as possible.
3. Place the hair in the hair collection container provided and send to the lab for analysis.

Random urine samples were collected from 2 individuals that did not have enough hair to sample and from 2 individuals that volunteered for urine testing as well as hair testing.

An American Medical Laboratories (AML) courier picked up all hair and urine samples on the days of testing and these samples were delivered to AML for analysis. AML tested all urine samples for arsenic and forwarded all hair samples to National Medical Services Laboratory for analysis. AML reported all results directly to WOHA.

Analysis

Urine: urine arsenic was determined using ICP-MS (inductively coupled plasma-mass spectrometry) testing with a detection limit of 0.010 mg/L.

Hair: prior to testing, the hair was washed twice with a non-ionic detergent and twice rinsed with de-ionized water. The hair samples were then analyzed for arsenic using graphite furnace atomic absorption spectroscopy. The detection limit range was 0.03 – 3.0 mg/kg of hair.

Results

Hair samples were collected from 39 adults and 27 children. Detectable levels of arsenic were reported in 3 children (0.09 mg/kg, 0.12 mg/kg, and 0.12 mg/kg) of the total 66 hair samples collected. Detectable limits in these individuals ranged from 0.03 – 3.0 mg/kg of hair. For the remaining 63 individuals, no arsenic was detected above the reporting limit range of 0.08 to 0.69 mg/kg of hair. The reporting limit range varied due to the varying volume of hair sample received from each individual.

The mean (average) hair arsenic concentration was 0.053 mg/kg and the median concentration was 0.05 mg/kg. For these calculations, the arsenic concentration of a non-detectable sample was assumed to be one-half the detection limit of the sample. This is consistent with the method used by ATSDR in their exposure investigation.

Urine samples were collected from 4 adults. Detectable levels of arsenic were reported in all four specimens (0.017 mg/L, 0.022 mg/L, 0.030 mg/L, and 0.050 mg/L). All reported detectable values fell at or below the range limit of less than 0.050 mg/L of urine.

See Exhibit of Results.

Reporting

WOHA staff tabulated the results of the 68 samples for qualitative analysis and provided each individual with a notification letter regarding their result. In order to protect the privacy of the participants in the testing, individual results were not and will not be released to American University. A WOHA staff member distributed the letters

directly to the individuals on March 1, 2001. Dr. Kenneth Chase, Anish Ranpuria, and Christy Schroeder were available to meet with individuals regarding their results in meetings held on March 5th, 2001.

Conclusion

Based on the sampling performed by WOHA, hair and urine arsenic concentrations were not elevated in the 41 adults and 27 children who participated in this testing program. The results were within the ranges reported for unexposed populations. WOHA's testing is consistent with the results obtained by the Agency for Toxic Substances and Disease Registry (ATSDR) testing program. ATSDR concluded that hair arsenic concentrations were not elevated in the 28 children and 4 adults who participated in their investigation[5].

If you have any questions, regarding this report, please do not hesitate to contact us.

Sincerely,

Kenneth H. Chase, MD, FACOEM
President

Christy Schroeder, RN, BSN
Research Associate

Anish K. Ranpuria, MPH

P:AMU-01\SummaryReport

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5. Agency for Toxic Substances and Disease Registry (ATSDR) 2001. Health Consultation: Exposure Investigation, Spring Valley Chemical Munitions (a/k/a American University Child Development Center). Washington D.C. March 8, 2001.

ATTACHMENTS/EXHIBITS

WASHINGTON OCCUPATIONAL HEALTH ASSOCIATES, INC.
Suite 410
1120 19th Street, N.W.
Washington, D.C. 20036

Consultants in Occupational and Environmental Health

Telephone (202) 463-6698
Telecopier (202) 223-6525

Biological Monitoring Questionnaire
American University

This information will help you and the testing team to understand potential routes of exposure to arsenic. The information in this form is confidential unless you authorize its release.

Name of person giving hair or urine sample _____

Date hair or urine sample given _____

Birth date _____ Sex _____

Relationship to University (student/staff/faculty, etc.) _____

Dates of employment or attendance at University _____

University staff job description _____

University faculty department _____

1. Is your hair permed? Yes No
2. Have you used medicated shampoo in the past week? Yes No
3. Do you work or are employed with:
   a. Wood preservatives? Yes No
   b. Pesticides? Yes No
   c. Chemical analysis? Yes No
   d. Chemical fertilizer? Yes No
4. Have you eaten fish, shellfish, or seaweed (including kelp) during the past two weeks?
   Yes No
5. If the answer to No. 4 is "yes", can you estimate how much? _____
6. Have you or do you use herbal preparations or teas? Yes No

   Name of preparation _____

P:AMU-01\biologicalmonitoringquestionnaire

7. If you are a student athlete, please list the sport(s) in which you participate and dates of participation:

_____

_____

8. If you are engaged in teaching or research involving chemicals, please briefly describe the nature of the work:

_____

_____

9. If you work in the physical plant department, please describe your job:

_____

_____

WASHINGTON OCCUPATIONAL HEALTH ASSOCIATES, INC.
Suite 410
1120 19th Street, N.W.
Washington, D.C. 20036

Consultants in Occupational and Environmental Health

Telephone (202) 463-6698
Telecopier (202) 223-6525

Consent for Biological Monitoring
American University

American University has decided to make testing for potential arsenic exposure available to students, faculty, and staff for the University who has had the potential for exposure to soil containing arsenic. The testing involves sampling and chemical analysis of a sample of hair or urine from each participant. This testing will be performed at no cost to you. The University has retained the services of an independent consulting firm, Washington Occupational Health Associates (WOHA) who will collect the actual samples. Your signature on the attached consent form will authorize American University to conduct the test and release the results to you.

If your hair will be tested, a technician will cut a hair sample of about 0.5 grams from the back of your head (nape of the neck) using a pair of scissors. This mass of hair is equal to a bundle of hair about ¼ inch in diameter and 2 inches long. There is no physical pain or discomfort associated with this procedure. This hair sample will be tested only for arsenic.

If your urine will be tested, you will be given a container from the technician and asked to provide a sample. This urine sample will be tested only for arsenic.

Regardless of which test method is used, you will also be asked to fill out a short questionnaire to describe factors relating to potential arsenic exposure.

Participation in this testing is totally voluntary and you may choose to stop at any time, even after signing this consent form.

WOHA will provide you with your test results and an explanation of their significance. The test results will be mailed to you. The results of this test are an indicator of possible exposure to arsenic. These test results are not an indicator of disease and cannot be used to predict the future occurrence of disease.

If you are not a University employee, your individual test results will be maintained under absolute confidentiality. Summary statistics of the tests that do not reveal individual results will be made available to American University, the federal Agency for Toxic Substances and Disease Registry (ATSDR), and the Washington DC Department of Health to determine if any further public health or industrial hygiene intervention steps are necessary.

For University employees, individual test results will not be made available to the University unless your permission is granted for their release. Individual test results will be maintained under absolute confidentiality. Summary statistics of the tests that do not reveal individual results will be made available to American University, the federal Agency for Toxic Substances and Disease Registry (ATSDR), and the Washington DC Department of Health to determine if any further public health or industrial hygiene intervention steps are necessary. If you agree to release the results to the University, these results will be maintained in a confidential supplemental file in the Human Resources Department. These test results will not be included in your personnel file.

For further information, please call the American University information line at (202) 885-2020.

Participant Consent: I am 18 years of age or older and legally competent to understand American University's arsenic exposure testing program. I have read the description of this testing program. All of my questions have been satisfactorily answered. I voluntarily request I be included in this testing program.

Name (print) _____

Age _____ Sex _____

Nature of relationship with AU (student/staff/faculty, etc.) _____

Dates of attendance/employment at AU _____

Mailing Address _____

_____

_____

Telephone number _____

Signature _____

Witness _____ Date _____

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Washington, D.C. 20036

Consultants in Occupational and Environmental Health

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Telecopier (202) 223-6525

Hair Sampling Questionnaire
American University Child Development Center

This information will help you and the testing team to understand potential routes of exposure to arsenic. The information in this form is confidential unless you authorize its release.

Name of child giving hair sample _____

Date hair sample given _____

Name of person filling out questionnaire and relationship to child:

_____

Birth date of child _____ Sex of child _____

1. Is your child's hair permed ? Yes No

2. Has your child used medicated shampoo in the past week? Yes No

3. Do you or any adults in your home work or are employed with:

   a. Wood preservatives? Yes No

   b. Pesticides? Yes No

   c. Chemical analysis? Yes No

4. Has your child eaten fish, shellfish, or seaweed (including kelp) during the past two weeks?
   Yes No

5. If the answer to No. 4 is "yes", can you estimate how much? _____

6. Have you or do you give your child herbal preparations or teas? Yes No

   Name of preparation _____

7. Does your child (now or in the past) eat non-food items (dirt, snow, paper, etc.)
   Yes No

8. If your answer to No. 7 is "yes", please name the item and estimate how much his/her daily consumption is _____

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Washington, D.C. 20036

Consultants in Occupational and Environmental Health

Telephone (202) 463-6698
Telecopier (202) 223-6525

Consent for Hair Testing
American University Child Development Center

American University has decided to make testing for potential arsenic exposure available to children who have attended the Child Development Center (CDC) within the past twelve months. The testing involves sampling and chemical analysis of a sample of hair from each child. This testing will be performed at no cost to you. The University has retained the services of an independent consulting firm, Washington Occupational Health Associates (WOHA), who will collect the actual samples. The signature of a parent or legal guardian on the attached consent form will authorize WOHA to conduct the test and release the results to you.

A technician will cut a hair sample of about 0.5 grams from the back of the head (nape of the neck) of each child using a pair of scissors. This mass of hair is equal to a bundle of hair about ¼ inch in diameter and 2 inches long. There is no physical pain or discomfort associated with this procedure. This hair sample will be tested only for arsenic.

Participation in this testing is totally voluntary and you may choose to stop at any time, even after signing this consent form.

WOHA will provide you with your child's test results and an explanation of their significance. The results will be mailed to you. The results of this test are an indicator of possible exposure to arsenic. These test results are not an indicator of disease and cannot be used to predict the future occurrence of disease.

Individual test results will not be made available to American University or to the public and will be maintained under absolute confidentiality unless parental permission is granted for their release. Summary statistics of the tests that do not reveal individual results will be made available to American University, the Agency for Toxic Substances and Disease Registry (ATSDR), and the DC Department of Health to determine if any further public health intervention steps are necessary. We want to stress that these statistics are summaries only, and that your confidentiality will be maintained.

For further information, please call the American University information line at (202) 885-2020.

Participant Consent: I am the parent or legal guardian of the child indicated below. I have read the description of this testing program. All of my questions have been satisfactorily answered. I voluntarily request that my child be included in this testing program.

Child's name (print) _____

Age _____ Sex _____

Dates of attendance at CDC _____

Parent/Guardian's name (print) _____

Mailing Address _____

_____

_____

Telephone number _____

Signature _____

Witness _____ Date _____

DATE OF COLLECTION	SPECIMEN TYPE	PERSONNEL TYPE	RESULTS
2/10/01	Hair	Child (CDC)	0.12 mcg/g
2/10/01	Hair	Child (CDC)	None Detected
2/10/01	Hair	Grounds Crew	None Detected
2/10/01	Hair	Child (CDC)	None Detected
2/10/01	Hair	Child (CDC)	None Detected
2/10/01	Hair	Child (CDC)	None Detected
2/10/01	Hair	Student/Rugby Player	None Detected
2/10/01	Hair	Child (CDC)	None Detected
2/10/01	Hair	Child (CDC)	0.09 mcg/g
2/10/01	Hair	Student/Rugby Player	None Detected
2/15/01	Hair	Grounds Crew	None Detected
2/15/01	Hair	Grounds Crew	None Detected
2/15/01	Hair	Grounds Crew	None Detected
2/15/01	Hair	Grounds Crew	None Detected
2/15/01	Hair	Grounds Crew	None Detected
2/15/01	Hair	Child (CDC)	None Detected
2/15/01	Hair	Child (CDC)	None Detected
2/15/01	Hair	Child (CDC)	None Detected
2/15/01	Hair	Grounds Crew	None Detected
2/15/01	Hair	Grounds Crew	None Detected
2/15/01	Hair	Student/Rugby Player	None Detected
2/15/01	Hair	Child (CDC)	None Detected
2/15/01	Hair	Student/Rugby Player	None Detected
2/15/01	Hair	Staff (CDC)	None Detected
2/15/01	Hair	Student/Rugby Player	None Detected
2/15/01	Hair	Child (CDC)	None Detected
2/15/01	Hair	Child (CDC)	None Detected
2/15/01	Hair	Child (CDC)	None Detected
2/15/01	Urine	Grounds Crew	22 ug/L Creatinine: 163 mg/dL Arsenic Creatinine Ratio: 13.5

DATE OF COLLECTION	SPECIMEN TYPE	PERSONNEL TYPE	RESULTS
02/10/01	Hair	Student/Rugby Player	None Detected
02/10/01	Hair	Student/Rugby Player	None Detected
2/10/01	Hair	Student/Rugby Player	None Detected
2/10/01	Hair	Student/Rugby Player	None Detected
2/10/01	Hair	Grounds Crew	None Detected
2/10/01	Hair	Student/Rugby Player	None Detected
2/10/01	Hair	Child (CDC)	None Detected
2/10/01	Hair	Child (CDC)	None Detected
2/10/01	Hair	Grounds Crew	None Detected
2/10/01	Hair	Child (CDC)	None Detected
2/10/01	Hair	Student/Rugby Player	None Detected
2/10/01	Hair	Child (CDC)	None Detected
2/10/01	Hair	Child (CDC)	None Detected
2/10/01	Hair	Child (CDC)	None Detected
02/15/01	Hair	Child (CDC)	None Detected
02/15/01	Hair	Child (CDC)	0.12 mcg/g
02/15/01	Hair	Child (CDC)	None Detected
02/15/01	Hair	Child (CDC)	None Detected
02/15/01	Hair	Grounds Crew	None Detected
2/15/01	Hair	Student/Rugby Player	None Detected
2/15/01	Hair Urine	Grounds Crew	None Detected 17 ug/L Creatinine: 133 mg/dL Arsenic/Creatinine Ratio: 12.8
2/15/01	Hair	Student/Rugby Player	None Detected
2/15/01	Hair Urine	Grounds Crew	None Detected 50 ug/L Creatinine: 170 mg/dL Arsenic/Creatinine Ratio: 29.4
2/15/01	Hair	Student/Rugby Player	None Detected

DATE OF COLLECTION	SPECIMEN TYPE	PERSONNEL TYPE	RESULTS
2/15/01	Hair	Student/Rugby Player	None Detected
2/15/01	Hair	Child (CDC)	None Detected
2/15/01	Hair	Student/Rugby Player	None Detected
2/15/01	Hair	Student/Rugby Player	None Detected
2/15/01	Hair	Grounds Crew	None Detected
2/15/01	Urine	Grounds Crew	30 ug/L Creatinine: 98 mg/dL Arsenic/Creatinine Ratio: 30.6
2/15/01	Hair	Student/Rugby Player	None Detected
2/15/01	Hair	Child (CDC)	None Detected
2/15/01	Hair	Grounds Crew	None Detected
2/15/01	Hair	Child (CDC)	None Detected
2/15/01	Hair	Student/Rugby Player	None Detected
2/15/01	Hair	Student/Rugby Player	None Detected
2/15/01	Hair	Grounds Crew	None Detected
2/15/01	Hair	Grounds Crew	None Detected
2/27/01	Hair	Student	None Detected

Mrs. MORELLA. I'm pleased to recognize Lewis Walker, former Deputy Assistant Secretary of the Army for Environmental Safety and Occupational Health. Mr. Walker.

Mr. WALKER. Yes, Madam Chairwoman and Congresswoman Norton, I am Lewis D. Walker, and I was the former Deputy Assistant Secretary of the Army for Environment, Safety and Occupational Health. I retired from the Federal Government in June 1995 first on medical leave and then formal retirement on January 1, 1996. I was in the position from April 20, 1980, to the time of my retirement.

With regard to the Spring Valley area, it was one of my restoration responsibilities that the Army addressed during my tenure.

In 1986, Army assisted the American University with its construction program by having Army emergency disposal units survey the constructionsites. With nothing found at the sites down to considerable depth, the construction projects were completed successfully. Army then conducted a review of the area on the possibility of unexploded ordnance in the area and found no information that would require further study.

Later, in 1993, World War I munitions were discovered in the Spring Valley area. The Army removed the munitions and initiated a restoration program for the 600-acre area. Over $20 million were spent on this project by the time I retired in 1995.

Madam Chairwoman, this concludes my brief statement. I will be glad to respond to the questions to the extent that I can remember the details, and thank you for inviting me to testify today.

Mrs. MORELLA. Thank you, Mr. Walker.

[The prepared statement of Mr. Walker follows:]

Statement
by
Lewis D. Walker

Before the Committee on Government Reform
United States House of Representatives
July 27, 2001

Madam Chairwoman:

I am Lewis D. Walker, former Deputy Assistant Secretary of the Army (Environment, Safety and Occupational Health). I retired from the Federal Government in June 1995, first on medical leave and then formal retirement on January 1, 1996.

I was in that position from April 20, 1980 to the time of my retirement. With regard to the Spring Valley area it was one of many restoration projects that the Army addressed during my tenure.

In 1986, Army assisted the American University with its construction program by having Army emergency ordnance disposal (EOD) units survey the construction sites. With nothing found at the sites down to a considerable depth, the construction projects were completed successfully. Army then conducted a review of the area on the possibility of unexploded ordnance in the area and found no information that would require further study.

Later in 1993, World War I munitions were discovered in Spring Valley. The Army removed the munitions and initiated a restoration program for the 600-acre area. Over $20 million were spent on this project by the time I retired in 1995.

Madam Chairwoman, that concludes my brief statement. I will be glad to respond to questions to the extent that I can remember the details.

Mrs. MORELLA. Now I recognize Francis Reardon, Auditor General of the Army, the U.S. Army Audit Agency. Mr. Reardon.

Mr. REARDON. Thank you, Chairman Morella, Congresswoman Norton. I am Francis Reardon, the Army's Auditor General. With me is Stephen Kiefer, the Agency's Deputy Auditor General for Installation Management Audits and the senior agency official who worked on our 1995 effort concerning Spring Valley.

The Agency's efforts in regard to Spring Valley operations are limited to a 1995 review performed at the request of the U.S. Army Claims Service. The Claims Service asked for audit assistance in assessing the validity of a 1995 claim brought against the Army by the Miller Co. for about $15 million in damages, losses and expenses the developer said it suffered as a result of the Army's alleged negligence in burying chemical weapons. The Agency began its review on April 17, 1995, by meeting with the onsite project manager for the U.S. Army Corps of Engineers Baltimore District and reviewing available data, such as the results of prior surveys and research efforts by the Army and other government agencies, claims and correspondence provided by the Miller Co., relevant and appropriate laws and regulations applicable at the time of experimentation operations and in 1986.

During the process of this review, audit staff members held an entrance conference on June 6, 1995, with Corps of Engineers headquarters personnel.

We have noted the recent press accounts concerning Army audits have apparently mistaken the June 6, 1995, briefing charts and the interim results reflected therein as a report. This was not the case. Rather, the charts simply reflect the auditor's review at that stage of the ongoing review. It should be recognized that additional work occurred after the entrance briefing with the Corps of Engineers headquarters personnel. After the additional work, which included review of documents, applicable laws, and military regulations, conversation with subject matter experts, and a legal review by the Agency's chief counsel, we reached our final conclusions.

On July 27, 1995, the Agency issued Report 95–774 addressing the claim by the Spring Valley real estate developer. The Agency concluded that the Army had no legal or regulatory requirement to formally notify local authorities or third parties in 1986 because Army researchers were unable to conclusively determine that chemical weapons had ever been buried at Spring Valley. The Army fulfilled its responsibilities during World War I by storing and disposing of chemical weapons in accordance with laws and regulations applicable at the time. The real estate developer should have known about the presence of the experiment station and the possibility that dangerous materials existed, and at least $11 million of the real estate developer's $15 million claim was without merit, and due to a lack of documentation from the Miller Co., the remaining $4 million could not be evaluated.

Mr. Kiefer and I appreciate the opportunity to testify and provide the Army audit agency results concerning Spring Valley. That concludes my statement, Madam Chairwoman.

Mrs. MORELLA. Thank you, Mr. Reardon.

[The prepared statement of Mr. Reardon follows:]

NOT FOR PUBLICATION UNTIL
RELEASED BY THE SUBCOMMITTEE

Statement for

Mr. Francis E. Reardon

Auditor General of the Army

Before the

Subcommittee on the District of Columbia

Committee on Government Reform

July 27, 2001

NOT FOR PUBLICATION UNTIL
RELEASED BY THE SUBCOMMITTEE

DEPARTMENT OF THE ARMY

STATEMENT BY MR. FRANCIS E. REARDON, AUDITOR GENERAL OF THE ARMY

BEFORE THE

COMMITTEE ON GOVERNMENT REFORM

SUBCOMMITTEE ON THE DISTRICT OF COLUMBIA

HEARING ON SPRING VALLEY

Ms. Chairwoman and members of the Subcommittee:

I am pleased to provide a written statement discussing the U.S. Army Audit Agency's efforts related to a claim filed by a real estate developer for damages resulting from buried chemical weapons at Spring Valley, Washington, DC.

As the Army's Auditor General, I am responsible for the worldwide operations of the U.S. Army Audit Agency. I report to the Secretary of the Army and I am responsive to the Army's Chief of Staff. The Agency provides objective and independent audit and consulting services that help Army leaders throughout the world make informed decisions, resolve issues, use resources effectively, and satisfy statutory and fiduciary responsibilities. The Agency produces about 500 reports annually.

The Agency's efforts related to Spring Valley operations are limited to a 1995 review performed at the request of the U.S. Army Claims Service. The Agency received a request dated 6 March 1995 from the Chief, Eastern U.S. Tort Branch, U.S. Army Claims Service for audit assistance in assessing the validity of a 1995 claim brought against the U.S. Army by the W.C. & A.N. Miller Companies. The Miller Companies sought about $15 million in damages, losses and expenses it said it suffered as the result of the Army's alleged negligence in burying chemical weapons without warnings or markings and failing to promptly notify the developer. The Claims Service sought our assistance in reviewing and assessing the adequacy of the documentation the developer provided to support the claim.

Four objectives were established for our review:

- Determine whether chemical weapons used at Spring Valley were stored and disposed of in accordance with laws and regulations applicable during the 1918 period of operations.
- Determine whether the Army notified local authorities and third parties in accordance with public laws and regulations applicable at the time Spring Valley was identified as a possible chemical weapons waste site in 1986.
- Determine whether the developer knew or should have known about the presence of chemical ordnance at Spring Valley when it purchased the land.
- Assess the validity of claims against the Army for damages resulting from the Spring Valley cleanup.

The Agency began a review on 17 April 1995 by touring the site and meeting with the project manager from the U.S. Army Corps of Engineers Baltimore District. As with all our engagements, the Agency exercised due diligence in reviewing all available and relevant data to draw supportable conclusions. This data included:

- The results of prior surveys and research efforts by the government and American University.
- American Expeditionary Force regulations in effect at the time of operations at the Experiment Station.
- Press accounts of Spring Valley operations and subsequent area development.
- Environmental Photographic Interpretation Center analyses of aerial photos taken of the site in 1918, 1927 and 1937.
- Leases and land use agreements obtained by the Army at the time of operations.
- Records of area home and property sales.
- Claims and correspondence provided by the Miller Companies.

We also reviewed relevant and appropriate laws and regulations and records of public meetings Corps of Engineers Baltimore District personnel held with community representatives.

On 27 July 1995, the Agency issued two reports addressing our review. The opinions expressed in the reports are those of the U.S. Army Audit Agency. The reports, which are included as attachments to this testimony, are:

- Report SR 95-774, Memorandum for the Chief, Eastern U.S. Tort Branch, U.S. Army Claims Service, Subject: Review of Claim Against the U.S. Army—Spring Valley. In this report the Agency concluded that:

  - The Army fulfilled its responsibilities during World War I by storing and disposing of chemical weapons in accordance with laws and regulations applicable at the time of operations.

  - The Army had no legal or regulatory requirement to formally notify local authorities or third parties in 1986 because Army researchers were unable to conclusively determine that chemical weapons had ever been buried at Spring Valley. At the request of American University, during 1986 the Army tried to determine if chemical weapons were buried in the Spring Valley area. Research at that time could not identify any definite burial sites in Spring Valley and did not support additional research efforts. The Army would have been required to formally notify the public only if the research had confirmed that hazardous chemical weapons existed in Spring Valley. In November 1986 the Toxic and Hazardous Materials Agency provided a final report to U.S. Army Materiel Command, which in turn provided the report to American University. Based on legal interpretations provided by the Agency's Chief Counsel, the Agency concluded that the Army had no further requirements for distribution or dissemination of the report in 1986.

  - The real estate developer should have known about the presence of the Experiment Station and the possibility that dangerous material existed.

  - At least $11 million of the real estate developer's $15 million claim was without merit. We could not assess the validity of the remaining $4 million of the claim because the Miller Companies did not provide all necessary supporting documentation.

- Report SR 95-775, Memorandum for the Commander, U.S. Army Corps of Engineers, Subject: Review of Claim Against the U.S. Army—Spring Valley. This report summarized actions we believed the Corps could take to improve its position in adjudicating future claims. For example, because requests for lot reports and construction permits were not date-stamped, Corps managers could neither prove nor disprove claims of processing delays. And unlimited and unsupervised public access to records

and information created an unnecessary risk that documents could be lost.

On July 9 2001, The Washington Post published an article entitled "Evidence of D.C. Toxins Unheeded." The article referenced a 1995 "internal Army audit" and stated that the audit concluded that the Army's failure to notify the District of Columbia and neighbors in 1986 violated Federal laws and military regulations. The Agency believes the article was referring to its review of the Miller Companies claim against the Army.

When the Agency first learned of the article, it initiated a search of Agency records and interviewed personnel assigned to the 1995 effort. Our copies of working papers and files supporting the 1995 review were most probably destroyed in the 1998 timeframe, in accordance with Army and Agency policy and regulatory guidance. Staff members assigned to the engagement have only recollections of the details surrounding the effort beyond those discussed in the reports.

The statement in the article that the Army violated the law apparently was based on a copy of charts for a 6 June 1995 briefing given to Corps Headquarters personnel. One of those charts indicates that, at the time of the briefing, the Agency believed the Army should have formally notified local authorities and third parties in 1986 of the potential existence of buried chemical weapons. This was not our final conclusion in the report. The Agency does not have the working papers and files to support the actual audit trail of how it evolved from the 6 June interim conclusion to the final conclusion in our 27 July report that the Army had followed the law. However, the Agency believes that after the 6 June briefing, auditors performed additional work and discussed the laws and regulations in effect in 1986 with Agency legal counsel and command subject matter experts. As a result, our conclusion changed. According to audit standards, the Agency defers to experts when necessary, such as in obtaining legal opinions. As published in Report SR 95-774, which I have discussed and which the Agency stands by, the Agency concluded that in 1986 the Army had no obligation to formally notify local authorities or third parties because at that time the available evidence of buried chemical weapons at Spring Valley was, at best, inconclusive.

I appreciate the opportunity to testify and provide the Army Audit Agency's viewpoint.

DEPARTMENT OF THE ARMY
SOUTHEASTERN REGION, U.S. ARMY AUDIT AGENCY
7526 CONNELLEY DRIVE, SUITE J
HANOVER, MARYLAND 21076-1663

REPLY TO ATTENTION OF:
SAAG-FEFO-JH

27 JUL 1995

MEMORANDUM THRU Chief, Internal Review and Compliance Office, U.S. Army Corps of Engineers, Baltimore District, PO Box 715, Baltimore, Maryland 21203-1715

FOR Commander, U.S. Army Corps of Engineers

SUBJECT: Review of Claim Against the U.S. Army - Spring Valley, Audit Report: SR 95-775

1. In response to a request for support from the U.S. Army Claims Service, we reviewed a claim the Spring Valley real estate developer submitted for alleged damages resulting from the Army's cleanup operations.

2. During our review, we identified opportunities for improvement in three of the U.S. Army Corps of Engineers' processes. The enclosure discusses our observations and includes some suggested actions. This report isn't subject to the official command-reply process, but we would appreciate knowing what actions you plan to take.

3. I'd like to thank the members of your staff for the courtesies and cooperation they extended to us during our review.

FOR THE DEPUTY AUDITOR GENERAL:

Stephen E. Keffer

STEPHEN E. KEFFER
Regional Auditor General

Encl

Attachment 2 to USAAA Testimony

REVIEW OF CLAIM AGAINST THE U.S. ARMY SUBMITTED BY THE SPRING VALLEY REAL ESTATE DEVELOPER

BACKGROUND

From April to June 1995, we reviewed the claim submitted by W.C. & A.N. Miller Companies, the Spring Valley real estate developer. Miller Companies claimed $15,135,040 in damages, losses, and expenses caused by the Army's alleged negligence or wrongful acts or omissions. Miller Companies claimed the damages resulted from the Army's burial of chemical munitions without warnings or markings during World War I.

Throughout the project, the U.S. Army Corps of Engineers expended every effort to alleviate the impact of the project on the lives of the community and successfully established and maintained communications with the public. Effective procedures included:

- Interim lot reports for local residents.
- Construction permit application support for the local community.
- Resident and business reimbursement for evacuation expenses.
- Onsite information trailer and public affairs representative.
- Zone representatives ("captains") and regular zone captains' meetings.

During our review, however, we observed three procedures which we believe the Army could revise to improve its position in adjudicating future claims.

OBSERVATIONS

In this section, we discuss three areas:

- Interim lot report.
- Construction permit application.
- Public access to information and records.

Enclosure

Interim Lot Report

The Spring Valley Resident Office established a process to provide interim lot reports to property owners, within the project area, who entered contracts to sell their property.

An interim lot report was a real estate clearance report issued for an individual property meeting two qualification requirements:

- The sales contract was conditioned upon negative findings with respect to the existence of buried munitions on the property.

- The property was listed with a real estate agency.

The Corps of Engineers investigated and cleared all other property in the project area as part of nine larger zone areas and issued zone clearance reports.

The Resident Office lessened the potential for delays in financing homes in the area by furnishing proof of the status of their property to individual owners who met the criteria. The interim lot report process required a 24-workday timeframe for six steps identified in the process.

Miller Companies claimed the Corps of Engineers delayed issuing interim lot reports and giving the area a clean bill of health from 18 to 208 days. The developer claimed substantial losses resulting from the delays.

Although our review couldn't substantiate or disprove these claims, we determined the project officer could improve the process by establishing two additional steps.

- Date stamp requests for interim lot reports when received.

- Monitor and track the process.

Unless the Army dates the requests when it receives them and monitors and tracks the process, it can't determine if the reports are completed timely or can't disprove claims that settlements were delayed due to the interim lot reports.

Construction Permit Application

The Resident Office also established a process to assist property owners, within the project area, in obtaining construction permits by verifying the status of the property with the local permit bureau.

The Resident Office required two conditions for the property owners to meet before it would give advice about safety hazards from unexploded ordnance during construction activities.

- The District of Columbia made the request.

- The request was for a property within the project area.

The Spring Valley developer claimed that some construction projects were delayed more than 20 weeks while waiting for the Army to provide the status of the property.

We weren't able to get all the documents we needed from Miller Companies to verify its statements regarding the delays.

However, we suggest that the Army establish timeframes for all steps of the process and monitor progress through the system.

Public Access to Information and Records

The Resident Office established and maintained an open-door policy with local residents at the project site in Spring Valley. Project personnel welcomed visitors, including the developer, and went out of their way to provide whatever information the visitors requested.

However, unlimited access to information in the project files provided the developer with many of the documents it used to support its claim against the Army. Moreover, this unlimited access created an unnecessary risk of losing some documents.

The Army should establish policies ensuring a balance between being open and honest with the public and being circumspect. The Army should safeguard the documents to prevent their removal or destruction.

Resident offices could control the public's access to file documents with a variety of procedures. Some suggested actions include:

- Require an Army Public Affairs Office representative be present to explain the records and answer questions from the public.

- Require requests for information and documents be in writing. (The Army could develop a simple form for the requester to use.)

- Require project employees to get documents for the requester and log them out and in.
- Log information copied for visitors.
- Ensure that the Army documents, duplicates, and safeguards the documents.

DEPARTMENT OF THE ARMY
SOUTHEASTERN REGION, U.S. ARMY AUDIT AGENCY
7526 CONNELLEY DRIVE, SUITE I
HANOVER, MARYLAND 21076-1662

REPLY TO
ATTENTION OF:

SAAG-FEFO-JH

27 JUL 1995

MEMORANDUM FOR Chief, Eastern U.S. Tort Branch, U.S. Army Claims Service, OTJAG, Building 441, Llewellyn Avenue, Fort Meade, Maryland 20755-5360

SUBJECT: Review of Claim Against the U.S. Army - Spring Valley, Audit Report: SR 95-774

1. In response to your request, this is the report on our review of the claim filed by the Spring Valley real estate developer.

2. We concluded the claim was without merit. The Army wasn't liable for the developer's alleged damages.

a. The Army fulfilled its responsibilities during World War I by storing and disposing of chemical munitions in accordance with applicable laws and regulations.

b. The Army had no duty to notify local authorities or third parties in 1986, as the developer claimed. Army researchers were unable to conclusively determine that munitions had ever been buried in Spring Valley. In spite of the research results, the Army developed a plan to support American University in the event its construction project unearthed any munitions. The university completed its construction project without finding any munitions.

c. The Army followed all required procedures when munitions were discovered in another part of Spring Valley in 1993.

3. We determined that the developer didn't sell property in Spring Meadows to alleviate cash flow problems caused by the Army's cleanup efforts. The developer had entered negotiations to sell lots in Spring Meadows to other builders 4 months before the discovery of munitions in Spring Valley. Prices offered by the builders for the lots in Spring Meadows reflected market conditions unrelated to Spring Valley.

4. We couldn't determine if any other items claimed were valid because the claimant didn't submit all necessary documents to support the amounts.

Attachment 1 to USAAA Testimony

SAAG-PEPO-JH
SUBJECT: Review of Claim Against the U.S. Army - Spring Valley, Audit Report: SR 95-774.

5. The enclosure describes what we reviewed and our objectives and conclusions. This report contains no recommendations and isn't subject to the official command-reply process, but we would appreciate knowing what actions you plan to take.

6. If further support is required or you have any questions, please call Mr. John Holley at DSN 345-3036 or Commercial (703) 355-3036.

FOR THE DEPUTY AUDITOR GENERAL:

Stephen E. Keefer

Encl

STEPHEN E. KEEFER
Regional Auditor General

CF:
Office of The Judge Advocate General (DAJA-ELL)

REVIEW OF THE CLAIM AGAINST THE U.S. ARMY SUBMITTED BY THE SPRING VALLEY REAL ESTATE DEVELOPER

WHAT WE REVIEWED

From April to June 1995, we reviewed the claim submitted by W.C. & A.N. Miller Companies, the Spring Valley real estate developer. Miller Companies claimed $15,135,040 in damages caused by the Army's negligence, wrongful acts, or omissions. Miller Companies claimed the damages resulted from the Army's burial of chemical munitions without warnings or markings during World War I.

BACKGROUND

In January 1993, while digging a utility trench in the exclusive Washington, DC neighborhood of Spring Valley, a Miller Companies construction crew uncovered several items that turned out to be World War I vintage munitions. The discovery resulted in an intensive month-long operation by the Army to uncover and remove all dangerous items from the immediate area. This effort was Phase I of Operation Safe Removal.

Following the initial Phase I of Operation Safe Removal, the Army undertook a 2-year effort (Phase II of Operation Safe Removal) to identify and investigate all the property formerly occupied by the American University Experimental Station and to remove any dangerous items discovered. During World War I, American University and private property owners in Spring Valley leased land to the War Department's Chemical Warfare Service to conduct chemical weapons research.

The two phases of Operation Safe Removal cost about $22 million.

In January 1995, Miller Companies submitted a claim against the Army. Miller Companies claimed it suffered damages, losses, and expenses costing $15,135,040 because of the Army's alleged negligence in burying hazardous munitions without warnings or markings.

In March 1995, the Office of The Judge Advocate General requested Army Audit Agency support in responding to the developer's claim.

OBJECTIVES AND CONCLUSIONS

We established four objectives for the review. Here are those objectives and our conclusions:

Objective: To determine whether chemical weapons the Army used at Spring Valley were stored and disposed of in accordance with laws and regulations applicable during the 1918 period of operations.

Conclusion: The Army stored and disposed of chemical weapons at Spring Valley in accordance with laws and regulations applicable at the time of operations.

American Expeditionary Force Regulation Number 253, dated November 1917, included two requirements for disposing of gas shells, bombs, and grenades.

- They should be buried in the ground 3- to 3 1/2-feet deep.

- They shouldn't be thrown into water.

The construction crew found the munitions in a pit 6- to 8-feet deep. Also, personnel conducting the cleanup found a sign in the pit stating, "Danger - Poisonous Gas." The sign indicated that, during the time of operations, the Army attempted to warn the public of the hazard.

Objective: To determine whether the Army notified local authorities and third parties in accordance with public laws and regulations applicable at the time Spring Valley was identified as a chemical weapons waste site in 1986.

Conclusion: The Army wasn't required to notify local authorities and third parties when it identified Spring Valley as a possible chemical weapons waste site in 1986.

The Army adequately tried in 1986 to determine if munitions were buried in the Spring Valley area. Research couldn't identify any definite burial sites in

Spring Valley and didn't support further efforts. Only if the research had concluded that hazardous munitions actually existed in Spring Valley would the Army have been required to notify the public.

Pursuant to a proposed construction project in 1986, American University conducted records research that showed the possible existence of munitions burial sites on university grounds. Since its research was inconclusive, the university asked the Secretary of Defense to further research the issue.

To comply with American University's request, the Army's Toxic and Hazardous Materials Agency conducted research. The Agency:

- Searched available records.

- Requested support from the U.S. Environmental Protection Agency's Environmental Photographic Interpretation Center.

The records research found no positive evidence of any burials of munitions at the American University Experimental Station during World War I. However, the researchers also concluded that no recorded evidence existed to disprove the possibility that the Army buried some materials on or near the Experimental Station.

During the World War I period, burial was accepted practice and considered final disposition for chemical munitions. However, some burials weren't documented.

The Environmental Photographic Interpretation Center's research of historical aerial photography of the American University Experimental Station from 1918, 1927, and 1937 showed the possibility of burial sites. The center inferred identification of possible sites from a few discernable photographic characteristics.

The Army concluded that only an actual discovery of munitions would resolve the issue. As a result, the Army suspended efforts in June 1986 to discover buried ordnance at American University and Spring Valley. The Army developed a plan to support American University in the event the university found munitions during the construction project. The university completed the project without finding any munitions.

In November 1986, the Toxic and Hazardous Materials Agency provided a final report of the results of its research to U.S. Army Materiel Command. Army Materiel Command provided the report to American University.

The Army had no further requirements for distribution or dissemination of the report in 1986.

After the passage of the Comprehensive Environmental Restoration, Compensation, and Liability Act (CERCLA) of 1980, the President delegated to DOD the authority to clean up hazardous substances released from active and formerly used DOD sites. The act included abandoned ordnance and explosive waste as hazardous waste.

The Superfund Amendments and Reauthorization Act (SARA) of 1986 (Public Law 99-499, October 1986) enhanced the earlier environmental act and made it more comprehensive. Section 120 of the superfund legislation specifically established the applicability of the environmental requirements to Federal sites.

If the Army's research in 1986 had concluded that the Army had buried hazardous munitions in Spring Valley, Army Materiel Command would have been required to notify the Environmental Protection Agency and ensure the site was added to the Federal Agency Hazardous Waste Compliance Docket. The site would then have been included in the Defense Environmental Restoration Program-Formerly Used Defense Site process.

The Formerly Used Defense Site process would have resulted in a preliminary assessment by the U.S. Army Corps of Engineers to determine the Spring Valley site's eligibility and a further investigation to determine project eligibility. Whenever the Corps of Engineers determined that Spring Valley was an eligible project, then the Army would have been required to notify the public and encourage its participation.

The Army properly followed the Formerly Used Defense Site process when munitions were found in 1993.

Objective: To determine whether the developers knew or should have known about the presence of chemical ordnance at Spring Valley when they purchased the land.

Conclusion: Miller Companies should have known of the presence of the American University Experimental Station and the possibility that dangerous material existed.

In its claim against the Army, Miller Companies state it never knew the land was used for anything but farming. This seems unlikely, considering the fact that Miller Companies owned land and actively developed the area as early as 1912.

It was common knowledge, while the American University Experimental Station existed, that the Army conducted chemical warfare research and related activities in Spring Valley. The Experimental Station comprised an extensive area of about 500 acres.

Photographs of the area from 1918 to 1930 showed that much debris from the Experimental Station was left behind. As late as 1927, a few buildings, remnants of other buildings, and two inground structures with foundations around them still existed. Numerous large ground scars, craters, and impressions of trenches remained.

During the World War I period, the local and university newspapers periodically reported on the Chemical Warfare Service's activities. One August 1918 article reported the accidental gassing of a senator and his family who lived in Spring Valley. Also, newspapers reported in 1950 that the university found a bomb on the grounds during a construction project.

In addition, in 1986, at the request of American University, the Army conducted research into the possibility that it had buried chemical munitions on university property. Meanwhile, the university maintained contact with Spring Valley residents (including Miller Companies) regarding the status of the proposed construction project. It's unlikely that Miller Companies was unaware of the investigations.

Also, when the construction crew discovered the munitions burial pit in January 1993, a 1920 vintage sign was also uncovered warning of "Danger-Poisonous Gas." This sign must have been posted on Miller Companies' property at one time, since it had owned the land since about 1926.

Objective: To assess the validity of claims against the Army for damages resulting from the Spring Valley cleanup.

(Miller Companies' claim is contingent on the Army's negligence with respect to its handling of the Spring Valley operation. While we didn't find any negligence on the Army's part in its handling of Spring Valley, to answer this objective, we evaluated the validity of the amounts claimed by Miller Companies under the assumption that the Army was negligent.)

Conclusion: We couldn't assess the validity of 14 of the 17 line items included in the claim valued at $4,003,655 because Miller Companies didn't provide all necessary

supporting documentation. However, three line items claimed in the Land Investment Division section of the claim valued at $11,131,385 weren't valid.

In the Land Investment Division section of the claim, Miller Companies claimed it was forced to sell land in the Spring Meadows area below market value of $140,000 to $165,000 a lot. Spring Meadows is a subdivision being developed by Miller Companies in Maryland. Miller Companies claimed it had to sell the lots in Spring Meadows to compensate for cash flow problems caused by a slow down in sales brought about by the discovery of munitions in Spring Valley.

In September 1992, 4 months before the discovery of chemical munitions at Spring Valley, Miller Companies entered into negotiations with another commercial real estate developer to market and sell 84 single family building lots in Spring Meadows to other builders. Correspondence between Miller Companies and the other developer showed they did this because there wasn't a market for Miller Companies' higher priced homes in Spring Meadows. Therefore, the sale of the lots in Spring Meadows wasn't related to the discovery of chemical munitions in Spring Valley.

Furthermore, the amounts of the offers submitted by builders, some of which were submitted in 1992 (before the discovery of munitions in Spring Valley), were in the same general range--$90,000 to $110,000. These offers indicated what the builders thought the property was worth at the time--about $50,000 a lot less than Miller Companies claimed.

We needed additional supporting documentation from Miller Companies to assess the remaining 14 line items.

Personnel	$ 203,789
Community Center	16,910
Communications	8,319
Professional Fees	374,492
On-Site Services	21,600
Third Party Claims	112,980
Two Homes/Essentially Complete	84,913
Nine Homes/Under Contract	111,604
Two Homes/Terminated	49,849
Ten Homes/Projected	219,100
Excess Overhead	565,743
Delayed Subdivision Completion	2,153,212
Delayed Profits on New Home Commissions -- Spring Valley	68,766
Delayed Profits From Resale Commissions -- Spring Valley	12,378
Total	$4,003,655

As of the date of this report, Miller Companies hadn't provided all of the requested information.

Although we couldn't fully assess the validity of the claim for the 14 line items, portions of the claim itself appeared to refute the damages. For example, in a October 1994 letter to a third party claimant's attorney, Miller Companies' lawyers stated, "New and used homes have been selling. Accordingly, we can only assume that your clients' inability to market their home is a function of current market conditions."

To further substantiate items in the claim, we requested assistance from the Corps of Engineers' Real Estate Division. We asked division personnel to conduct title and deed searches of the burial pit property and to prepare an indepth trend analysis of Spring Valley real estate values. We made the request in an attempt to further corroborate:

- Whether the deeds mentioned anything about the munitions at the time title was transferred.

- What type of warranties, if any, were given at the time Miller Companies purchased the land.

As of the date of this report, the Corps was unable to comply with our request.

Mrs. MORELLA. You're just on call for questions right and so——

Mr. KIEFER. Right.

Mrs. MORELLA. And so now let me see, I have Colonel Fiala, but are you planning to testify? This is just a brief search for identity. All right. I know you're a special presence.

Raymond Fatz, Deputy Assistant Secretary of the Army for Environment, Safety and Occupational Health. Forgive the interruption. Thank you, sir.

Mr. FATZ. Good afternoon, Madam Chairwoman and Congresswoman Norton. I'm pleased to have this opportunity to appear before you to discuss Army activities at the formerly used defense site [FUDS], located in Spring Valley.

The Army's No. 1 priority for Spring Valley is to protect the health and safety of its residents. I have personally been to the site and have attended public meetings and have listened to the residents' concerns. We share their concerns and are committed to identifying and removing remaining contamination from defense-related activities. Through a collaborative effort with the Environmental Protection Agency, the District of Columbia Department of Health, American University and the community, we will work to ensure that information on our activities is openly communicated and that the cleanup proceeds in a rapid and thorough manner. We will continue to do so until the community is satisfied that the cleanup is complete.

As you know, the Army has initiated a comprehensive sampling program at every residential property in Spring Valley to identify potential contamination. This effort was designed and is being undertaken in close coordination with our regulatory partners and the community. It is my hope that this effort and any necessary follow-on actions will provide a level of comfort to the residents that their property is safe for their families.

This is a highly complex project due to the nature of contamination, the fact that the area is so highly developed and is a residential community. The Army has worked closely with the District of Columbia, the EPA, American University and ATSDR since 1993 to share information and to coordinate plans and future actions. I believe that the Army has been forthright in providing information to all interested parties.

After the discovery of the munitions by a construction crew in 1993, the Army began extensive outreach to the community. We developed a public involvement and response plan that had the specific objectives of keeping the community informed, providing an opportunity to review and comment on work being conducted, and ensuring that the community concerns are integrated into the plans and actions. Today information is shared through community meetings, newsletters, status updates, a Web site and information repository at the Palisades Public Library.

This spring the Army established a restoration advisory board comprised of 14 community members as well as representatives from several involved agencies. The board provides an expanded opportunity for public input to the cleanup process.

The safety and well-being of the community are of paramount importance to the Army. I know that this may be a very difficult time for the Spring Valley residents. As a parent, I understand

their need to have confidence in the safety of their homes and yards. I want to assure you that the Army is committed to restoring that confidence. The Army is applying its best expertise and resources and technology to the situation. We will continue to clean up this site as comprehensively and effectively as possible in coordination with the regulatory agencies and the community.

I believe that the Army acted in good faith at every stage of this project, based on the information and technology available to us at the time. Nonetheless, it is now clear that some contamination went undetected despite our efforts.

Over the past 15 years, we have learned a great deal about the past practices dating back to World War I and how to better detect and characterize contamination. A review of our actions at Spring Valley will ensure that what we have learned is applied as we go forward investigating and remediating this and other sites.

I appreciate the opportunity to testify on this matter of importance. Thank you.

Mrs. MORELLA. Thank you very much.

[The prepared statement of Mr. Fatz follows:]

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Statement for

Mr. Raymond J. Fatz
Deputy Assistant Secretary of the Army
(Environment, Safety and Occupational Health)

Before the
Subcommittee on the District of Columbia

Committee on Government Reform

July 27, 2001

NOT FOR PUBLICATION UNTIL
RELEASED BY THE SUBCOMMITTEE

TESTIMONY
SUBCOMMITTE ON THE DISTRICT OF COLUMBIA
COMMITTEE ON GOVERNMENT REFORM
US HOUSE OF REPRESENTATIVES
JULY 27, 2001

RAYMOND J. FATZ
Deputy Assistant Secretary of the Army
(Environment, Safety and Occupational Health)

I am pleased to have the opportunity to provide to the Committee this written statement describing Army activities at the formerly used defense site (FUDS) located in Spring Valley, District of Columbia. My testimony will discuss the Department of Defense (DoD) FUDS Program generally and our actions in the Spring Valley area. I will summarize the Army's efforts to determine the nature and extent of contamination at the area, the actions we took based on the information we had at the time, and the coordination we had with American University, District and federal regulators, and the community.

The Army's number one priority for Spring Valley is to ensure that any remaining contamination from defense related activities that presents a risk to human health and the environment is quickly identified and eliminated. We share the concerns of the residents and will continue to work with them to rapidly complete a safe and thorough cleanup in their neighborhood. We will continue to work hard to keep the residents and regulators informed of all activities at the site. This hearing is one more way in which we can accomplish this goal.

The Army is cleaning up contamination related to DoD activities at this site during World War I. I continue to believe that past decisions made by the Army at this site were made in good faith and were intended to be in the interest of the community. The Army has continued to respond as new areas of concern and types of contamination are identified, and we will continue to do so until the Army, regulatory agencies, and the community are satisfied that the clean up is complete.

As the Deputy Assistant Secretary of the Army (Environment, Safety and Occupational Health), I oversee environmental, safety, and occupational health programs within the Army, including restoration, compliance, pollution prevention, environmental technology, occupational health and safety. My responsibilities include the development of Army policy and guidance, oversight of programs and their implementation at Army installations all over the world. I was appointed to my current position in 1996.

The Formerly Used Defense Sites (FUDS) Program is part of the Defense Environmental Restoration Program (DERP), which was established by Congress in 1986. Under the DERP, DoD has the authority and funding to respond to releases of hazardous substances that it caused. FUDS are properties that the military services

owned, leased, possessed, or used prior to 1986. The Army is the Department of Defense Executive Agent for the FUDS Program, having responsibility for all sites, regardless of which military service used the site. I am the senior Army official who oversees Executive Agent activities. The Corps of Engineers, which is well-suited to the task because of its expertise, experience, and organizational capabilities, executes the program through its geographic Divisions and Districts.

The FUDS Program inventory includes more than 9,000 properties now owned by other government agencies, corporations, and private individuals. The Army has determined that approximately 2,700 of the 9,000 require cleanup. The Spring Valley area is one of the 2,700 FUDS in the United States and its territories which require cleanup. As for the remaining properties, cleanup was either completed, is not required, or they are not eligible under the program because the contamination that might be present did not result from defense activities. Current property use varies from industrial to residential or public use. The type of response required can vary, including cleanup of hazardous, toxic, or radioactive waste; removal of ordnance and explosives; and building demolition and debris removal.

The Army's mission and objective with regard to the FUDS Program is to identify eligible sites, to assess the need for clean up, and to complete the cleanup. These actions are taken through the following process. First, a site is identified through military records, or it is brought to our attention by regulatory agencies or the public. Second, an extensive search of historical records is conducted to determine whether any military component used the site and the nature of activities. In this inventory phase, an assessment is made of whether DoD activities could have contributed to any contamination present on the property. If the conclusion is yes, an investigation is initiated during which environmental sampling is conducted to determine the nature and extent of DoD contamination and what response actions are appropriate. In the final phase, cleanup of the property to levels that protect human health, safety, and the environment is accomplished, as required. Throughout this process, the Army coordinates with property owners, local and state agencies, the community, and, where appropriate, the U.S. Environmental Protection Agency.

The FUDS Program presents special challenges since DoD no longer owns the property and must obtain the landowner's permission to conduct on-site investigations, studies, and cleanup. In some instances, property owners refuse to grant the necessary rights of access because they fear that the fact of a cleanup will adversely affect their property values. However, at many locations, cleanup of sites has allowed current owners and communities to redevelop property that otherwise could not be accomplished, or enhanced the value by assuring subsequent owners that the property is clear of any contamination.

Determining which of the 2,700 FUDS properties requiring cleanup to address first is a challenge. The Army uses a worst-first prioritization approach, whereby all sites are assessed according to the relative risk they present to human health, safety, and the environment. The Army attempts to first address those sites that present the greatest

risk. Because of the nature of the contamination and its location in a residential community, Spring Valley is one of the highest priority projects within the Program.

Funding for the FUDS Program comes from a specific account appropriated by Congress to the Department of Defense. Funding has remained at a steady level of about $200 million each year. The Program has received "plus ups" from Congress each year for the past five years. These "plus ups" have been used to address urgent needs as they arise, such as Spring Valley. We estimate that the cost to complete the FUDS Program, that is, to complete all response activities at the 2,700 properties, is $12 billion. Thus, at current funding levels, the program will take 50 or more years to complete.

I will now turn my discussion to the former American University Experiment Station, located in what is now known as Spring Valley. We are not aware of any other location where chemical agents were tested in what became a well-established residential neighborhood at the heart of a large metropolitan area such as Washington, DC.

I believe the decisions made at Spring Valley were reasonable at the time they were made, based on the information available at the time and our ability to interpret it. In 1986, at the request of American University, an Army technical support organization reviewed historical records to determine the potential for buried chemical warfare material or munitions at the site. The University was preparing for construction of new facilities and, aware of past use of the property, wanted to ensure safety. An Army review of records concluded that there was little likelihood of large-scale ordnance burial. It did not rule out small-scale burials, but indicated that individual items would be difficult to locate. Analysis of historical photo imagery indicated potential burial sites, but official Army records showed that surplus agents and chemicals had been shipped to Edgewood Arsenal, Maryland, after the American University Experiment Station closed. That information, along with the fact that no munitions had been discovered in the nearly 60 years of farming and development of the property, led the Army to a decision not to pursue further study at the site. Nonetheless, the Army offered an approach that we believed would be of more direct and immediate assistance to American University. This approach was to support the University by providing ordnance specialists throughout the construction project. The Army prepared a support plan and afforded the University an opportunity to provide input before it was finalized. The University completed its project without finding any munitions. The US Army Audit Agency concluded that: "The Army adequately tried in 1986 to determine if munitions were buried in the Spring Valley area."

In 1995, the Army issued the decision that no further action was necessary for all areas of the Spring Valley property, except the Captain Rankin area. This decision was based on the results of an extensive remedial investigation lasting for two years in which geophysical surveys of 492 properties failed to locate any burial pits. In addition, environmental sampling was conducted at 13 areas that included 17 points of interest. In all, over 260 samples were taken. No chemical agents, explosives, or breakdown products were found in any of the soil samples taken. The sample results were

evaluated in a risk assessment that determined that there was no elevated human health risk requiring remedial action. Sampling for a full suite of contaminants conducted by the US Environmental Protection Agency did not identify arsenic at levels requiring action. Comments received during a 30-day public comment period on the Army's remedial investigation report indicated broad support for a No Further Action decision. Parties indicating their support included the Environmental Protection Agency, the District of Columbia government, the community, and the developers of the property, the W.C and A.N. Miller Companies. Consequently, in June 1995, the Army issued a No Further Action decision for this portion of the site. The Army continued to investigate to determine appropriate response action for the Captain Rankin area.

This project was given close attention and priority. For example, the Army responded immediately to the discovery of munitions by a construction crew in 1993; we immediately dispatched a technical escort team; and the team remained on site until it completed its work. The safety and well-being of the community was, at that time, and continues to be of paramount importance to the Army. More recently, the Army further demonstrated its commitment to ensure public health concerns were addressed by expediting the sampling of the American University Child Development Center. When sampling results showed elevated levels of arsenic in soil, hair samples from children and workers were taken, and testing showed that there had been no exposure to arsenic. The Army conducted additional sampling to further define any potential exposure. As the Deputy Assistant Secretary of the Army (Environment, Safety and Occupational Health), I continue to receive regular updates and visit the site to ascertain progress.

The Army acted in good faith at every stage of this project based on the information and technology available to us at the time. Nonetheless, it is now clear that some contamination went undetected despite our efforts. Over the past 15 years, we have learned a great deal about past practices dating back to World War I, and how to better detect and characterize contamination. A review of our actions at Spring Valley will ensure that what we have learned is applied as we go forward investigating and remediating sites.

The Office of the Secretary of Defense's and the Army's policy has continued to evolve and stress the importance of regulatory and community outreach. In 1986, the Army had no information indicating that there was a risk to human health, safety or the environment. The Army Audit Agency reviewed the facts and concluded that, because there was no finding of a release of hazardous substances or materials, the Army was not required to notify local authorities and third parties of its research or findings regarding the property. The Army provided the 1986 report to American University, since it had requested that the Army conduct the research earlier that year.

After the discovery of munitions by a construction crew in 1993, the Army conducted extensive outreach to the community. This included the development of a Public Involvement and Response Plan that had the specific objectives of: keeping the community informed; providing an opportunity to review and comment on work being

conducted; and to ensure than community concerns are integrated into plans and actions. Mechanisms for doing so included site visits, community meetings, newsletters, status updates, a website, and an information repository. The plan established a citizens' advisory group and a geographic zone captains' group. Both groups were residents who volunteered to help the Army keep their neighbors informed of Army activities, and to keep the Army informed of the residents' concerns. In addition, residents were notified by certified letters of the results of any sampling performed on their property and the availability of key documents relating to the geographic zone in which their property was located. The community participated in the cleanup process by appointing a member of the Spring Valley Homeowners' Group to the Technical Review Committee (TRC). The TRC is a team comprised of Army, EPA, state, and local representatives who review progress and make recommendations for future action. In 2001, a Restoration Advisory Board (RAB) comprised of 14 community members as well as representatives from several involved agencies was established in accordance with the wishes of the community. The purpose of the RAB is to provide an expanded opportunity for public input into the cleanup process. The RAB meets monthly, and the meetings are open to the public.

The Army has worked closely with the District of Columbia Department of Health, the Environmental Protection Agency, American University, and the Agency for Toxic Substances and Disease Registry since 1993 to share information and to coordinate plans and future actions. I believe that the Army has been forthright in providing information to all interested parties.

Between 1993 and 2000, the Army spent over $40 million from the FUDS account at the Spring Valley site. The fiscal year 2001 requirement has grown to over $10 million, $7 million more than originally programmed. This increase is primarily due to the expanded sampling at the Child Development Center, the arsenic sampling effort at all 1200 residential properties, and the exploration of suspected burial pits. The Army is shifting resources from other projects to accomplish the work. "Doing the right thing" has always been the Army's intent at the site. The Army will continue to allocate resources to the Spring Valley project as needed to ensure human health and safety are not compromised.

CONCLUSION

In summary, the Spring Valley FUDS is a property where we have found both chemical and non-chemical munitions in a residential area. We are applying our best expertise, resources, and technology to the situation. Cleaning up buried ordnance and other military items is one of the biggest challenges facing the Army's environmental program today. While our use of detection technologies has improved, our ability to distinguish buried munitions items from non-hazardous metal scrap remains a challenge. As a consequence, intrusive investigations often become the most effective approach, however, they are costly and potentially dangerous.

I believe that the Army has tried to make the best decisions in the interests of the residents of Spring Valley that it could. Today, we understand more about past practices and how they may impact the environment, and our technology may be better for detecting contamination that it was even as recently as 1995. We are reviewing our actions at this site to ensure that we continually improve our ability to identify contamination that could pose a risk. We will continue our current program to cleanup this site as comprehensively and effectively as possible, in coordination with regulatory agencies and the community. I believe we have the policies and procedures in place to ensure that this occurs.

The Baltimore District Corps of Engineers is the Army's lead manager for all aspects of the project. I have full confidence in the Baltimore District to manage all aspects of this project including the technical, consultation with regulatory and health agencies and outreach efforts associated with Army responsibilities at Spring Valley. The Baltimore District has a regular on-site presence and is handling day-to-day operations in an exemplary manner. I will continue to monitor progress, and be involved in critical decisions.

I appreciate the opportunity to testify and provide the Army's view.

Mrs. MORELLA. Colonel Fiala.

Colonel FIALA. Good afternoon, Madam Chairman and Congresswoman Norton. I am Colonel Charles J. Fiala, Jr., Commander and District Engineer of the Baltimore District Corps of Engineers. Thank you for inviting me to testify today.

Since February 1993, the Baltimore District Corps of Engineers has been the lead Army agency responsible for site operations in the environmental cleanup at Spring Valley formerly used defense site in Washington, DC. I want to start out by letting you know we share the concerns of the community. I have a large team of dedicated specialists working on this project headed by my site operations officer Major Mike Peloquin, and while the members of his team may not live in Spring Valley, they view themselves as community members, and they work very hard and take their work very seriously.

To illustrate this point I would like to share with you some comments made by one Spring Valley resident when Mike's predecessor Major Brian Plaisted was preparing to retire a few months ago.

This resident said of Brian Plaisted, "He earned the respect of the members of the Spring Valley-Wesley Heights Citizens Association. He has pursued a difficult mission with care and good judgment, always with an eye to the interest of the residents of this area. We thank him for his concern for the well-being of people living near the chemical warfare operations site and for his untiring efforts to keep residents informed."

This mission is a complex mission. There are no easy solutions. We have a large site, over 660 acres, with what now appears to be isolated areas of contamination. Trying to find this contamination is a little like trying to find the proverbial needle in a haystack; difficult, but not impossible. The contamination resulted from activities that took place over 80 years ago when today's strict environmental laws and regulations did not exist. Many of the activities and disposal practices were undocumented, and to complicate the problem further, what was once a large rural area has been extensively developed, so the topography of today is nothing like it was 80 years ago.

A detailed chronology of our involvement is provided in my written testimony and has been adequately already summarized by Mr. Voltaggio earlier.

Right now I would like to emphasize that from the beginning of our involvement in Spring Valley, we have worked hard to make our investigation totally open and to include the community in the process. We are continuing to look for better ways to do this. Our latest effort in this regard was the establishment of the Restoration Advisory Board made up of residents, business interests and the involved government agencies. We've coordinated our actions with the EPA, D.C. government, and other defense agencies and the community. We've conducted sampling, laboratory analyses and risk assessments using the latest sampling techniques and testing protocols. A top priority of the Army has been and continues to be the health and safety of the community and the work force we have on the ground conducting operations.

Past decisions can always be criticized in hindsight, but I believe that they were made in good faith and with the best information available at the time. We will continue to coordinate our work at Spring Valley openly and in full consultation with the community, D.C. government and the EPA. The Army Corps of Engineers has committed to aggressively identifying and removing all hazards associated with past defensive actions in the Spring Valley neighborhood. This commitment is supported by resources from numerous Army agencies, including personal involvement at the Army Secretariat level and by onsite support from the world's foremost experts in ordnance, chemical warfare materiel, and the area of photointerpretation.

Thank you for the opportunity to testify. This concludes my remarks, and I'll be happy to answer your questions.

[The prepared statement of Colonel Fiala follows:]

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Statement for

Colonel Charles J. Fiala, Jr.

Commander

Baltimore District
U.S. Army Corps of Engineers

Before the
Subcommittee on the District of Columbia

Committee on Government Reform

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Testimony by

Colonel Charles J. Fiala, Jr.
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Provided to

Subcommittee on the District of Columbia
Committee on Government Reform
U.S. House of Representatives
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Introduction

This is the written testimony of Colonel Charles J. Fiala, Jr., commander of the Baltimore District of the Army Corps of Engineers. It addresses the Baltimore District's actions in the identification and removal of contamination at the Spring Valley Formerly Used Defense Site in Washington, D.C. Since February 1993, the Baltimore District has been the Army agency responsible for operations at the site. Throughout all of these operations, the top priority of the Baltimore District has been the safety of the community and the workers.

On January 5, 1993, a utility contractor encountered buried ordnance at the site. Based on this find, the Army promptly responded. For the next four weeks, an emergency response force under the command of the U.S. Army Chemical and Biological Defense Command removed buried ordnance from the pit that was uncovered. This emergency response was called Phase I. This response was completed on February 2, 1993, and resulted in the removal of 141 ordnance-related items. Forty-three of these were suspect chemical items. In close coordination with the Environmental Protection Agency (EPA), the city of Washington, D.C., and other DoD agencies, the Baltimore District immediately began a comprehensive investigation of the entire site. On January 6, 1993, Baltimore District initiated real estate and archive search activities to establish site eligibility under the Formerly Used Defense Sites program. On January 12, 1993, a preliminary site visit was conducted to identify

potential areas of concern. On January 19, 1993, Baltimore District issued a report that recommended site eligibility, defined site boundaries, and requested approval to initiate response activities. The comprehensive rewiew was approved on February 2, 1993.

General information about the Spring Valley Formerly Used Defense Site

The Spring Valley site consists of approximately 661 acres in the Northwest section of Washington, D.C. During the World War I era, the Chemical Warfare Service, originally under the Bureau of Mines and later under the War Department, used the major portion of the area as a research and development facility for chemical agents, equipment, and munitions. The Army used the remaining part of the area for a camp to house and train engineer troops. These two areas were known as American University Experiment Station (AUES) and Camp Leach, respectively.

Historical and archival information indicates that onsite testing, usage, and disposal of ordnance and chemical warfare materials occurred on the AUES portion of the site between 1918 and 1920. The majority of the real property was returned to private ownership by October 1920.

The current owners of the Spring Valley site include American University (70 acres) and numerous residential homeowners (591 acres), including at least 14 embassy residences.

Corps of Engineers activities in Spring Valley

Investigation from 1993 to 1995

On February 3, 1993, the Baltimore District began to conduct a remedial investigation of the site, called Phase II. All of this work was closely coordinated with the EPA and the city of Washington, D.C. Based on direction by the mayor, our focal point for coordination with the city was the D.C. Office of Emergency Preparedness. The Baltimore District's investigation focused on specific sites that were determined to have the potential for contamination.

The process used to conduct the investigation was as follows. Because of the large size of the site (over 660 acres), we needed a logical strategy to identify where we should focus our efforts. We employed standard methodology used nationwide to investigate contaminated sites. This methodology calls for reviewing all historical information to identify areas with the greatest potential for contamination, and then to investigate those areas. We called these areas "points of interest." On maps and in documents, these are often labeled as POIs. Enclosed is a map delineating these points of interest. The rationale we used, and the one we continue to follow, was that if we

found contamination at one of these points of interest, we would then expand our investigation.

In order to identify the points of interest, we undertook a major historical research effort. We reviewed large volumes of historical documents from numerous sources. The documents included a large quantity of test reports and archival sources concerning AUES. This review was collected into a report called *A Brief History of the American University Experiment Station and the U.S. Navy Bomb Disposal School, American University* (June 1994). A summary of the findings in this report is presented in Appendix 2.

Another major source of information used to identify points of interest was historical photographs and plans. The aerial photographs from 1918, 1927, 1991 and 1993 were merged and interpreted using photogrammetric equipment and techniques. The bulk of this work was accomplished by the EPA's Environmental Photographic Interpretation Center (EPIC). These features were then plotted on current maps by the U.S. Army Corps of Engineers Topographic Engineering Center. We also used a 1918 plan of the AUES campus and a number of ground photographs of the area.

Based on this review, we identified over 50 points of interest where we started our investigation. We used the best information available to pinpoint the areas on which to focus our efforts, but as you might understand, this is an inexact science. The most important aerial photograph in terms of locating specific points of interest was probably the one from 1918, since it was taken while AUES was in operation. But the quality of this photograph made it very difficult to locate a particular point in the photo on the ground today. This is not to make excuses, but to try to convey the difficulty of the task we faced, and indeed still face.

In conducting the investigation, we used two primary techniques. We conducted geophysical surveys to identify possible locations for the burial of ordnance material and we conducted environmental sampling to identify possible chemical contamination.

The geophysical surveys were done at all points of interest considered to be potential ordnance burial locations, plus a selection of approximately 10 percent of all properties outside of the points of interest. These additional properties served as a check on the historical information that had been gathered. A total of 492 properties were surveyed. Most were surveyed with a state-of-the-art electromagnetic device called an EM-31. This device is useful in identifying large metallic objects under the ground, such as ordnance burial pits. Some properties had a magnetometer survey due to the difficult terrain or other limiting conditions. A total of over 1,900 anomalies were identified. (Anomalies are disturbances in the electromagnetic field that may be indicative of metal objects below the ground surface.)

A team of technical specialists collected and analyzed the geophysical data and made recommendations as to whether individual geophysical anomalies warranted excavation. These recommendations were passed to an "Anomaly Review Board" made up of senior staff members from the Corps of Engineers' center for ordnance expertise located in Huntsville, Alabama. This board evaluated the recommendations for clarity and consistency and then made a final recommendation regarding the need for excavation. The Anomaly Review Board recommended a total of 840 anomalies for further study or removal. The Baltimore District then pursued an extensive investigation of these 840 anomalies, which found a great deal of metallic debris from property development, but only one round -- a spent Livens smoke round. During this time, two other rounds were anonymously left for investigators to find: one by the Corps' on-site trailer and one on the side of Nebraska Avenue adjacent to the Metropolitan Methodist Church. This round was brought to an American University safety officer. An additional 3-inch Stokes mortar round was discovered during the digging of a basement. This round was unfilled, unfired, and unarmed. Approximately 20 other pieces of ordnance scrap items were also found. All of these items were safely removed from the site. And, no additional burial pits were identified.

Environmental sampling was accomplished at 13 areas that included 17 points of interest where historical documents indicated field testing, development, or accidental releases of chemical agents were known or believed to have occurred. Samples were also collected from several locations away from the known AUES activities for the establishment of background metals concentrations. The general process for sampling was to take samples from randomly selected locations within each point of interest. This sampling plan was developed in accordance with EPA guidance. The samples were analyzed by an independent laboratory for the contaminants most likely to be found at that point of interest based on the historical documentation. EPA Region III took samples from these same locations and analyzed them for a full suite of volatile organic compounds, semi-volatile organic compounds, and metals. A total of 260 samples were taken. Samples were taken as close as possible to the 1918 surface level. Identification of this level was based on a comparison between a 1918 topographic map of the area and a 1981 topographic map of this same area with further identification through field observations. No chemical agents, chemical warfare agent-unique breakdown products, explosives, or explosive breakdown products were found in any of the soil samples collected. However, several metals were identified that exceeded the EPA's risk based screening criteria. Metals that exceeded both background concentrations and the risk based screening criteria became chemicals of potential concern. These metals were included in a quantitative baseline risk assessment. This assessment found no elevated health risk requiring remedial action. Arsenic was not identified as a chemical of potential concern for the risk assessment since the sampling results were not significantly different from the background. Thus the *Remedial*

Investigation Report concluded that no further action was required with respect to chemical warfare materiel and munitions.

After a public comment period on the remedial investigation, Baltimore District issued a *No Further Action Record of Decision* for most of the Spring Valley site in June 1995. However, this finding specifically excluded an area of the site called the Spalding/Captain Rankin area. The Baltimore District, EPA, and D.C. government agreed that further limited investigation was required before being able to fully close-out work at the site. This work concentrated on the investigation of ordnance and chemical warfare materiel associated with several AUES era bunkers at this site used for the testing of chemical agents. In our published 1995 record of decision, the Army took responsibility for any future actions required if additional munitions or contamination were discovered:

> "Consistent with its obligations under CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act) and DERP (Defense Environmental Restoration Program), the Army remains responsible for any additional response actions necessary in relation to buried munitions and environmental contamination associated with prior DoD (Department of Defense) activities at the OSR FUDS (Operation Safe Removal Formerly Used Defense Sites). Based on the results of the testing and investigations performed to date, the Army concludes that all appropriate and necessary steps have been taken, at this time, to protect public health and safety and the environment in relation to OSR FUDS. If such additional munitions or environmental contamination are discovered at the OSR FUDS, the Army is committed by CERCLA and DERP to take such remedial actions as may be necessary to address such buried munitions and /or environmental contamination resulting from DoD activities."

New information

In 1996, as the Baltimore District continued work in the Spalding/Captain Rankin area of the site, the D.C. Health Department reported to EPA that they had uncovered new information regarding the Spring Valley site. In 1997, the D.C. Health Department provided the Baltimore District with the results of their independent archival research regarding the site, highlighting a number of concerns with investigations completed to date. Throughout 1997, the Baltimore District evaluated these concerns and, in January 1998, published a *Remedial Investigation Evaluation Report*. In this review, we responded to each of the concerns raised by the D.C. Health Department. We also identified that we had made an error in the location of one point of interest, known as Point of Interest 24. It had been mislocated by approximately 150 feet. That may not sound like much on a 660 acre site, but if the contamination is highly

localized, then that's enough to make a difference. Also during this review, we verified that all the other points of interest were properly located.

The Baltimore District's review also found the potential for residual hazards to remain in the form of single rounds and polymerized mustard agent. The Baltimore District concluded that the risk to the public of encountering these potential items was remote and further investigation of these potential items was not feasible. Therefore, with the exception of the mislocated Point of Interest 24, additional investigation to locate potential residual hazards was considered unwarranted. Again, the Baltimore District clearly acknowledged in its review that the Army continues to have a responsibility for any additional response actions necessary in relation to buried munitions and environmental contamination associated with prior DoD activities at the Spring Valley site.

Investigation of burial pits at 4801 Glenbrook Road property

As a result of our finding regarding Point of Interest 24, we felt we needed to conduct additional investigation at the corrected location of this point of interest. In February 1998, we conducted a geophysical survey of this new location on Glenbrook Road and found two large metallic areas below the ground surface, which were indicative of possible burial pits.

Throughout the remainder of 1998, we developed plans for investigating these two areas, which required extensive coordination with the many organizations involved, including the D.C. government, EPA, and a variety of supporting DoD organizations. We mobilized to the site on February 15, 1999, and began the intrusive investigation on March 29, 1999. One year later, on March 29, 2000, we had completed the investigation of two large burial pits. Over 600 items were recovered, including 288 ordnance items. Fourteen of the items were determined to contain chemical warfare agent, predominantly mustard agent. All of these activities were completed in a safe manner ensuring the safety and health of the community.

Discovery of arsenic contamination

Arsenic is a naturally occurring element that is widely distributed in the environment. Because of this, some arsenic is expected to be found in virtually all soil. This level is sometimes referred to as "background," and that level varies from area to area. To ascertain the background level in this area, EPA Region III, in August 1999, took 30 samples from locations near Spring Valley, but outside the FUDS boundary. The results from these samples ranged from 3.3 to 18 parts per million.

We know from our historical research about past activities at the site that arsenic was used at AUES. It was used in the production of Lewisite, a blister agent developed

at AUES, as well as in the manufacturing of other chemicals used for testing. Because arsenic is so pervasive in the natural environment, however, finding arsenic would not necessarily mean that it came from AUES activities. Therefore, the 1993-1995 remedial investigation conducted by the Baltimore District focused environmental sampling on the chemical agents themselves and their specific breakdown product. For instance, we sampled for chemicals known as CVAA and CVOAO, which are breakdown products of Lewisite that we would not expect to find in the natural environment. Nevertheless, as mentioned earlier, EPA Region III split samples with the Baltimore District, analyzing them for a full suite of organic compounds and metals, including arsenic. Neither the Baltimore District's sampling results nor the EPA's identified a need for further evaluation at the time.

In 1999, as part of the investigation at the Glenbrook Road property, Baltimore District, EPA, and D.C. Health Department officials met and decided as a team that additional sampling was needed. It was also determined that EPA, with its acknowledged expertise in testing for chemicals in soil, would conduct the testing. EPA Region III took samples there and on four adjacent properties and analyzed them for a full suite of contaminants. One sample on the Glenbrook Road property contained an elevated level of arsenic.

Following the original standard methodology, the elevated arsenic finding at the Glenbrook Road property prompted Baltimore District to take additional samples. This additional testing found elevated levels throughout the garden area surrounding the pit excavation. Consistent with our overall approach, grid sampling was then done over the entire property, and sampling was expanded to other properties. This was followed by an Engineering Evaluation/Cost Analysis to determine whether there was an elevated risk to health and, if needed, development of the appropriate remedial action plan. An elevated risk was found. The Engineering Evaluation/Cost Analysis was subsequently expanded to include two adjacent properties based on additional sampling and evaluation of results. After a public comment period, we determined the appropriate remedy to be a two-foot soil removal in those areas with arsenic values that were elevated in comparison to the background distribution of arsenic. After the two-foot removal, confirmation samples were taken and additional soil was removed where necessary. The removal is complete at two of the properties and restoration is underway. The third property is still awaiting completion of the risk assessment before any decision on removals can be made.

In January 2000, in light of the contamination we had found on the Glenbrook Road properties, the rationale we had followed all along for investigating this site dictated that we needed to expand the area of investigation. We developed a plan to conduct arsenic sampling on 61 private residences and the southern portion of the American University campus. The area to be sampled was defined to ensure that we included all the area that may have possibly been referred to as "arsenic valley" by the

soldiers at the facility as well as the research area of the AUES. We coordinated this plan with our partners at D.C. Health and EPA Region III and then briefed it to the community. This plan was based on the EPA's 1996 *Soil Screening Guidance* and included a six-part composite surface sample for each of four quadrants on every property. There was also one subsurface sample location chosen on each property with samples taken at 2-foot increments to a depth of 6 to 10 feet depending on the cut or fill since 1918 in that area. The American University property was divided into 28 lots, each approximately one-half acre in size, with each lot receiving the same sampling process. For properties larger than two acres, we conducted 12-part composite samples and two subsurface borings. In addition to arsenic testing, the surface soil samples on the American University campus were also analyzed for mustard agent breakdown products.

We began the initial field work for this investigation in late August 2000. Sampling at the American University Child Development Center was completed on November 27, 2000. Due to its sensitive nature, we expedited the results for the Child Development Center. Those composite results came back elevated at 31.3 parts per million arsenic on December 6, 2000, as compared to the background range of 3.3 to 18 parts per million. We promptly notified the university. We then conducted grid sampling at the Child Development Center on January 4-5 and received those results back on January 17, 2001. Arsenic concentrations at the Child Development Center ranged from 3.43 to 498 parts per million. We immediately notified the university, the D.C. Health Department, and EPA of those results. On January 25, we met with D.C. Health, EPA Region III, and American University and agreed on a sampling process to determine whether there were any other possible contaminants of concern. A sampling plan to test for a selected list of AUES chemicals was prepared, and the sampling was conducted on February 21-22. The evaluation of these results is currently underway; however, no health and safety issues have been identified to date.

The sample results also showed six lots at American University with surface sample results above 13 parts per million. At our January 25, 2001, partnering meeting, we agreed to conduct 20-foot grid sampling over these areas. We also agreed to include in this sampling a portion of the area that EPA Region III had sampled in 1999 that had some elevated results. Finally, we will conduct subsurface sampling at several locations on American University near Nebraska Avenue that had slightly elevated subsurface sample results, as well as one near the Glenbrook Road properties.

On the residential properties, we were able to sample 42 of the 61 properties we had initially identified. Eleven property owners would not give permission to do the sampling, and we were unable to make contact with eight other property owners. After obtaining the composite results for these 42 properties, we identified eight private residences where the sample results exceeded 13 parts per million. This value represents the upper range of the background distribution of samples.

Following this initial sampling effort of the residential properties, we expanded the sampling to conduct a six-part composite sampling of 16 other properties as part of our effort to ensure that we have fully characterized the sampling area. Five of the properties were added because they were adjacent to properties that had elevated surface sample results. Of the remaining 11 properties, two were properties for which we had been unable to make contact earlier, two were properties where the owners had only allowed subsurface sampling previously, and seven were nearby properties that had special circumstances warranting investigation.

As a result of this sampling of residential properties, EPA Region III, D.C. Health, and Baltimore District agreed on a sampling plan to conduct 20-foot grid sampling on 10 properties. Six are on Rockwood Parkway, and the other four were single properties on Indian Lane, Glenbrook Road, Quebec Street, and Woodway Lane. On four properties we also took samples to determine if there are other possible contaminants of concern. This sampling was completed on February 14, 2001. The validated results from the grid sampling were received in April 2001, and the results were shared with the property owners. A draft risk assessment is currently being prepared for all the properties that were grid sampled.

At a public meeting on February 13, 2001, the community turned out in large numbers to urge testing of the entire Spring Valley neighborhood. Baltimore District, in consultation with EPA Region III and the D.C. Health Department, responded with a comprehensive sampling plan that proposes to sample for arsenic on every property in Spring Valley, with more intensive sampling in selected areas. Sampling under this expanded plan began on May 31 and will continue until the sampling is completed, which is estimated to be in January 2002.

Baltimore District is also conducting an investigation of a possible additional burial location on a Glenbrook Road property. This operation began in May and is approximately 90 percent complete. Ten 75-mm rounds and about 40 small bottles have been found in one location on this property. Seven of the bottles have been found to contain dilute concentrations of either mustard or Lewisite chemical agents.

Concurrently with these efforts, EPA's Environmental Photographic Interpretation Center (EPIC) has reviewed archives and found several additional aerial photographs of the area, including one from 1922 and one from 1928. Baltimore District asked EPIC to review these areas in the following priority order: the "arsenic valley" area, the Sedgwick trench area, the 52nd Court trench area, the Static Test Fire area, and finally, the entire area shown in the new photographs. EPIC has completed their review for the entire area. The review guided our sampling effort and also contributed to our decision to conduct test pits at one of the Glenbrook Road properties, where we have now located an additional burial pit. The review of the Sedgwick trench area led the

team to agree on a sampling process for the five properties directly over the trenches and two other properties nearby where ground scars appear on several photographs. Quadrant sampling was conducted, and we identified three properties where the sample results exceeded 13 parts per million. These properties were grid sampled in late June 2001, and the preliminary results indicate that the elevated levels warrant the preparation of risk assessments. Finally, based on a review of the geophysical surveys from 1993, we conducted additional geophysical surveys on six properties located on or near the Sedgwick Trench in May 2000. The findings from these surveys are that no further action is warranted on four of the six properties. We are currently developing a site safety plan for the intrusive investigation of unresolved anomalies on the remaining two properties. This intrusive investigation is currently scheduled to begin in October 2001.

One final area to mention is the "small disposal area" located on American University. This was a surface disposal area containing laboratory glassware and metal items. The area was investigated from January 8-11, 2001, under evacuation conditions. No chemical warfare material was identified there, though elevated levels of lead and arsenic were detected. All contamination in this area has been removed.

Public involvement from 1993 to 1995

From the initial phone call notifying Baltimore District of the 1993 discovery of buried ordnance in Spring Valley, we maintained an active public involvement program. That program was recognized by the Public Relations Society of America with its prestigious Silver Anvil Award of Excellence for Crisis Communication in 1995. We went to great lengths to keep the community informed, to be accessible to community members, and include them in the process. Full-time public affairs staff support was provided to the project to facilitate the following:

- *Meetings*. Baltimore District hosted more than 40 town meetings to provide the community with information at every important stage of the project.

- *Community board*. We established a Zone Captains' Board, made up of local residents, which served as the liaison between the community and the Corps. The board met weekly, 85 meetings in all.

- *Media coverage*. News releases and advisories were regularly sent to media outlets with an ongoing interest in the project. Baltimore District officials routinely made themselves available for interviews. The result was numerous articles and considerable broadcast coverage of the project, which helped to keep the community well informed.

- *Partnering*. Baltimore District worked closely with city agencies to minimize local inconveniences associated with excavations.

- *Information line.* We set up a toll-free information line to provide the community with around-the-clock access to information or emergency notifications.

- *Community newsletter.* We published 12 bimonthly newsletters with current information on the project, which were mailed directly to all community residents and local businesses impacted by the project.

- *Information repositories.* Baltimore District established repositories in two community libraries for all types of project material.

Public involvement from 1998 to present

Since returning to Spring Valley in 1998, Baltimore District has continued to actively seek public participation in the investigation and cleanup process. To help accomplish this, a number of community involvement initiatives have been used. These include:

- *Community meetings.* Monthly meetings are open to community members as well as the general public and provide a forum for the Corps and community to exchange information about the site and activities associated with the investigation.

- *Public availability sessions.* In addition to the community meetings, these sessions provide residents with the opportunity to meet one-on-one with the various government officials involved in the project. Since January 2000, two of these sessions have been held.

- *Meetings with community groups.* Early in the project, a community group of key persons and leaders was established in March 1999. Meetings were held on a weekly basis and provided updates on the Corps investigation of the Glenbrook Road site. These meetings were disbanded when the Restoration Advisory Board was formed in May 2001.

- *Restoration Advisory Board.* This board comprises 14 community members, a community co-chair, a government co-chair and several officials representing the agencies involved in the project. The community members were selected by fellow community members to serve on the board. The board meets once a month and the meetings are open to the public.

- *One-on-one meetings.* Throughout this project, the Baltimore District has maintained an open-door policy. We regularly meet with officials and community members to discuss questions or issues related to the investigation.

- *Monthly community newsletters. The Corps'pondent,* prepared by the Baltimore District, is specifically geared toward keeping the community apprised on activities related to this project. It is mailed to every resident within the Spring Valley study area and is posted on the project Internet web page.

- *Letters.* Letters are sent to residents and property owners to inform them of developments specifically concerning them or their property, and to solicit their input or obtain permission for additional investigation on their property.

- *Telephone information line.* This telephone message board is updated regularly and checked twice a day for messages. The appropriate project person promptly follows up on messages left on this 1-800 line. You can reach this number by calling 1-800-434-0988. That phone number is included in briefing, letters, newsletters, and other correspondence sent to the community.

- *Internet web page.* Our Internet web page provides current project information. The information available includes maps, photos, news releases, minutes of meetings and community newsletters. As with the information line number, the web page address is included in all correspondence sent to the community. The web page address is **(http://www.nab.usace.army.mil/projects/WashingtonDC/springvalley.htm)**.

- *Public document repository.* An information repository has been established at the District of Columbia Palisades Public Library, 49th and V Streets, N.W., Washington, D.C. Information on past project activities at Spring Valley, as well as current information on the project, is available at the repository.

- *Partnering with other government agencies.* The Corps has been participating in regular partnering meetings with officials from both EPA Region III and the D.C. Health Department to ensure resolution of all concerns about the site. The most recent partnering meeting was held on July 18, 2001.

Remaining scope of work

As reported in a preceding section, the comprehensive sampling began May 31, 2001. Assuming we sample all 1,200 developed properties and 400 half-acre lots, we anticipate completing the sampling by the end of 2001. We are conducting follow-up grid sampling concurrently at properties where quadrant-sampling results indicate it is necessary. Assuming that approximately 15 percent of the area will require follow-on grid sampling, this would require grid sampling on approximately 240 lots. Assuming that 25 percent of the grid sampling will occur after the finish of the initial sampling, this will require another month of sampling plus six weeks to get the sample results from the laboratory and then validated.

Sampling to identify areas of contamination will be followed by a remedial investigation report to analyze and present the sampling results and a risk assessment to determine if there is any elevated health risk. This report would require four months to write and review. We would then conduct a feasibility study to determine the best course of action to remediate the health risk. This study requires four months to write and review followed by the issuance of a proposed plan and a 30-day public comment period. Once the comment period closes, the Army will take two months to respond to comments, prepare the decision document, and gain concurrence from the stakeholders. At the close of this activity, contract actions would be implemented to conduct the remediation. How long the remediation will take will depend on whether removal or phyto-remediation is chosen. Soil removal could take two to four weeks per property, while phyto-remediation requires a 20-week growing period for the plants.

The resulting schedule is as follows:

Sampling	May 2001 to December 2001
Follow-on Sampling and results	June 2001 to February 2002
Remedial Investigation/ Risk Assessment	September 2001 to May 2002
Feasibility Study	June to September 2002
Public Comment Period	October 2002
Decision Document & Contract Actions	November to December 2002
Start Remediation	January 2003

This timeline is based on the process for conducting remedial investigations and subsequent remedial actions as required by law. We are currently investigating ways to streamline this process.

The second hazard is from buried ordnance or chemical warfare materiel. Currently, ordnance items have been identified only in certain areas near American University; the static test fire area and Zone 9; and the 52nd Court trench area. Chemical warfare materiel has been identified only at the 52nd Court trench and on two Glenbrook Road properties.

The Spring Valley team is reviewing the geophysical data for these areas and the Sedgwick trench area. Currently, a test pit investigation is underway on a Glenbrook Road property adjacent to American University. In addition, new geophysical data has been collected in the vicinity of the Sedgwick trenches, and new geophysical data will be collected from six areas on or near American University. Finally, additional geophysical data may be collected in the Zone 9 area.

The preparatory activities for conducting an investigation for ordnance items or chemical warfare materiel are significant. The site safety plan must be reviewed and

coordinated within the Department of Defense as well as with other federal agencies and the local governments involved. This process usually takes a minimum of six months and can often take as much as a year due to the complex nature of these investigations and the need to protect the safety of workers and the community. To streamline the process, the Corps is now preparing a Spring Valley-wide safety plan that will have an appendix added for each specific intrusive investigation that we undertake. By gaining approval for the generic plan in advance, we hope to reduce the approval time for the site-specific appendices to one or two months.

The schedule for the activities associated with the investigation of buried ordnance or chemical warfare materiel is as follows:

Test pit investigation	May to September 2001
Prepare for Sedgwick investigation	May to October 2001
Conduct Sedgwick investigation	October to November 2001
Identify remaining areas for surveying	July to September 2001
Conduct geophysical surveys	November to December 2001
Prepare and review data	January to March 2002
Prepare for any investigations required	April to July 2002
Conduct intrusive investigations	June to November 2002

Conclusion

The Spring Valley Formerly Used Defense Site is extremely complex and presents many challenges. We are searching for burials of material that would have occurred 80 years ago and for which there are no documented locations. In addition, the environment has significantly changed due to the extensive development of what was in 1920 primarily open space. The enclosed partial site cut-and-fill map that was produced as part of our investigation provides an example of the extent of this change. Our most current work has demonstrated that there were, in fact, burials at the site. Based on this evidence, we have intensified our efforts, and we have been able to pinpoint the location of other contamination and accomplished significant remediation.

In conclusion, we are committed to aggressively pursuing identification and remediation of all hazards associated with past DoD actions in the Spring Valley neighborhood. This commitment is evidenced by the extensive ongoing activities and the application of resources from numerous Army agencies, including personal involvement at the Secretariat level and on-site support from the world's foremost experts on ordnance, chemical warfare material, and aerial photo interpretation. This commitment is further demonstrated by the more than $49 million that has been spent on investigation and remediation of the site. Our current working estimate to complete the remainder of the project is $34 million.

Our work at the site has been and will continue to be coordinated openly and in full consultation with the community, the D.C government, and the Environmental Protection Agency. I am confident that with the Army's commitment to fully address issues at the site and with the expert resources being utilized at the site, we will successfully eliminate risks associated with DoD's former activities.

July 27, 2001

Testimony of Colonel Charles J. Fiala, Jr., Commander, Baltimore District, U.S. Army Corps of Engineers, before the Subcommittee on the District of Columbia, U.S. House of Representatives

Appendix 1: Bibliography of Key Documents for the Spring Valley Site

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July 27, 2001

Testimony of Colonel Charles J. Fiala, Jr., Commander, Baltimore District, U.S. Army Corps of Engineers, before the Subcommittee on the District of Columbia, U.S. House of Representatives

Appendix 2: History of the Spring Valley Site

On April 30, 1917, shortly after the United States declared war on Germany, American University's board of trustees offered the campus to the Government in support of the war effort. Major General William M. Black, Chief of Engineers of the Army, urged acceptance of the offer, knowing the Engineers' need for additional training facilities in the Washington metropolitan area. Secretary of War Newton D. Baker then accepted the university's offer and gave control of the campus and its buildings to the U.S. Army Corps of Engineers. On May 28, 1917, the Corps of Engineers assumed control of the northeast section of the campus, establishing Camp American University for the organization and training of engineer regiments.

Meanwhile, Secretary of the Interior Franklin K. Lane offered the Bureau of Mines' expertise in noxious and explosive mine gases to the War Department. The War Department accepted Lane's offer. Then, in need of a new large research complex, the Bureau of Mines also took advantage of American University's offer and established its efforts at the university, naming its facility the American University Experiment Station.

Although the Corps of Engineers' site was already designated Camp American University, the establishment two months later of the Bureau of Mines' American University Experiment Station on the remainder of the university grounds generated considerable confusion about the natures and missions of the two distinctly different installations. Therefore, in 1918, the Corps of Engineers re-designated Camp American University as Camp Leach. Both installations grew, and the boundary between them changed to allow for that.

On October 16, 1917, the Army activated the Office of Gas Service, later renamed the Chemical Warfare Service, as a start toward consolidating all Army gas-related activities. On June 25, 1918, President Woodrow Wilson transferred control of the Experiment Station from the Bureau of Mines to the Gas Service. There were only minimal changes in organization and personnel as a result of that transfer. Key sections of the Experiment Station included gas warfare defense, medical research, chemical research, gas mask research, pyrotechnic research, mechanical research, offensive gas warfare, and pharmacological investigations. The Experiment Station, however, did become the headquarters of the Gas Service's new research division, with branches in different parts of the country.

Both installations continued to expand. Finally, the Corps of Engineers negotiated a formal agreement with the Bureau of Mines dividing the campus between them. Both organizations, though, had to lease land to meet their needs. For example, as part of the Bureau of Mines' growth, it built underground concrete pits on both university and leased land — primarily the Spalding property — so that it could conduct tests without endangering the surrounding community. By November 1918, the Experiment Station had 153 temporary and permanent structures throughout the campus and adjacent areas.

The Bureau worked for both the Army and the Navy, testing a wide variety of toxic and nontoxic chemicals for both offensive and defensive purposes. Its scientists used gun and bomb pits, sheds, trenches similar to those on the Western Front in France, and open fields in an effort to understand the mechanics and effects of the gases under study. That research and testing left potential contamination sites on the campus and surrounding areas that fall into three principal categories: permanent structures the Government left after the war; sites of temporary warehouse, testing, and laboratory facilities destroyed or removed by agreement with the university's board of trustees; and open areas where field tests were conducted.

Residents of the area remained in place throughout the war with no known cases of relocation, voluntary or otherwise. Except for adjustments to accommodate the rigors of wartime, civilian lifestyles near the campus continued much as before the war. Although there were several fires and explosions at AUES facilities, only one, on August 3, 1918, resulted in a substantial release of noxious gas. On this occasion, the explosion of lab apparatus in a manufacturing shack sent noxious chemicals into the atmosphere, which resulted in the accidental gassing of three adults living across Nebraska Avenue from the experiment station. These persons required immediate medical attention but not hospitalization.

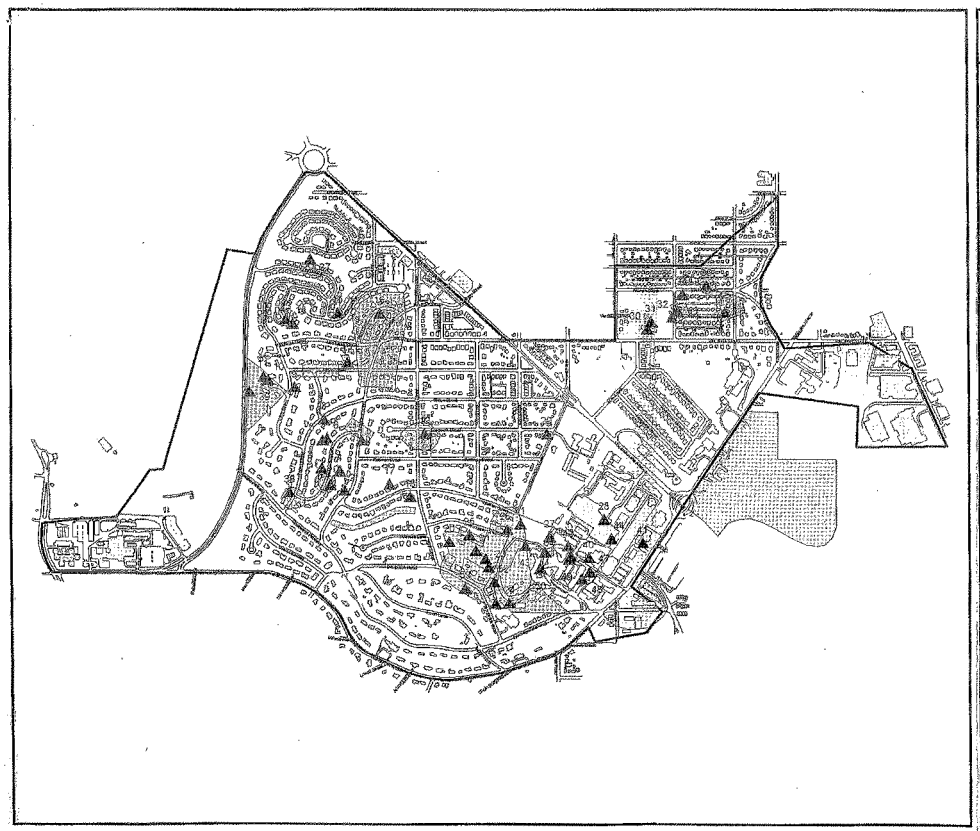
Speculation returned with vigor to the area after the war, even though according to oral tradition, the first owners of postwar houses in American University Park found their backyards pocked with shell holes and dugouts left by the Army at the end of Camp Leach's occupation of that area. Small farms remained until the 1930s but were replaced by housing construction by the end of the 1940s.

In contrast to American University Park, with its rows of identical houses targeted to a middle-income market, most of Spring Valley was designed as a subdivision of custom-built homes. W.C. & A.N. Miller Company, incorporated in the 1920s, increasingly focused its development work in that area. By 1928,

the Miller Company had purchased approximately 300 acres of land in Spring Valley. The company platted the land as the Spring Valley subdivision. The Miller family, company, and heirs have remained prominent in the development of Spring Valley for about 65 years.

By 1965, only the northern 42-acre tract of the Millers' holdings remained to be developed. It was on that tract that the first burial pit was discovered in January 1993.

Military activities returned to the American University campus on July 8, 1942, when the Navy Bomb Disposal School moved from the Washington Navy Yard to five acres abutting the Music Conservatory on the campus. The school taught handling and disposal of unexploded ordnance. However, the stripping of live fuses and any actual demolitions were conducted at the Navy's Stumpneck Ordnance Investigation Laboratory on the Potomac River at Indian Head, Maryland. The school's Research Department, however, did use chemicals including mercury and various acids in its work. The school ended its existence on October 31, 1945, selling a quantity of its supplies, chemicals, furniture, and related items to the university and completing the history of the service of American University and its campus in two world wars.



Spring Valley
Points of Interest

Spring Valley Operable Unit 3
Washington D.C.

Legend

- POIs
- Roads
- Buildings
- POIs
- Spring Valley Boundary

Spring Valley Facilities
- Camp Leach
- Naval Security Station

Numbered Points of Interest

1. Circular Trenches
2. Possible Pit
3. Small Crater Scars
4. Possible Pit
5. Possible Pit
6. Possible Target or Test Site
7. Possible Test Area
8. Possible Target or Test Site
9. Possible Firing or Observation Stalls
10. Possible Target or Test Site
11. Scattered Ground Scars
12. Possible Graded Area
13. Circular Trenches
14. Pit
15. Ground Scar
16. Chemical Persistency Test Area
17. Possible Pit
18. Small Crater Scars
19. Old Mustard Field
20. Ground Scar
21. Shell Pit
22. Shell Pit
23. Shell Pit
24-R. Probable Pit, Revised Location
25. Possible Trenches
26. Small Crater Scars
27. Probable Trench or Ditc
28. Probable Trench or Ditc
29. Ground Scar
30. Training Trenches
31. Training Trenches
32. Training Trenches
33. Training Trenches
34. Training Trenches
35. Training Trenches
36. Training Trenches
37. Mill Creek
38. Bradley Field (Major Tolman's Field)
39. Static Test Fire Area
40. Ohio Hall
41. History Building
42. Physiological Laborator
43. Gun Pit
44. Chemical Research Laboratory
45. Explosives Laboratory
46. Cannister Laboratory
47. Bacteriological Laborat
48. Dispersols Laboratory
49. Pharmacological Laboratory
50. Gun Pit
51. Fire and Flame Laborat
52. Electrolytic Laboratory

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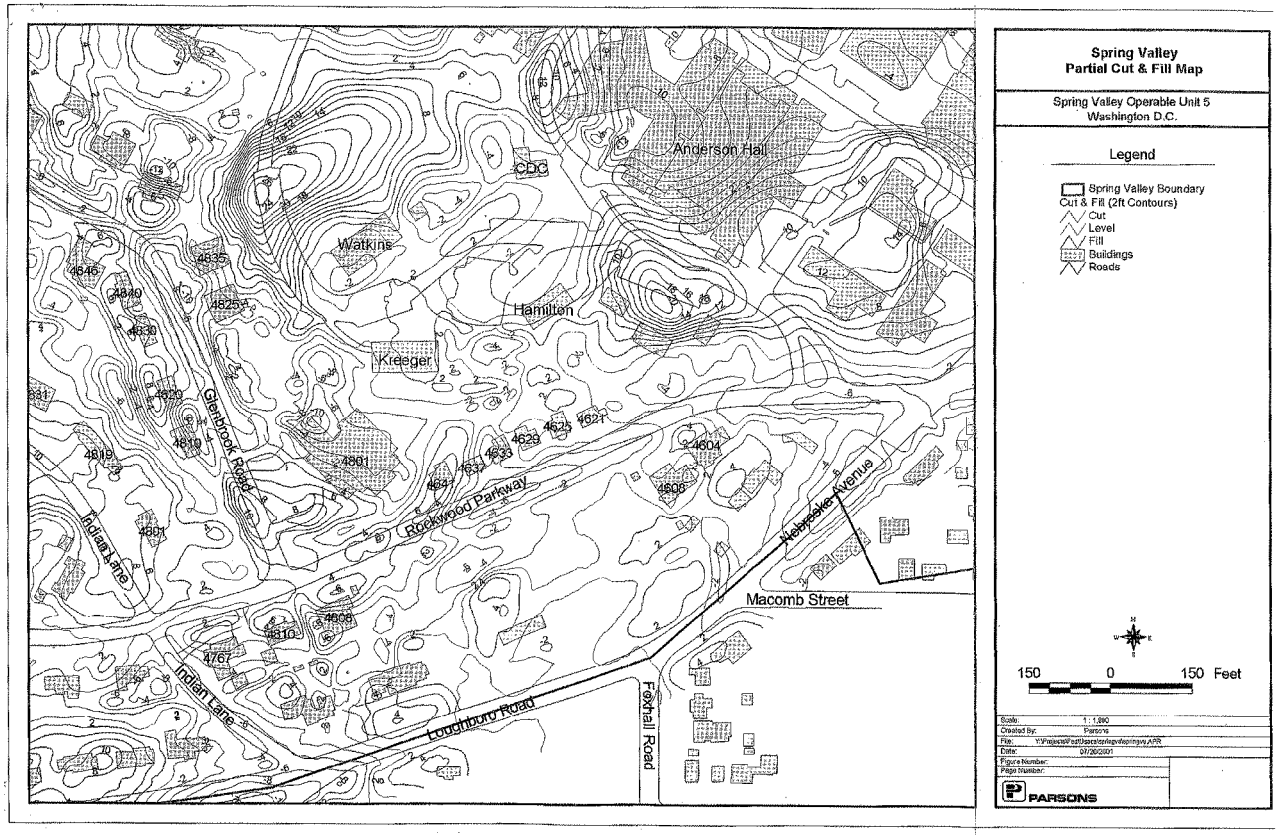
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Kreeger
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Rockwood Parkway
Indian Lane
Loughboro Road
Foxhall Road
Massachusetts Avenue
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Spring Valley
Partial Cut & Fill Map
Spring Valley Operable Unit 5
Washington D.C.
Legend
Spring Valley Boundary
Cut & Fill (2ft Contours)
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Level
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Buildings
Roads
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PARSONS

Mrs. MORELLA. Thank you very much, Colonel Fiala, and if I could just ask this third and final panel if they would allow us to recess for about 35 minutes, give you a chance to stand up and move around. We'll have five consecutive votes on the floor, and then we will come back for questioning.

OK. Great. Thank you. So the committee is in recess for about 35 minutes.

[Recess.]

Mrs. MORELLA. Thank you for being so patient. I'm going to reconvene our hearing, and we'll commence with our questioning. I thank the panel for being here for the entire time for their testimony.

I will start off, Dr. Ladner; with you, since you were the first one to testify. Thank you for being here, first of all. I want to point out, as you are aware, Dr. Ladner, that the subcommittee did invite Donald Myers to this hearing, and Donald Myers is the vice president for finance and treasurer of the American University.

Mr. LADNER. That's right.

Mrs. MORELLA. And you're aware during the relevant period we're discussing, 1986 to the present, Donald Myers held this position at American University. At this time, the invitation to Dr. Donald Myers to appear at this hearing will be submitted for the record.

And you're aware that the subcommittee was informed by letter from David Taylor, your chief of staff, dated July 25, 2001, that Donald Myers was unable to attend because of illness?

Mr. LADNER. That's right.

Mrs. MORELLA. And I'm going to submit the letter from David Taylor for the record.

The subcommittee also sent a letter to David Taylor inquiring when Vice President Donald Myers would be available to give testimony under oath. I think you're probably aware of that.

Mr. LADNER. I am.

Mrs. MORELLA. For the record, I am going to submit the letter for the record.

I want to during my period of time then switch over to General Walker. General Walker, let's go to the bottom line first. Why didn't the Army feel it was necessary to inform the public that there might be munitions buried under the University in the Spring Valley area?

General WALKER. Madam Chairman, the situation—I realize it was my decision that's under close scrutiny here, but based on the evidence that we had at that time and the many projects that we were dealing with throughout the country, it didn't show that this site warranted additional study.

However, I always at any site left the situation open that if we found something, or new information, we would return. I did not find sufficient evidence at that time to move forward with and also did not see the need to disclose that. We made a decision that there wasn't enough evidence to go forward. We had other sites that we're dealing with, literally thousands, and all these, and Spring Valley as well, I was very concerned about the health and welfare.

We had a particular site where two young children had been killed. We had several sites where we were contaminating the

drinking waters of communities, where we weren't giving bottled water out, and then making arrangements for permanent hookup of safe water supplies.

So this fit into a situation where there were many projects out there, and this one did not warrant the evidence. Had we had hard evidence there had been burial there and it was very clear, we would have been there with a thorough investigation.

Mrs. MORELLA. Who did make the ultimate decision regarding the U.S. Government's role in the Spring Valley, once American University asked for your help in 1986? How high up did the matter go? Did it go to the White House?

General WALKER. No. This was——

Mrs. MORELLA. Defense Secretary?

General WALKER. Well, you always hate to come back and have a review of your decisions and find out that they were not accurate. I was the one that made the decision. I was the one that worked with American University. I was the one that had made the decision, on the evidence that I had, not to go forward. People were informed. My supervisors were informed. But I was in charge of the environmental programs and the occupational health programs in the Army and safety programs, and so I made that decision.

Mrs. MORELLA. In reading that October 29, 1986 report by the Army, that was sent to American University, in terms of semantics it seems to take pains to discredit any contemporary evidence that munitions were buried in Spring Valley. In fact, it even says we could not disprove the possibility that some materials remain buried on or near the campus of American University. And then, additionally, one of the main conclusions was the source that says that munitions were buried is historically suspect, and yet the Army's analysis of the source, two American University newspaper—Courier—articles from 1921 focus on disproving minor details of the reports, like the munitions buried, the style of writing, rather than the big-picture question of whether or not weapons were indeed buried there.

We wonder whether the Army was ever really interested in finding out the truth about buried munitions.

General WALKER. Madam Chairman, we were very concerned at the time when I had the program of looking and trying to ascertain where all those that might pose threats of health and safety to individuals might be, and we operated—we have the program. We actually—after 1986, we expanded the program because we knew that it was too large for the former used sites and current active sites on the installations, but we were quite concerned about every area and this was one of many. We made a judgment call, or I made a judgment call. It turned out by 1993 that it was proven that there were munitions there. It was one of those judgments that you make and then you find out that it was not that sound.

But the Army still admitted that they—in 1993 when we found the munitions there, we immediately stepped forward, moved to remove them, worked with the D.C. government, the Army—or the Environmental Protection Agency and all those concerned, to make sure that we maintained the health and safety of the people in the area.

Mrs. MORELLA. Did the Army or the U.S. Government conduct its own archival review of military activities on the AU campus, and if so, were you ever denied any access to material because it was deemed classified?

General WALKER. No. I had a security clearance, Madam Chairman. I didn't feel that I was denied any information. We had two studies that were important to this effort. And in the review, we had the U.S. Army Toxic and Hazardous Materials Agency, which is now named the Army Environmental Center, and then we had the EPIC report that was referred to earlier by the EPA representative.

Mrs. MORELLA. Actually, I guess what you're saying to me, General Walker, is that you made a decision but you were incorrect in making the decision?

General WALKER. I made the decision on the information that I had which later basically was inadequate, yes.

Mrs. MORELLA. Did you make it alone, make the decision alone?

General WALKER. I had people that reviewed the material who were there, but I was the one responsible for making the decision.

Mrs. MORELLA. OK. I'll get back in on the next round. Ms. Norton.

Ms. NORTON. Thank you very much, Mrs. Morella. Mr. Reardon.

Mr. REARDON. Yes, ma'am?

Ms. NORTON. I'm looking at your testimony, and you try to distinguish the charts. You say it is charts from which the conclusion was drawn, that the Agency believed that—this is the sticking point here—the 1986 finding, as it were, that came from these charts, that the Army should have formally notified local authorities—I'm quoting from your testimony now—and third parties in 1986 of potential existence of buried chemicals.

Then you go on to say that ultimately the auditors performed additional work—and here I'm quoting again—discussed the laws and regulations in effect in 1986 with Agency legal counsel and command subject matter experts. And that on the basis of those discussions, you testified the Army had no obligation to formally notify local authorities or third parties, because at that time the available evidence of buried chemical weapons at Spring Valley was at best inconclusive.

Is it your testimony that in order to do further investigation, one has to already have conclusive evidence of contaminants and that there was no obligation, given the indications here, to seek further evidence of contaminants?

Mr. KIEFER. Let me address it, please. There's a couple of issues here. One, we were chartered to do a review of the potential existence of chemical weapons, not contaminants.

Ms. NORTON. Let's say chemical weapons then.

Mr. KIEFER. The review on June 6th when we had our entrance conference, we had charts that were—the conclusion was based on the premise that we had knowledge of a potential chemical weapons storage site. Based on that information, we concluded that notification should be made. Subsequent review and talking with the subject matter experts and our legal counsel, there were no requirements to report the potential of chemical weapons——

Ms. NORTON. Stop there. What elicits my question is that the lawyers got in the picture. I'm a graduate of Yale Law School. I know what—I make no defense of lawyers, although I respect them.

Mr. KIEFER. Ms. Norton, under our charter, we were validating a legal claim made by Miller Co. That's why we were involved.

Ms. NORTON. Therefore, you were protecting the Agency against liability is what your testimony is.

Mr. KIEFER. No. We were validating the claim for the Army. We are an independent Army—Mr. Reardon is the Auditor General of the Army, and he's independent in all the evaluations we do. We were to assess was there validity to the claim made by Miller Co.

Ms. NORTON. I can understand that you, in connection with a lawsuit, may have said that there is no validity to the claim made by this claimant. What I cannot understand is why in 1986 this did not encourage further investigation by the Army. Those are two different matters.

You know, I can understand, look, there's nothing here that says contaminated weapons here. We don't have any conclusive evidence. I accept that. Don't sue us on the basis of what we don't know. What I don't accept is that the Army or the auditor would not have said, while there is no evidence now, there is enough indication, particularly since this is a residential community and this is the second largest site in the United States where there were munitions, and maybe we ourselves ought to look further.

You could have still protected yourself against liability and you may well have been right, there's not any liability, and done your duty as a public agency to look for chemical weapons for which you would have been exclusively responsible.

Mr. KIEFER. Again, Ms. Norton, based on the information we had, there was no clear evidence there were munitions stored there. And I think on top of that, the fact that——

Ms. NORTON. You said there was no—look, all this says is that the Army had no obligation—and listen to this. I can understand that there was no clear evidence that chemical weapons were stored in the community, but it says that the Army had—your testimony, Mr. Reardon's testimony, it says the obligation—had no obligation to formally notify local authorities or third parties, because at the time the available evidence wasn't clear enough.

Mr. KIEFER. Correct.

Ms. NORTON. And I am saying that is very scary because all you would have been required to do is further investigation.

Mr. KIEFER. But I guess, along with that, you have to understand that the Army was also working with American University when they were getting ready to do their construction, that we have not found anything, but if anything is found during construction, the Army was standing by ready to do what needed to be done.

Ms. NORTON. But you see what it does, that leads it to a hit and miss ad hoc, if you find something then maybe we'll find something, but we're certainly not going to move on our own, we certainly have no obligation except on a site-by-site basis to see whether or not there are weapons buried here.

There seems to be no proactive preventative response here. And so if the attitude you initially took continued, then we would still be waiting, weapon by weapon, for somebody to dig up earth, building a house or building on the AU campus, before AU could do anything. At some point you all decided you did have to move forward.

Mr. KIEFER. Let me try to clarify this a little bit more. We were validating a claim by Miller Co. Our work which we currently are involved in and have been involved in does look at health and safety environmental issues. It was a totally different scope of events. As far as Army Audit's role, we were validating a claim, we weren't doing a——

Ms. NORTON. I accept that, Mr. Kiefer. You were validating a claim. And my concern is that beyond validating that claim, you saw no reason to look further to see if there might have been chemical weapons. You could—it seems to me that those are—I said from the beginning, those are two different things. But your own early warning seems to have been ignored.

For example, you concluded in 1995 that there was no further risk. You dismissed D.C.'s pleas for further testing in 1997. It looks as though the Army had to be pushed every step of the way in order to accept responsibility and to—finally, of course, you have a good cleanup going on, but at considerable angst to the community involved.

Could I ask a question of Mr.——

Mr. KIEFER. Ms. Norton, could I——

Ms. NORTON. Yes indeed, if you have further response.

Mr. KIEFER. Remember, we were looking back to 1986. We weren't actively involved in 1993, 1995 operations. This again, we were looking at a claim, and the objective for the munitions was 1986.

Ms. NORTON. I understand that. It's the trail we're trying to get back to——

Mr. KIEFER. I understand.

Ms. NORTON. How could the Army Corps of Engineers have become more proactive? Could they have taken more seriously back in 1986 what I'm calling an early warning?

Could I ask, Dr. Ladner, did AU offer its campus? Was it paid for allowing this weapons testing to occur?

Mr. LADNER. You're talking about originally?

Ms. NORTON. Yes.

Mr. LADNER. In 1917? The initiative of the then-president and the board of trustees is what led to the Army coming in. We actually wrote a letter to the President of the United States and made this offer, and the Army then came in and developed the site in the way that they did.

Ms. NORTON. Was there any quid pro quo? Why did you decide to do that——

Mr. LADNER. I think it was patriotism. We had a lot of land. We had 92 acres. And back in 1919, that was farmland. And I think it was simply generosity of the spirit, that this can help in the cause. We did the same thing in World War II, incidentally.

Ms. NORTON. Is that right?

Mr. LADNER. Right.

Ms. NORTON. As a result of your offer in World War II, were there any burials that took place?

Mr. LADNER. Well, in fact there were two components to the program, as best I can recall from the research. One is that we trained what were then called WAVES. The women in the Navy had a large barracks and training site on our campus, and they had a Navy Disposal Training Center in which they used no live ammunition but only dummy weapons to be worked on by the Navy.

Ms. NORTON. Dr. Ladner, you had—American University, not you yourself, had access to that map from 1986, did you not?

Mr. LADNER. We did.

Ms. NORTON. Therefore, you did not have to rely entirely upon the opinion of the Army auditors, did you?

Mr. LADNER. No.

Ms. NORTON. What did American University believe that map showed in 1986?

Mr. LADNER. Two or three things are relevant to our understanding of that map. One is it's important to note that we're the ones that took the initiative to find out what was there originally through our own research. So we were very eager. We notified the EPA, we notified the Army, etc. Second, when this report came, as Madam Chair has noted, through the October 29 cover letter it indicated that there was absolutely no cause for alarm, there was no munition burial, there was no reason to believe that there was any danger or hazard. Third, it's important——

Ms. NORTON. Let me ask you, when you asked the Army what's the meaning of the map? Is that what you are saying?

Mr. LADNER. Absolutely. We were not the experts. We went to them for help. We don't have our own munitions search team. We don't have the expertise to do that. We went to them because they have that kind of expertise. So even though we're the largest landowner, obviously, we are one of the landowners there in a position of saying someone who is an expert needs to come in here and tell us what we have here. We followed all the right protocol. We contacted the Defense Department, the EPA, etc., to get an answer to that question. It's also important to note as——

Ms. NORTON. Did you ever have discussions with——

Mr. LADNER. Pardon me?

Ms. NORTON. Did you ever have discussions in the university community about these discoveries, or with members of the community?

Mr. LADNER. We notified the communities through memoranda, and it was reported in the student newspaper. There was a period of several months, because we were involved in a construction project where the Army was clearly visible there every day there onsite, and we reported what they were doing and why. Clearly, it was discussed by our general counsel, by our vice president of facilities, etc., during that time to be able to make judgments about what the Army was telling us.

When they completed the excavation, they gave us a clean bill of health, and we built the building. So we didn't feel that we were in any jeopardy, that there was some alarm bell that needed to be pulled. We were told that there was nothing found.

Ms. NORTON. Why have you brought suit, and what do you expect to prove in that lawsuit and to get as a result of that lawsuit?

Mr. LADNER. Right. Small technicality which you as a lawyer may know. We actually haven't brought suit. We've filed an administrative claim with the Army. We hope over the next 6 months to be able to prevent having to file suit. We simply want to recover real damages to the University. There have been very direct charges that have cost us in terms of relocating——

Ms. NORTON. Why do you think you're entitled? Who do you think has harmed the University?

Mr. LADNER. The Army.

Ms. NORTON. I'll wait for the next round, Madam Chair.

Mrs. MORELLA. Thank you.

It's interesting when you mentioned, Dr. Ladner, that in a sense of patriotism that American University offered to be literally the dumping ground. Did they try to get—well, did the Army get indemnification? I mean, did the University in any way ask for—you know what I'm trying to say.

Mr. LADNER. Sure——

Mrs. MORELLA. Would there be any blame that the University or any claim that the University could make for any damages?

Mr. LADNER. Yes. Madam Chair, in 1920 when the Army activities were completed and they moved, or at least said later that they had moved all the munitions to the Edgewood area in Maryland, we then signed an agreement. Our president signed an agreement, with the Army that indicated two things: one, that the condition of the land would be restored to its prewar condition; and, two, that upon payment of $121,000-plus to the University, the Army would be indemnified.

Mrs. MORELLA. The Army would be. So that evidently took place and——

Mr. LADNER. Right.

Mrs. MORELLA. It sounded like you needed a good lawyer at that time to——

Mr. LADNER. We have one now.

Mrs. MORELLA. But now let me get back to where you live, and I alluded to that earlier when I mentioned the Korean Embassy. The house that's next door to you is one that was formerly owned and occupied by the—I think it's the Loughlins.

Mr. LADNER. Loughlins. Tom and Kathy Laughlin.

Mrs. MORELLA. Right. Right. And they have two young children who have been living in that house since 1994, and the Washington Post reported on Wednesday of this week that the Loughlins say that this week the Army, AU, the EPA, and the developer withheld critical information. Do you have any response to that?

Mr. LADNER. Yes. We had no transactions with the Loughlins. We didn't sell them the property. We have never in any way had direct responsibility for that property since they have owned it or in the process of their buying it.

I can say that I personally went next door when some small vials of chlorine and acid were found in our front yard, in the president's residence, and notified them that a remedial action was about to take place, and that we had been notified that it was not a dangerous transaction, and indeed my wife and I have continued to

live in the house throughout all of the testing and remediation around that area.

In addition, the University formally notified all the people on that block of what was taking place. So we did take steps to notify the Loughlins in particular of what we knew at the time.

Mrs. MORELLA. The Washington Post in that very same article said that Robert Brandt, president of the development company, Lawrence N. Brandt, Inc., said that his company told them everything we knew; and stated, I'm upset because I purchased the property from AU. Is it true that the developer purchased the Laughlin property from American University——

Mr. LADNER. Not directly. We actually auctioned the property in 1987, and I believe it was purchased by Miller & Co., actually, and then sold to Mr. Brandt.

Mrs. MORELLA. And the house you live in, was that built by the same development company?

Mr. LADNER. It was.

Mrs. MORELLA. And that property was also purchased by the developer——

Mr. LADNER. That's right. That's right.

Mrs. MORELLA [continuing]. From American University?

Mr. LADNER. Those two parcels together, at the same time.

Mrs. MORELLA. OK. The Washington Post also reported that a spokesman for American University said the University relied on information from the Army and the EPA. This is referring to the same year the developers sold the property next door to you—the Loughlins'—the American University purchased your house and the lot from the same developer. I think that's probably safe to say? OK.

The Washington Post also reported that a spokesman for AU said the University relied on information from the Army and the EPA. What information did the University receive from the Army and the EPA concerning toxic contaminants on the American University campus and the property on Glenbrook Road?

Mr. LADNER. You have already heard testimony earlier from the EPA representative that the mindset throughout the period until 1993 was not looking for chemical contamination, it was looking for munitions. And indeed the staff and administration at American University were concerned about finding shrapnel, which they did in 1994, even finding a dummy bomb which they did earlier, and so forth. And we took seriously the reports that were given to us by the experts, which we had invited in, and on least three different occasions—you quoted from one—the October 29 report said very explicitly there's nothing to worry about, there are no munitions burials here, there are no harmful munitions, etc. So we took that information and relied on it.

Mrs. MORELLA. Semantics is so very important in terms of how you interpret something, what it is—"is" is at any particular point. I've often said sometimes to tell the truth, the whole truth, and nothing but the truth can mean three different things; so we have to be very careful with that.

I want to go to Colonel Fiala. Sir, could you enlighten us in terms of what the process has been for obtaining permission from property owners to test property? And it is the understanding of

the subcommittee that less than half of those 1,200 property owners have signed the right of entry form. Can you update us on the status?

Colonel FIALA. Yes, ma'am. Let me update you on the whole process that we came about in developing a comprehensive sampling plan. We worked with our partners at EPA. Now, again this is soil contamination. So we kind of leaned very hard on the EPA to work with us on developing a soil sample protocol. That work transpired in February of this year.

In March of this year, we had a community meeting where we laid out a draft plan to the community. That plan had already been coordinated by the EPA. It had been coordinated with the D.C. Health Department. We got their comments. A month later we came back and had refined our plan based on their comments, based on further comments from our partners in the EPA and D.C. Health, and briefed the community on our sampling plan.

To date, we have got the rights of entry of—we have 1,200 properties, homeowners that we have to get rights of entry on, and there's another 400 sites divided up into half-acre parcels in the area. To date, we have rights of entry of a little over 650 of that 1,200.

Now, we aren't sitting on our hands with that. We have folks personally calling people in the neighborhood, knocking on doors, making sure they have the rights of entry forms and taking, in my view, a very aggressive posture in trying to get these. Now, this is the summertime, so some people may be out of the town for the summer and we may have to wait until this fall. But we're continuing aggressively to push getting these rights of entry forms signed so we can enter their property.

Mrs. MORELLA. So let's say you have reason to believe that a certain neighborhood has high levels of arsenic and you have not been able to acquire permission from the owners; you don't have that right of entry. Do you have the power to test the soils? Can you test it anyway?

Colonel FIALA. We haven't stumbled onto that at this point, and in fact the heightened media attention has kind of moved that process forward and——

Mrs. MORELLA. So you haven't had anybody who's refused that——

Colonel FIALA. We haven't. Now, initially in some of our operations we did. We had some areas back around the AU property and the Korean ambassador's property. We had 61 properties that we wanted to sample. Of that, initially we got 42 properties that were sampled in late summer and in the fall of 2000. Eight additional properties—as we started getting out there and taking samples, then eight additional property owners came forward and said you could sample that. And we did that sampling in January and February 2000. In that specific year, we still have a couple properties that we're still waiting for—waiting.

This is a gradual process. As we further get out there, and with the heightened media and our outreach program and through the RAB, and through our newsletters and through our Web site and through our personal phone calls with the property owners, we're confident we're going to get——

Mrs. MORELLA. But you don't have the power to do it?

Colonel FIALA. I don't have the power to——

Mrs. MORELLA. You can use other means. What do you do when you find that the soil has been contaminated and there are problems? What do you do?

Colonel FIALA. The first step is we're taking a sample of the soil. We run it through a lab. This is the same lab that we've used throughout the operation. So we want to make sure we are consistent with the data we're getting out. If you have elevated composite samples above the background level, which is about 18 parts per million, we then go in and further refine the sampling process in about a 20-meter—20-foot square, take detailed samples, and further test that if there's an elevated. If not, we won't do any testing.

And this is in conjunction with the D.C. Health Department and EPA. When we get the results from the labs, we immediately provide that to the property owners so they know right away what the data is and what it means.

Mrs. MORELLA. And do you correct it?

Colonel FIALA. Well, again if it's above the background levels, we'll go back in and further—in a refined sampling program or process to refine where the contamination is. Once we've refined the contamination, there's a risk assessment that is done in conjunction with the EPA, in conjunction with the D.C. Health Department, to determine whether or not you have to physically remove the soil or that it can stay there.

Mrs. MORELLA. But the Army does that——

Colonel FIALA. Yes. And then we go and do it. So, for example, we went through that process in the backyard of the Korean ambassador's property, and the determination—where we found the samples, we did a detailed sample, found where the contamination was, went through the risk analysis process, and determined in consultation with EPA and D.C. Health Department that we would remove 2 feet of soil from the backyard of the Korean ambassador's property. So that's the process.

Mrs. MORELLA. You mentioned the standard 43? I thought—EPA is 43——

Colonel FIALA. The composite sample background that says OK, we need to go back and do some more work is 18 parts per million.

Mrs. MORELLA. 18. I see. But EPA is 43.

Colonel FIALA. EPA's figure for doing some remediation is 43 parts per million. So we're taking a very conservative approach on that.

Mrs. MORELLA. Right. You are. Probably with great validity.

Ms. Norton.

Ms. NORTON. Thank you, Madam Chair.

Colonel FIALA. Madam, let me correct that. It's not 18. It's 13 in the grid sampling, not 18; so we've even gone down further.

Ms. NORTON. Dr. Ladner, is it not the case that the University has just had approved an ambitious expansion plan for the campus?

Mr. LADNER. I wouldn't call it ambitious actually, but we have had a 10-year plan approved——

Ms. NORTON. Is it not limited to almost 1 million square feet?

Mr. LADNER. No, 400,000.

Ms. NORTON. Over the next 10 years?

Mr. LADNER. 10 years.

Ms. NORTON. That will, of course, involve excavation of soil and the like in the area?

Mr. LADNER. Right.

Ms. NORTON. Would you not believe that a complete environmental assessment should be made before we kick up more dirt on your campus or in the Spring Valley area and before any construction begins?

Mr. LADNER. Two things are relevant there, Delegate Norton. One is we have had a letter from the D.C. Health Department indicating that this environmental approach that you speak of should not be cause for holding up the approval of the campus plan. And that was on record as part of the proceedings in the campus plan, deliberations by the Zoning Commission.

The second thing is we absolutely agree that before any site—we would do this anyhow. In fact in 1986, this is how we discovered and why the Army came in and so forth. For each site, we intend to do just that. Third——

Ms. NORTON. Excuse me. What is it you intend to do for each site?

Mr. LADNER. To have the testing for the soil done completely for the site. And third——

Ms. NORTON. To make sure there is no chemical——

Mr. LADNER. Exactly.

Ms. NORTON. What about the very process of excavating soil and the rest? Are you going to take precautions to see to it that it is not airborne and otherwise become—what precautions will you take?

Mr. LADNER. I am not an expert. We will take all the precautions that we are told to follow by the experts.

Ms. NORTON. That's very important, Dr. Ladner. If all you do is to hire your usual contractor and say go to it, we're going to have more of what we've already had in the Spring Valley area. It does seem to me that very specialized work has to be done for any construction in that area.

Mr. LADNER. I didn't mean by experts, the construction company. I meant the EPA, I meant consultants that we ourselves hired. We've hired toxicologists, environmental experts, etc. We intend to continue to employ those people as experts onsite.

Ms. NORTON. Thank you very. That certainly is reassuring, and I think it's going to be very important for you to work with the community in this regard as well. You have a controversial plan of expansion going on, Dr. Ladner, and we are very pleased to have universities in our area, but you have to understand that already most of the land in this town is taken from the taxpayers by a combination mostly of the Federal Government and private universities. They claim to give back a lot to the community. Almost everybody they employ lives in Maryland and Virginia, and so if you—if we are a little skeptical about expansion plans, especially in an area which has had this kind of environmental problem, you will have to forgive us. But you are housed in a community that is among our highest-income communities, that contributes disproportionately to a government which cannot charge commuter

taxes, that people come and use all the services. So that we are very—we embrace this community, we hug this community.

They pay the taxes that American University and Georgetown, my own University where I still teach, and AU and Howard do not pay. So I'm going to ask you if you are—I know you have the sign-off of our city and the approval of your expansion plan, but I am going to ask you to work very closely with this community, which has lived through a fiscal crisis with us, is a community of great concern to us, a community where the property values are continuing to go up, and a community, frankly, that we live off disproportionately.

I'm going to ask you, since you don't live off us, since you do not contribute to the Government of the District of Columbia, since the Government of the District of Columbia does not even have what New Haven and Boston have, which is a fair—a plan whereby universities at least contribute what they can to the city and its upkeep, something that the District of Columbia ought to do forthwith. At the very least, I'm going to ask you to work far more closely with the community as you embark on this construction.

You have a very angry community up there. I think they are as angry with AU as they are with the Army Corps of Engineers, frankly, and I think there is repair work that needs to be done with that community, including working very closely with them, listening to them about your expansion plans, being able to compromise with them with respect to your expansion plans. Every inch that you expand takes revenue from the District of Columbia that it does not have.

So I'm going to ask that of you publicly, in the name of a community that we rely on and that I think has lived through terrible times, with very little coming back to it, but nevertheless has been steadfast. Can I get a commitment from you to work more closely with the community?

Mr. LADNER. Delegate Norton, we're not talking about expanding the property that we do not already own, so there is no property taken off the tax rolls. We're talking about developing buildings on our campus, A.

B, last year we contributed more than $400 million to the Washington, DC, economy.

C, there were——

Ms. NORTON. What does that mean? I'm going to stop you there, Mr. Ladner. In what way?

Mr. LADNER. In terms of our taxes, in terms of payments for services, a whole raft of things, and I would be happy to share the——

Ms. NORTON. I wish you would submit in detail to this committee——

Mr. LADNER. Be happy to.

Ms. NORTON [continuing]. Your payment of taxes.

Mr. LADNER. Be happy to do that.

Ms. NORTON. To the Army, I have been very concerned about a distinction that you have relied on throughout this hearing between munitions, on the one hand, and chemical contamination on the other. Everybody knew that we were talking about World War I munitions. Is it your testimony that you expected that there

would be World War I munition that would not leak out some contamination into the soil and that therefore all you've got to do is look at the weapon itself, and that shouldn't lead you to look for chemical residue that might come from munitions made as long ago as World War I?

Colonel FIALA. Ma'am, I'll respond to that, to your question. When the Corps of Engineers Baltimore District was asked and given the mission to come into the community for the first time in February 1993, our focus was on burial pits and trenches and looking for chemical munitions in the components lab equipment, those kinds of things, in the manufacture of the chemical weapons and the testing process that was done at AU. That was the focus.

We developed a plan where we went through and identified areas we call points of interest. We went back and did some sampling and did some excavations in those areas, and that effort resulted in us finding, in addition to the rounds that were found in phase 1 of this operation, about 144 munitions.

At the same time, we took samples of the chemical components directly related to the manufacture of lewisite and mustard gas. We did not look for arsenic because we were focused on finding buried pits and trenches and munitions, and we took these samples in conjunction with that, and that was the process between 1993 and 1995.

Ms. NORTON. And that may have been the source of much of the problem here. My concern here is not that the Army buried this in 1921 or whatever, but that by 1986, for example, it would have—it seems to me to be impossible to believe that once there were munitions, there would not also be chemicals including perhaps arsenic. Heaven knows what they are, but munitions aren't so airtight that they would remain munitions.

So, one, you know you're looking for munitions. It seems to me that it would follow that you're looking for chemicals that leaked from munitions. And yet Mr. Reardon's testimony, your testimony seems to be that the search was for munitions, and if that's what we had uncovered, we didn't have any obligation to look beyond the compact thing called a munition to see whether those munitions had begun to seep out into the soil or elsewhere.

Colonel FIALA. Ma'am, we did take soil samples around the pits that we found munitions, and again we were looking for the components that are related, the chemical materials that were related to munitions and the chemicals, the chemical properties of those.

We did not take arsenic. The EPA took on the arsenic level testing, and again one of the reasons for that is because, again, I'll go back to the science that we're dealing with here. We were looking for munitions and chemical weapons. Arsenic is a naturally occurring—I know we've heard testimony before—naturally occurring in the environment, heavy metal. It is also used extensively in pesticides. It's used extensively as a treatment of a wood preservative.

So our focus was to find the science to look for munitions buried and the chemical components to those, and we were concerned with the leaching out of that material. We took samples in those points of interest and found nothing elevated.

Ms. NORTON. Are you concerned at the criticism about the way you dug initially, and the incompetence that it is alleged characterized some of the not digging deep enough, etc?

Colonel FIALA. Ma'am, I haven't heard any criticism about not digging deep enough.

Ms. NORTON. It was in——

Colonel FIALA. I will tell you that we have been, as we have testified before—and it's been common knowledge that we made a mistake in one point of interest in our operation between 1993 and 1995.

If you look at the map there, that's 660 acres. We made a mistake in locating one point of interest 150 feet from where it was. That mistake was based on an initial photographic interpretation that was then further updated during the course of the operation. It did not get back to the operators on the ground.

We made that mistake in 1993 and 1995. The D.C. government Health Department and our review after they gave us a letter in late 1996, early 1997. We conducted a review of our operation and we found that we had made this mistake of 150 feet. When we went back in——

Ms. NORTON. How did the District of Columbia find that out?

Colonel FIALA. They didn't. They gave us a list of concerns, and I think the number was 37 in the letter. And those were valid, and we applaud their Herculean effort in the further refinement and research of the documents.

We then in the Baltimore District went back and did a review and published a revised report in late 1997 and began operations in 1998. We went back to this point of interest, 24, which is in the backyard of the Korean ambassador's property. As we went into that hole, we found extensive munitions, and we started taking soil samples with EPA, and we found elevated levels of arsenic contamination, as Mr. Voltaggio talked about before.

Then we started expanding the circle, and that is the process. And we haven't wavered from that process since the Baltimore Corps of Engineers has been involved since 1993. You find some contamination in a hole, whether it's weapons material, you take samples, and you begin to build out from that point of interest, until you find clean soil. That's been the process, and it continues to be the process today.

Ms. NORTON. One further question. The District testified that its grant had been cut so that it can't do its own—as much of its own soil samples as possible. I need to know why that occurs, and I need to be assured that there will be no budgetary problems with respect to the total cleanup. Can I get that assurance?

Mr. FATZ. Yes, ma'am. If you're referring to Dr. Gordon's statement that the $80,000 was cut——

Ms. NORTON. I am.

Mr. FATZ. I will personally get with Dr. Gordon and explain why that money was withdrawn. It wasn't obligated, and I will get with Dr. Gordon and tell him how he can get more money. There's a process for that and I will explain that.

Ms. NORTON. Thank you.

Colonel FIALA. Ma'am, I would like to point out that this is the first time we heard requested that D.C. government would like to conduct separate soil samples, so we will support that effort.

Ms. NORTON. I very much appreciate that. I appreciate that has come out and that you are willing to work with the District. You believe you are adequately funded to do the complete cleanup?

Colonel FIALA. I'm the operator on the ground, ma'am. I'm adequately funded for my current operations. And let me point out when we worked the extensive and comprehensive sampling plan starting in February, and started work in that with community outreach and getting their opinions, and working with the EPA and the Department of Health, the Department of the Army stood up and gave me additional money to conduct that operation.

Ms. NORTON. Thank you very much, and thank you, Madam Chair.

Mrs. MORELLA. Thank you. Let me ask you, perhaps it's Colonel Fiala or maybe Mr. Fatz who would respond. What has the Army spent so far? And then, what is the cost of sampling each of the 1,200 properties? And then I'm curious also about how much is budgeted for sampling and remediation and how much has already been spent on sampling, including the restoration, and how much has been spent on remediation?

Mr. FATZ. OK. If we can do this as a tag team, I'll answer the overall. To date, we have spent $50 million at Spring Valley and that includes $10 million this year. We went into the fiscal year 2001, and it was budgeted for $3 million, and we had to find $7 million in our program to bring it up to the $10 million that the Baltimore District required to do the sampling after the arsenic find.

Mrs. MORELLA. What's the breakdown——

Colonel FIALA. With regards to your question about the sampling, our estimate right now, it's going to cost between $3 million to $5 million, and that's going to depend on how often and to what level we need to go back and do further sampling or refine it. And that will depend on what kind of initial results we get back in our initial sampling.

Mrs. MORELLA. Could you break it down on each of the properties, approximately what the cost is? I think there's——

Colonel FIALA. And we'd—I'd like to submit that for the record.

Mrs. MORELLA. You certainly may. You may submit that to the record.

[The information referred to follows:]

DEPARTMENT OF THE ARMY
BALTIMORE DISTRICT, U.S. ARMY CORPS OF ENGINEERS
P.O. BOX 1715
BALTIMORE, MD 21203-1715

August 22, 2001

REPLY TO
ATTENTION OF
Programs and Project
Management Division

Matthew Batt
Subcommittee on the District of Columbia
B 349C Rayburn House Office Building
Washington, DC 20515

Dear Mr. Batt:

This is in response to your letter dated August 14, 2001, regarding my testimony before the Subcommittee on the District of Columbia regarding the Spring Valley formerly used defense site.

My corrections to the transcription of my oral testimony are enclosed. I have also enclosed the following additional information requested during the hearing:

- the cost per property to conduct soil sampling in Spring Valley.

Please contact me or Major Michael Peloquin at 410-962-0157 if you have any questions in this matter.

Sincerely,

Charles J. Fiala, Jr.
Colonel, Corps of Engineers
District Engineer

Enclosures

What is the cost of sampling each of the 1,200 properties?

Under the Army's current sampling plan for all 1,200 residential properties and 400 non-residential lots located within the Spring Valley formerly used defense site, the first round of sampling is called "composite sampling." The purpose of this sampling is to serve as a screening tool to identify which properties may have contamination and may require additional investigation.

Composite sampling involves subdividing the property into 2 to 4 smaller units, and within each unit we collect surface soil samples from several locations and mix them together. Each of these mixtures is analyzed for arsenic, so that there is a separate result for each of the subunits on the property. The resulting arsenic concentration represents an "average" value for that subunit. Based on our knowledge of historical activities at each property (including aerial photography and historical records), we may also take subsurface samples, and we may analyze for other contaminants in addition to arsenic.

The average cost per property for the composite sampling is $2,100.00.

If the analysis results from the composite sampling finds an arsenic concentration less or equal to 12.6 parts per million, then our sampling plan indicates that no further action is necessary. If the analysis results find an arsenic concentration that is greater than 12.6 parts per million, then a second round of sampling is performed, called "grid sampling."

Grid sampling involves laying out an imaginary grid over the entire property, 20 feet by 20 feet, and taking a discrete soil sample from within each grid. These samples are not mixed together; rather, each discrete sample is analyzed separately. Thus, each property ends up with approximately 50 individual sample results (depending on the size of the property) which can be used to conduct a human health risk assessment. If this risk assessment finds an unacceptable risk, then the Army will recommend that it be allowed to remediate the property.

The average cost per property for the grid sampling is $10,000.00.

Please note that the above costs are averages. Actual costs at individual properties may be higher or lower depending on the property size, the need for subsurface sampling, and the need to analyze for contaminants other than arsenic.

Mrs. MORELLA. And tell me about your technologies. What technology did you use in 1986 and in 1993 to detect the burial sites? And then, what are you doing today?

Colonel FIALA. Yes, ma'am. When we started the geophysical surveys in 1993, again, we started in 1993, not in 1986. We used an instrument that's referred to as the EM–31. It is an instrument that was—the right instrument to look for buried munitions and mass locations of buried munitions and the metal signature that they provide. And there's been criticism that we aren't using the right piece of equipment. In our role of looking for these things, our experts in this business of ordnance discovery are convinced that we are.

There's been some minor technical improvements to the EM–31. There's been further improvements in GIS; in other words, where you are on the ground, refinement that allows us to improve the physics of how you determine whether or not you need to dig or not. In addition to that—at the request of the D.C. Health Department, we are going to conduct some testing with some other more modern equipment to determine whether or not we can use those, and that testing is going to be conducted in late August, going into September. Based on those results, we will go back to areas where we jointly have some concerns—and when I say jointly, that's us, the EPA and the Health Department—and use that technology.

Mrs. MORELLA. Colonel Fiala, I really don't understand EM–31 or GIS, GIS, but I hope that what you are saying to me is that you have the best available, latest technology that you are employing.

Colonel FIALA. You've summarized it better than I have, ma'am.

Mrs. MORELLA. Just one final question, and I don't mean to ignore everybody. That's really been the difficulty because we'd like to spend time with each one of you and go through a whole litany of questions, but time doesn't truly allow it. Maybe for Mr. Reardon, General Reardon, is a criminal investigation being conducted by your agency or other agencies of the Federal Government regarding the Spring Valley project?

Mr. REARDON. Ma'am, Army audit would not be doing a criminal investigation, wouldn't be our area, and I know of no criminal investigation being done by anyone in the Army over Spring Valley.

Mrs. MORELLA. Is there anyone on the panel who feels qualified to respond to that? We had heard there might be.

Colonel FIALA. Ma'am, I'll respond to that because I have employees that have been interviewed. It's my understanding there is an investigation being conducted by the EPA, and in their investigation they're interviewing employees and other Federal officials that were involved in this operation in 1993 to 1995. So they have been interviewed, and I know this because they have interviewed a couple of our people.

Mrs. MORELLA. Do you have any idea of the scope of the investigation?

Colonel FIALA. No, ma'am. I just know that they come in and interview.

Mrs. MORELLA. This is a question we'll direct to the EPA in writing.

I'm going to defer to the ranking member. I have no further questions to ask you, but I would like to submit questions for the

record for you to answer as expeditiously as possible, and I thank you.

Ms. Norton.

Ms. NORTON. Thank you, Mrs. Morella. I have only a couple of more things today.

One, I want to make sure that I understood President Ladner correctly. I certainly understand that his—that the expansion that's been approved is expansion on the AU campus. Do I understand you to say that you do not intend to acquire properties on the south side of what you now own?

Mr. LADNER. No, I would not say that. We have purchased a couple of buildings in the last 5 to 6 years, and we hold open that option as any other legal entity has in the city.

Ms. NORTON. So your response to me was not entirely candid then. You're saying as of now you intend to expand on the AU campus, but you add that you still purchase properties outside of your campus, and therefore you might expand beyond the campus confines.

Mr. LADNER. Congresswoman Norton, I was responding to a discussion about the campus plan as you laid it out, and so I intended to be doing it in that context. I'm glad you asked this further question because it's my understanding you were talking about the campus plan.

Ms. NORTON. And the campus plan does then include not only the campus, but any properties you may acquire?

Mr. LADNER. No, it does not.

Ms. NORTON. The campus plans means you will be expanding only on property you own now?

Mr. LADNER. That's right.

Ms. NORTON. That's important.

Madam Chair, I want to ask that included in the record be a list of addresses in Spring Valley and diseases which people—and the diseases that people at these addresses have acquired. I have no idea——

Mrs. MORELLA. Without objection, so ordered.

[The information referred to follows:]

	38th & Van Ness
42nd Street	Lung Cancer (non-smoker)
43rd & Yuma	Brain Cancer
Indian Lane & Glenbrook	Brain Cancer
5019 Sedgwick	Brain Cancer
5010 Sedgwick	Bomb Parts Brain Tumors
5053 Sedgwick	Parkinson's
5047 Sedgwick	Hus. & Wife died of Cancer
5030 Sedgwick	8 yr old Son went into coma. Also had asthma
5041 Sedgwick	allergies
4721 Sedgwick	former occupants died of lung cancer
4800 Blk.Sedgwick	Fiance died of lymphoma
4900 Sedgwick 15yr.	Blood Disorder
5065 Sedgwick	Son-brain cancer Daughter breast cancer Mother died age 49 large cell lymphoma Father died multiple myeloma
5040 Sedgwick	Thyroid growth, skin lesions, father had skin lesions too. Dog had skin tumors Had pernicious anemia at age 19
5054 Sedgwick	James Carter had aplastic anemia 1966 Corrigan child died of Aplastic anemia after they bought house from Carter estate
5058 Sedgwick	breast cancer Father had prostate cancer (avid gardner) Mother multiple skin cancers, both daughters Have skin cancers Boy across street died at young age.

3410 Lowell St. – Chronic Lymphocytic Leukemia

	Daughter brain cancer, grandkid hydrocephalitus	
3819 48th St.	Breathing diff. Dog died age 6 Wife had hair loss 3,000 Plants died, cicadias deformed.	
5045 Van Ness	Has skin cancer. Hands would burn after working in Garden.Daughter also has skin cancer&lives at 52nd Court now. 100s of trucks of dirt moved from Mass. & Van Ness to 52nd ct. Another lady said dirt from AU taken to Van Ness and Mass many years earlier.	
4810 Loughboro	Parents died in 50's from cancer	
CDC/ATO 1979-82	Husb.Testicular Cancer Kid born Club Feet	Frat brother died of cancer at age 28
CDC	Kid had warts & rash	
CDC	had skin problem	Soil barer 10 yrs.ago
CDC 10yrs. ago	Kid had stomach ill.	(301)498-7144 (202)885-3360
CDC/ATO	Friend died of cancer	
AU	autoimmune problems Breathing diff. Allergies	
AU	Rugby Players had rashes	AU Coach
AU	Chronic infections, bone cond. Sleep apnea, anemic Fatigue syndrome	
42nd & Warren	Breast cancer age 30s	
43rd & Butterworth	Breast cancer age 30s	
48th & Albemarle	Breast cancer age 30s	
44th & River Road	Leukemia	
44th & Fessendon	Lymphatic Lymphoma	
44th & Yuma	Breast cancer 2 cases formerly residents at	

Address	Illness	Other factors
4710 Quebec St.	Non-Hodgkins Lymphoma Dog died of cancer	Neighbor also had it
4825 Rodman St.	Chronic Auto-immune Dis. Anemia, parkinson's, Parents died of cancer	
4849 Rodman	As levels 14-17 ppm	
5166 Tilden St.	Multiple Myoloma	Water in basement downhill from Sed.Tr.
5170 Tilden	Husb. Died of cancer	
4941 Tilden	Brain Cancer	
5012 Tilden	Brother died of cancer	
4601 Tilden	Husb. Died of lung cancer	
4014 49th St.	Wife, benign liver growths Very rare	Neighbor had same problem
4325 49th St.	Office bldg. Boss died of loss of Red Blood Cells She has myelofibrosis	
3630 Fordham	bone cancer	
Fordham St.	Bone Marrow Cancer	
3717 Fordham 76-84	Fibrosarcoma in abdoman 6804 Langley Springs Court McLean 22101 daughter got cancer	age 15
5008 Warren St.	Lewisite lab report .43UJ&.45UJ Sister had rash raking leaves	
5001 Warren St.	Neuropathy	
5015 Warren St.	Arsenic and mercury elevated in blood & urine	
4825 Glenbrook Rd.	Laughlin's nanny Many problems compatible With arsenic/ mustard exposure Wife had Brain Tumor	
3723 48th St.	Former occups: Father died of lung cancer, smoker,	

Ms. NORTON. Thank you. I have no idea whether these residents—there's a pattern here sometimes on specific blocks—would have acquired these diseases in the first place, and the last thing we ought do is draw the conclusion that because a set of people have cancers, for example, and other diseases that there's a cause-effect relationship established. I ask for their inclusion in the record for one reason only, and that is to fortify and reinforce what from me is a major contribution we can make, and that is to get the earliest health studies so that people can take whatever precautions they need to take to avoid health risks, and so that the Federal Government can do whatever it can to prevent health risks to this community.

Thank you very much, Madam Chair.

Mrs. MORELLA. Again, I want to thank you for spending the day with us and for the information that you have given this subcommittee. As you probably have gathered, when we pull all our material together and look at what further needs to be done, we will be working with you, and we will be moving ahead beyond this. Thank you all very much.

The hearing is now adjourned, and I want to thank our staff for the work that they have done: Russell Smith, Heea Fales, Rob White, Matt Batt, Howard Denis and John.

[Whereupon, at 3:07 p.m., the subcommittee was adjourned.]

[The prepared statement of Hon. Thomas M. Davis and additional information submitted for the hearing record follow:]

THOMAS M. DAVIS
11TH DISTRICT, VIRGINIA

Congress of the United States
House of Representatives
Washington, DC 20515–4611

REP. TOM DAVIS

STATEMENT: JULY 27, 2001

Thank you Chairman Morella for your leadership in holding this important and timely hearing. The extent of toxic waste contamination in the Spring Valley section of the Nation's Capital is truly shocking. It is astonishing that we still do not have clear answers after 83 years of speculation and inquiry by Federal and local officials. I am grateful that the District of Columbia Subcommittee is bringing key parties together today where they can testify under oath to Congress about the facts.

What we do know is stunning. There is clearly a lot of explaining to do in the course of congressional efforts to aggressively pursue this

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matter. We need to know the nature of information previously reported, any health and environmental risks, and actions taken or contemplated by appropriate officials. I am stunned to learn that even today we apparently do not know how much and where munitions and laboratory materials were buried during World War 1!

What we have learned is not such as to build confidence. To cite just one dispute, the D.C. Department of Consumer Affairs has challenged a report by the Army Corps of Engineers which concluded that there were no risks posed. A task force including the Environmental Protection Agency was formed to resolve this key issue. Subsequently, hazardous materials were discovered and there is not yet a determination by the D.C. government concerning any health and environmental risks. Moreover, all the properties have not yet been tested!

I understand that there are proposals on the table to resolve this complex and tragic matter. Clearly time is of the essence, as evidence of possible severe adverse consequences continues to mount. I look forward to working with federal and local stakeholders and

congressional colleagues in an effort to get at the facts and produce timely action.

Thank you.

SEP 06 2001

AMERICAN UNIVERSITY

WASHINGTON, DC

September 5, 2001

The Honorable Constance A. Morella, Chairwoman
Subcommittee on the District of Columbia
Committee on Government Reform
House of Representatives
2157 Rayburn House Office Building
Washington, D.C. 20515-6143

Dear Chairwoman Morella:

As requested in your letter of August 21, 2001 to American University President Benjamin Ladner, we are sending to you responses to the questions you raised.

Thank you for the opportunity to respond, and please let us know if you need additional information.

Sincerely,

David E. Taylor
President's Chief of Staff

OFFICE OF THE PRESIDENT
4400 MASSACHUSETTS AVENUE, NW WASHINGTON, DC 20016-8060

SUBCOMMITTEE ON THE DISTRICT OF COLUMBIA

Responses of Benjamin Ladner
President, American University

September 5, 2001

1. *American University plays many roles in the Spring Valley situation. Describe its role as a landowner – how much of its campus was used by the military during World War I, how much property and where has the University since sold – such as the Korean Ambassador's residence?*

American University currently owns approximately 76 acres on its main campus. In 1917, the University owned approximately 90 acres, and all 90 acres were given over to the U.S. Army in 1917 for use during World War I. The 90 acres consisted of the main campus (then, approximately 59 acres); the current Cassell site (approximately 5.8 acres); the current Wesley Seminary plot (approximately 9 acres); undeveloped land along Glenbrook Road (approximately 3 acres); small plots around AU Park; and the Wesley Heights property, including the current plot of The United Methodist Church. AU donated approximately 9 acres to Wesley Seminary, and purchased approximately 8 acres that is now the Nebraska Avenue Parking Lot. In 1986, the University sold approximately 3/4 acre of undeveloped land to the Republic of Korea for expansion of the ambassador's residence garden. In 1992, the AU sold approximately two acres to Glenbrook Limited Partnership. In 1994 the University re-purchased from the Glenbrook Limited Partnership, approximately one acre of that land, along with the recently constructed home that is now the residence of the University President.

2. *Do you feel safe living in the house provided to you by the University? Does your family live there with you? Have you or your family members undergone any medical tests to ensure you have not been exposed to dangerous levels of arsenic or other chemicals?*

Yes, I do feel safe at the 4835 Glenbrook Road residence, where my wife and I live. Neither of us has undergone special medical tests for arsenic.

3. *When the University entered into the agreement with the U.S. Department of War, did the University sign any kind of agreement waiving any claims against the Department of War?*

We are not aware of any waiver executed by the University when it entered into an agreement with the Army in 1917, allowing the War Department to use campus property. In March and June 1920, after the Army had been ordered to and represented that it had transferred all munitions, materiel, and other chemical matter to a military facility in Maryland (which we found out

later it did not do), it appears the University and the Army signed documents that purported to release the Army from certain claims. (Those documents were provided in the packet of materials that accompanied my written testimony). For a variety of reasons, including the apparent mis-representations that preceded the signing of those documents, we do not believe any putative release contained within those documents is enforceable or that it bars the claim asserted by the University against the Army under the Federal Tort Claims Act.

4. *After World War I, did the University enter into other lease arrangements with the agencies of the Department of War or the later Department of Defense? Did the University or the Army conduct tests on those sites where those activities were performed?*

Since WWI the University has permitted the U.S. government to use campus property for various purposes, but never to test live munitions. During WWII, the WAVES (Women's Naval Auxiliary) and the SPARS (Women's Coast Guard Auxiliary) used the campus for training. The U.S. Navy also used part of the campus for its "Bomb Disposal School," which taught soldiers training for duty in Europe and the Pacific theatres how to identify enemy war materiel. It is our understanding that live ammunition was not used in connection with the "Bomb Disposal School" or any other WWII training activity.

5. *It has been said that the University knew nothing of the World War I era activities until it performed an archival search of its records in 1986. Yet an article produced by the campus publicity department, apparently in 1957, gives details about an unexploded bomb that was found when the University was building its television station and tower in late 1953 or early 1954. Moreover, another publication makes reference to an archives exhibit "based on AU's wartime past," covering 1861 to 1946, that was once displayed in the University's Bender Library during the fall of 1985. How do you explain this? Did the University conduct an investigation after the bomb was discovered in 1953, and if so, what were the results?*

Respectfully, we have never asserted that the University "knew nothing" of the U.S. Army's WWI activities on campus until it "performed an archival search of its records in 1986." We certainly knew prior to 1986 of the Army's presence on campus during WWI. However we did not know prior to our 1986 records search, which uncovered the 1921 student newspaper article that any possibility existed that WWI munitions were buried on or near University property. Furthermore, as set forth in my testimony and documents submitted to the subcommittee, in 1986 the Army found the 1921 article to be "historically suspect" and found "no official evidence" of any burial of

munitions on our campus. It is our understanding that the unexploded simulated or "dummy bomb" mentioned in a 1956-57 alumni publication, was a training device used by the Navy "Bomb Disposal School" on campus during WWII. It was not a live munition. The occasion for the article was the opening of the University television station. We have no other information regarding this. Regarding the Archive exhibit, it has been common knowledge for decades that the University was one site in the District used for WWI training activities. The property surrounding AU was also used by the U.S. Army during the Civil War as a fort for the defense of Washington D.C. The University Archives exhibit was a historical presentation by the archivist and was open to the public. It did not contain any information indicating the burial of World War I munitions on campus.

6. *Did American University prepare a risk assessment report on the risks and liabilities associated with the Army's research on American University?*

We are not aware of any independent risk assessment report on the risks and liabilities associated with the Army's WWI activities at American University. We have always deferred to the expertise and experience of the Army and the EPA to evaluate possible risks from the Army's presence during WWI. In 1986 the University made a request through the Army's Office of the Assistant Secretary and to the EPA to advise the university of any risks to the campus due to the Army's prior presence. In 1986 the Army informed the University that as a result of their survey "no suspicious items" were present. On December 8, 1994, following soil sampling performed on University property as part of the Army's investigation and assessment, the Army Corps' analysis indicated there were "no chemical warfare agents, explosives or their breakdown products, or measurable levels of these compounds present in the soil samples collected. Therefore no further action is necessary with regard to soil sampling on your property." The Army further advised us through a Record of Decision issued on June 2, 1995, that the conditions on campus "do no pose unacceptable risks to human health and the environment. Therefore no further remedial action is necessary . . . ."

7. *What is the name of the law firm or law firms that assisted the University on all matters pertaining to the U.S. government's weapon's research on American University's property?*

Between 1986 and 2001, the University consulted with attorneys in the following firms: Hewes, Morella, Gelband and Lamberton; Ropes and Gray; Thompson Hine; Beveridge and Diamond; Hogan and Hartson. We have no information on firms that may have been engaged by the University prior to 1986.

8. *Did American University or its contractors find any suspicious elements on the property when building after World War I and then after World War II when there was a growth spurt at the University? If and when this happened, did the University or the contractor inform the Army? How long before the Army took action?*

To the best of our knowledge, there were only two incidents. In July 1988, while re-grading an area south of the soccer field, a projectile approximately 14 inches long was unearthed. The Army was immediately notified and they sent an explosive ordnance disposal team that removed the object. In July 1994 while re-sodding the soccer field, an AU worker hit a metal object. The University immediately notified the Army, which determined the item to be a munitions fragment and removed it.

9. *How many acres of land did the University own in 1918 when it leased to the Department of War for conducting chemical weapons testing?* Answered in question one.

10. *When the University sold property, did it provide disclosures to buyers that the property may contain hazardous materials?*

No. Prior to 2001, (when Army Corps of Engineers tests revealed elevated levels of arsenic in the soil surrounding the Child Development Center), the University did not know that its property might contain hazardous materials. Indeed, prior to 2001, the Army repeatedly advised the University there were no such hazardous materials on University property. The University has not sold any of its property since 1992.

11. *What activities did the Bureau of Mines perform on the grounds of American University before the Department of War started its experimentation with chemical weapons?*

We have no definitive information with respect to Bureau of Mines activities and suggest that you ask the U.S. Army about this question.

12. *After some 68 years, why did the University initiate a request to the federal government to assess the campus for buried munitions?*

In 1986, a Denver-based reporter contacted the University about a scientist who, according to the reporter, may have conducted research and used radium on the AU campus in the early 1920s. As a result of the inquiry, the University conducted research on the scientist and did a radiation survey of the McKinley Building, with expertise provided by a radiation safety officer from George Washington University. While no radium was found, our archival research on the scientist found the reference in the April 1921 student publication *The Courier* suggesting that the War Department may have buried

munitions on or near the campus. Because the University was soon to begin the construction of Bender Arena, we contacted the U.S. Army and the EPA as a precautionary measure to ensure that no munitions or ordnance were present on campus property.

DEPARTMENT OF THE ARMY
BALTIMORE DISTRICT, U.S. ARMY CORPS OF ENGINEERS
P.O. BOX 1715
BALTIMORE, MD 21203-1715

SEP 4 2001

REPLY TO
ATTENTION OF
Programs and Project
Management Division

Honorable Constance A. Morella
Chairwoman, Subcommittee on the District of Columbia
Committee on Government Reform
2157 Rayburn House Office Building
Washington, DC 20515-6413

Dear Ms. Morella:

This is in response to your letter dated August 23, 2001, requesting answers to additional questions related to my testimony before the Subcommittee on the District of Columbia regarding the Spring Valley formerly used defense site.

My responses to your questions are enclosed. Please contact me at 410-962-4545 if I can be of further assistance.

Sincerely,

Charles J. Fiala, Jr.
Colonel, Corps of Engineers
District Engineer

Enclosure

Colonel Charles J. Fiala, Jr.

Response to Questions

from
Subcommittee on the District of Columbia

Committee on Government Reform

Spring Valley Formerly Used Defense Site

1.) Please describe the boundaries of the work that is being conducted by the Army Corps of Engineers?

The investigation currently underway by the Army Corps of Engineers encompasses the entire 661 acres within the boundaries which define the formerly used defense site. The attached map illustrates the boundaries of this site.

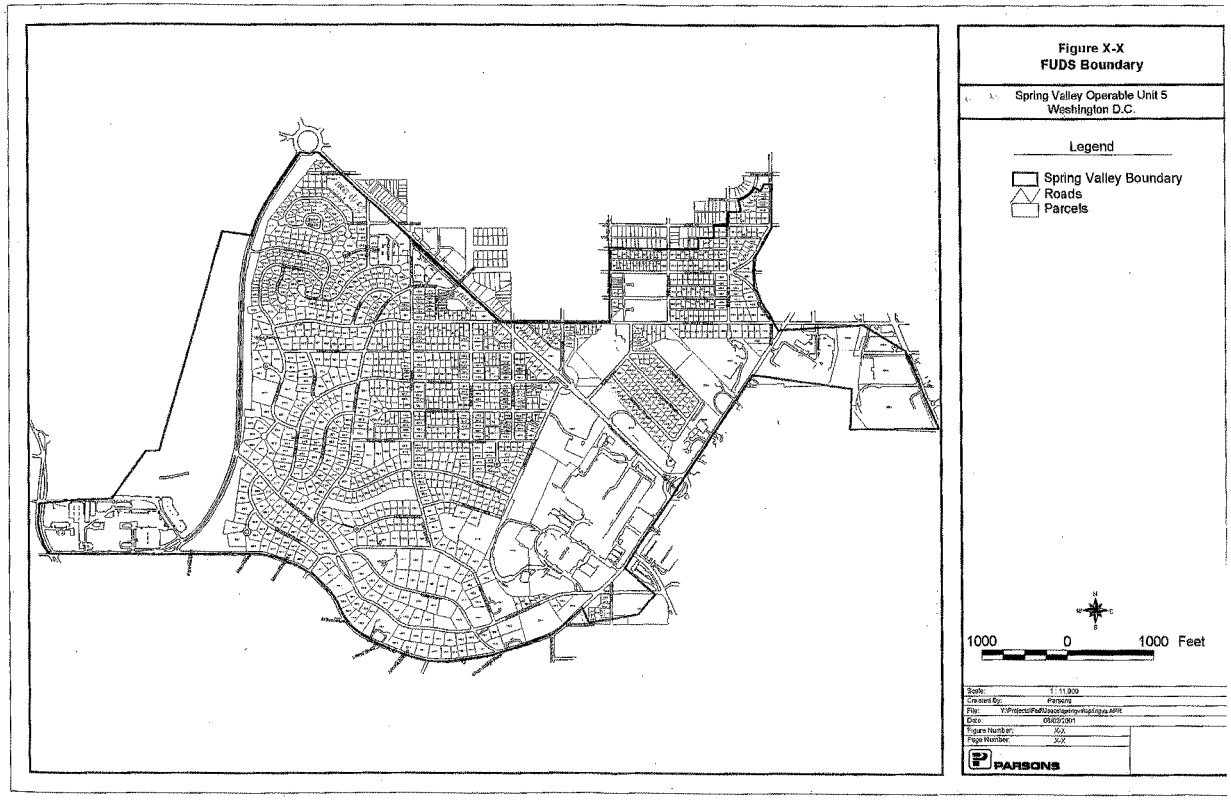
Figure X-X
FUDS Boundary
Spring Valley Operable Unit 5
Washington D.C.
Legend
Spring Valley Boundary
Roads
Parcels
1000
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1000 Feet
Scale: 1 : 11,900
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Date: 05/03/2001
Figure Number: X-X
Page Number: X-X
PARSONS

2.) Are you looking for other contaminants around the Spring Valley site? What are you looking for and what has been found? Are there other areas in the District of Columbia and surrounding region that are being searched for contaminants? Where are the areas and what has been found on those sites?

In addition to searching for arsenic, our current sampling includes sampling for other selected contaminants in certain locations. A description of the soil sampling plan is attached, including where we are sampling for contaminants other than arsenic.

The Corps' historical research into the Department of Defense's past activities at the former American University Experiment Station identified several other sites where testing may have occurred, including: Catholic University in the District of Columbia, and Fort Foote and the Montgomery County Country Club in Maryland. The Corps plans additional investigation at each of these sites, but to date has not identified any hazards at these locations.

FINAL SPRING VALLEY OU-5

Soil Sampling Plan

Central Test Area (Quadrant Sampling)

- Four (4) composite surface soil samples collected from 4 quadrants on every residential lot. The 4 samples consist of soil taken from 6 locations. The 4 composite samples will be analyzed for arsenic.
- Subsurface samples will be collected from one boring per property. The location of the boring shall be located in an area containing fill. If possible, the location of the boring shall also be located in an area identified as a ground scar/stressed vegetation. The depth of the boring will be based on the cut and fill map developed for the American University Experiment Station (AUES). For properties containing fill material, the boring will be conducted to 2 feet beyond fill (to a maximum of 10 feet). For properties containing only 1918 level or areas of cut, the boring will be conducted to 6 feet below ground surface (bgs). Samples will be collected from each 1-foot level and analyzed for arsenic.
- Expanded contaminant sampling based on POI-specific lists of potential contaminants (see below). Samples from the subsurface boring will be used for this testing.

Outside the CTA (Halve Sampling Areas)

- Two (2) composite surface soil samples on every residential lot. Both samples consist of soil taken from 6 locations. The 2 composite samples will be analyzed for arsenic.
- Subsurface samples will be collected from roughly 15% of the properties from the area outside of the Central Test Area (CTA). If possible, the location of the boring shall also be located in an area identified as a ground scar/stressed vegetation. The depth of the boring will be based on the cut and fill map developed for the AUES. For properties containing fill material, the boring will be conducted to 2 feet beyond fill (to a maximum of 10 feet). For properties containing only 1918 level or areas of cut, the boring will be conducted to 6 feet below ground surface. Samples will be collected from each 1-foot level and analyzed for arsenic.
- Some samples may also be tested for other contaminants (TBD).

POI-Specific Sampling Plans

♦POI 19 (CTA)

Documentation refers to POI 19 as the "Old Mustard Field" which seems to indicate this area was used to test for agent persistence. Therefore, Mustard and Mustard Agent Breakdown Products (ABPs) are identified as the potential chemicals of concern (PCOCs) and will be analyzed for at this POI.

- Surface soil (quadrant sampling) analyzed for arsenic.
- Subsurface samples will be collected from one boring per property. The location of the boring

shall be located in an area containing fill. If possible, the location of the boring shall also be located in an area identified as a ground scar/stressed vegetation. The depth of the boring will be based on the cut and fill map developed for the AUES. For properties containing fill material, the boring will be conducted to 2 feet beyond fill (to a maximum of 10 feet). For properties containing only 1918 level or areas of cut, the boring will be conducted to 6 feet below ground surface (bgs). Samples will be collected from each 1-foot level and analyzed for arsenic.

- Samples will be collected at 1-foot intervals and analyzed for arsenic.
- Samples will be collected at 1918 level. For properties containing only the 1918 level or areas of cut, the samples will be collected from 1 to 2 feet bgs. The samples will be analyzed for the following parameters:
    - Mustard
    - Mustard ABPs (Oxithiane, Dithiane, Thiodyglycol)

♦POIs 15R and 16R (CTA)

Documentation indicates POIs 15R and 16R (R refers to revised boundary) were chemical persistency test areas that consisted of applying chemicals to evaluate their persistency. Chemicals that were used at POIs 15R and 16R are identified in Mark Baker's memorandum dated 27 September 1993. These chemicals documented to have been used at POIs 15R and 16R are considered the PCOCs and will be analyzed for at POIs 15R and 16R.

- Surface soil (quadrant sampling) analyzed for arsenic.
- Subsurface samples will be collected from one boring per property. If possible, the location of the boring shall also be located in an area identified as a ground scar/stressed vegetation. The depth of the boring will be based on the cut and fill map developed for the AUES. For properties containing fill material, the boring will be conducted to 2 feet beyond fill (to a maximum of 10 feet). For properties containing only 1918 level or areas of cut, the boring will be conducted to 6 feet below ground surface (bgs). Samples will be collected from each 1-foot level and analyzed for arsenic.
- Samples will be collected at 1-foot intervals and analyzed for arsenic.
- Samples will be collected at 1918 level. For properties containing only the 1918 level or areas of cut, the samples will be collected from 1 to 2 feet bgs. For POI 15R, these samples will be collected in the subsurface boring conducted for each property within the boundaries of the POI. For POI 16R, these samples will be collected in a subsurface boring conducted for at the center of each patch used for persistency testing as documented from aerial photography. The samples will be analyzed for the following parameters:

    - Mustard
    - Mustard ABPs (Oxithiane, Dithiane, Thiodyglycol)
    - Lewisite ABPs (CVAO, CVAA)
    - Cyanide
    - Carbon Disulphide

♦POIs 7, 13, 39 (CTA)

Documentation indicates POI 7 was test area used for agent persistence. Documentation indicates POI 13 was a circular trench used as a static test fire area. The chemicals used at POI 13 were identified in Mark Baker's memorandum dated 27 September 1993. Documentation indicates POI 39 was a static test fire area. In addition, chemicals used at unknown locations on test range were also identified in this memorandum. These chemicals documented to have been used at POI 13 and the unknown test range locations are considered the PCOCs and will be analyzed for at POIs 7, 13, and 39.

- Surface soil (quadrant sampling) analyzed for arsenic, tetryl, nitroglycerin, 2,4-DNT, and 2,6-DNT, and nitrobenzene.
- Subsurface samples will be collected from one boring per property. If possible, the location of the boring shall also be located in an area identified as a ground scar/stressed vegetation. The depth of the boring will be based on the cut and fill map developed for the AUES. For properties containing fill material, the boring will be conducted to 2 feet beyond fill (to a maximum of 10 feet). For properties containing only 1918 level or areas of cut, the boring will be conducted to 6 feet below ground surface (bgs). Samples will be collected from each 1-foot level and analyzed for arsenic.
- Samples will be collected at 1-foot intervals and analyzed for arsenic.
- For POIs 7 and 39, samples will be collected at 1918 level. For properties containing only the 1918 level or areas of cut, the samples will be collected from 1 to 2 feet bgs. These samples will be collected in the subsurface boring conducted for each property within the boundaries of the POI.
- Trench Subsurface soil. For POI 13, four borings collected from the bottom of the trench and staggered for the inner and outer trenches similar to Sedgwick trench borings. A subsurface sample will be collected from the bottom of the trench in these borings.
- These subsurface samples at POIs 7, 39, and 13 will be collected and analyzed for the following parameters:

■Mustard	■Tetryl
■Mustard ABPs (Oxithiane, Dithiane, Thiodyglycol)	■Trinitrotoluene (TNT)
	■Nitroglycerin
■Lewisite ABPs (CVAO, CVAA)	■2,4 dinitrotoluene (2,4-DNT)
■Cyanide	■2,6 dinitrotoluene (2,6-DNT)
■Carbon Disulphide	■Nitrobenzene

♦POI 38 (CTA)

Documentation indicates POI 38 was a test area where shells were fired. The chemicals used at POI 38 were identified in Mark Baker's memorandum dated 27 September 1993. The chemicals documented to have been used at POI 38 are considered the PCOCs and will be analyzed for at POI 38.

- Surface soil (quadrant sampling) analyzed for arsenic, tetryl, nitroglycerin, 2,4-DNT, and 2,6-DNT, and nitrobenzene.
- Subsurface samples will be collected from one boring per property. If possible, the location of the

boring shall also be located in an area identified as a ground scar/stressed vegetation. The depth of the boring will be based on the cut and fill map developed for the American University Experiment Station (AUES). For properties containing fill material, the boring will be conducted to 2 feet beyond fill (to a maximum of 10 feet). For properties containing only 1918 level or areas of cut, the boring will be conducted to 6 feet below ground surface (bgs). Samples will be collected from each 1-foot level and analyzed for arsenic.

- Samples will be collected at 1-foot intervals and analyzed for arsenic.
- Samples will be collected at 1918 level. For properties containing only the 1918 level or areas of cut, the samples will be collected from 1 to 2 feet bgs. The samples will be analyzed for the following parameters:

■Tetryl	■2,4 dinitrotoluene (2,4-DNT)
■Trinitrotoluene (TNT)	■2,6 dinitrotoluene (2,6-DNT)
■Nitroglycerin	■Nitrobenzene

SUMMARY OF POI-SPECIFIC CONTAMINANT LISTS

Sampling Plan 1 (POI 19)

- Arsenic
- Mustard
- Mustard ABP (oxithiane, dithiane, thiodiglycol)

Sampling Plan 2 (POIs 15R and 16R)

- Arsenic
- Mustard
- Mustard ABP (oxithiane, dithiane, thiodiglycol)
- Lewisite ABP (CVAA/CVAO)
- Hydrocyanic acid **(use cyanide as indicator)**
- Cyanogen chloride **(use cyanide as indicator)**
- Cyanide
- Carbon Disulfide

Sampling Plan 3 (POIs 7, 13, 39)

- Arsenic
- Mustard
- Mustard ABP (oxithiane, dithiane, thiodiglycol)
- Lewisite ABP (CVAA/CVAO)
- Hydrocyanic acid **(use cyanide as indicator)**
- Cyanogen chloride **(use cyanide as indicator)**
- Cyanide
- Carbon Disulfide
- Tetryl
- Trinitrotoluene (TNT)
- Nitroglycerin

- 2,4 dinitrotoluene (2,4-DNT)
- 2,6 dinitrotoluene (2,6-DNT)
- Nitrobenzene

Sampling Plan 4 (POI 38)

- Tetryl
- Trinitrotoluene (TNT)
- Nitroglycerin
- 2,4 dinitrotoluene (2,4-DNT)
- 2,6 dinitrotoluene (2,6-DNT)
- Nitrobenzene

Soil Sampling Plan	Central Testing Area Map	Entire Sampling Area Map
Mark Baker's Memorandum	Sampling Plan Rationale	Timeline for Sampling
RETURN TO OVERVIEW OF SOIL SAMPLING PLAN		

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Baltimore District
Page updated: May 24, 2001
POC: Doug Garman

3.) What levels of arsenic were found in the initial stages of the investigation? What levels are being found now?

During the original investigation in Spring Valley, conducted from 1993 to 1995, the Corps' soil sampling efforts primarily focused on chemical warfare agents, explosives, and their breakdown products. Because arsenic is so ubiquitous, the decision made at the time was to concentrate our efforts on more specific chemical indicators that could be more confidently linked with chemical warfare materiel. Although we did take a limited number of samples for arsenic, none of these sample results was outside the range of what would be considered "background" for this area (3 to 18 parts per million).

Of the 260 soil samples collected by the Corps, 136 were "split" with the Environmental Protection Agency (EPA), allowing them to sample for other contaminants. EPA analyzed each of these split samples for a different suite of contaminants, which included arsenic. They also collected a limited number of independent samples. Most of EPA's sampling results indicated arsenic levels below 17 parts per million, which would generally be considered to be within background levels. Higher levels were detected in a few isolated samples, with the highest being 241 parts per million. However, environmental risk assessments conducted on these results did not indicate a need for further evaluation.

Starting in 1999, in concert with the Corps' new investigation of the burial pit at 4801 Glenbrook Road, EPA collected additional soil samples in the vicinity of the burial pit. One of these samples detected elevated levels of arsenic, and as a result the Corps conducted more extensive sampling at the 4801, 4825, and 4835 Glenbrook Road properties. These results ranged as high as 1,040 parts per million near the burial pit. The risk assessment for these sample results indicated a need for a response action, which is now underway.

As a result of the findings on the Glenbrook Road properties, in 2000 the Corps expanded its arsenic sampling to include private residences in the vicinity of the Glenbrook Road properties, as well as the southern half of the American University campus. This round of sampling found arsenic concentrations ranging from non-detect to 101 parts per million, and indicated that ten properties required additional sampling and evaluation. The Corps is currently conducting a risk assessment at these properties.

On May 31, 2001, the Corps began its current effort to sample every property within the Spring Valley formerly used defense site. This includes approximately 1,200 residential properties and 400 non-residential lots. The Corps has results for approximately 550 of these properties as of August 27, 2001, and approximately 12% of these properties have results above our screening threshold of 12.6 parts per million, indicating additional evaluation is recommended.

4.) What is your agency doing to reduce the risk at Spring Valley?

The Corps is working closely with the Environmental Protection Agency and the District of Columbia Department of Health to reduce human health risk that may have been caused by the military's past activities at Spring Valley. Where the Corps has identified areas of risk, we have informed the owners/residents of the nature of the risk, and provided them with information about the steps they can take to avoid exposure pathways. At the same time, we have taken the steps necessary to reduce the risk to acceptable levels through removal or other response to the contamination.

At this stage of the investigation, we don't know where all elevated levels of contaminants are, and we won't know where they are until we have completed our sampling. Therefore, the best general approach we can take is to ensure the community is well-informed.

The Corps has been proactive in its efforts to keep the community informed about and involved in our investigation. Our community involvement initiatives have included the following:

- Community meetings (with speakers from the U.S. Agency for Toxic Substances and Disease Registry, as well as private sector experts, such as Dr. Stephen Lamm, a well-known toxicologist and expert on arsenic)
- Establishment of a Restoration Advisory Board consisting of 14 community residents as well as representatives from local businesses, and the federal and local agencies involved in the investigation
- Monthly community newsletters mailed to every address within the 661 acres of the Spring Valley site
- Letters sent to residents and property owners to inform them of developments specifically concerning them or their property, and to solicit their input or obtain permission for additional investigation on their property
- Telephone information line (1-800-434-0988), updated regularly and checked twice a day for messages. The appropriate project person promptly follows up on messages left on this 1-800 line. This phone number is included in briefings, letters, newsletters, and other correspondence sent to the community.
- Internet web page. Our Internet web page provides current project information. The information available includes maps, photos, news releases, minutes of meetings and community newsletters. As with the information line number, the web page address is included in all correspondence sent to the community. The web page address is (http://www.nab.usace.army.mil/projects/WashingtonDC/springvalley.htm).
- Public document repository. An information repository has been established at the District of Columbia Palisades Public Library, 49th and V Streets, N.W., Washington, D.C. Information on past project activities at Spring Valley, as well as current information on the project, is available at the repository.

- Partnering with other government agencies. The Corps has been participating in regular partnering meetings with officials from both EPA Region III and the D.C. Health Department to ensure resolution of all concerns about the site. The most recent partnering meeting was held on July 18, 2001.

5.) What kinds of chemical weapons research was conducted by the American University Experimental Station? Have the results of that research been declassified? Did you have access to any top secret or classified records in conducting the archival research reviews?

A wide variety of research was conducted at the American University Experiment Station (AUES) during the First World War. The AUES mission during the war was the investigation, development, testing, and manufacturing of substances, materials, equipment and weapons to determine their suitability for offensive and defensive gas warfare.

During the war, AUES became the centerpiece of the Chemical Warfare Service's Research Division. Research was conducted on both offensive and defensive measures. Typically, defensive testing was conducted on gas masks and protective clothing to protect troops from the effects of enemy gas attacks. Research was also conducted on dugout curtains; these curtains were used to prevent gas from entering the below ground shelters that front line troops typically lived in while on duty in the trenches.

Research was also conducted on offensive measures. Scientists were trying to develop chemical agents that quickly dissipated, but were effective in causing enemy casualties. Tests were conducted on captured German gas masks to determine what agents were effective in penetrating their filter.

A large number of chemical and toxic agents, smoke materials, incendiary materials, and detonator materials were tested at AUES. Typically small amounts of materials were developed in the labs, and if the agent looked promising larger amounts were produced and the scale of the testing was expanded. The majority of the materials that were investigated at AUES were not tested in the fields. The most commonly tested materials in the test ranges were mustard gas and mustard gas derivatives, phosgene, and chloropicrin. Ordnance used in field tests was usually 75 mm shells, trench mortar shells, or Livens projectiles.

W. D. Bancroft's 1919 history of the Chemical Warfare Service contains information on the volume of chemical agents that were produced at AUES during the war. Documentation suggests that agents were produced to support the testing and research at AUES. Large-scale production for war time use took place at commercial industrial plants or at the assembly lines that were constructed at the Edgewood Arsenal in 1917. The scientists at AUES would conduct research on the best methods for large-scale production of various agents. Once an effective method of production was developed, large-scale production took place at a different facility.

There were several boxes of classified information in the collection of the Military History Institute at Carlisle Barracks, Pennsylvania. These boxes were declassified and the information was reviewed as part of the 1993 research effort. After review of the contents, the material was forwarded to the Fisher Library at Fort McClellan, Alabama, where the remaining AUES records were housed. No other

classified or top secret documents were encountered during the archival research effort. To the best of our knowledge, all of the records related to the research conducted at AUES during the war have been declassified and reviewed.

6.) Has the Army Corps of Engineers agreed to remediate every property where munitions or dangerous levels of arsenic are found? What is required to be remediated by law?

The Corps' current work, called a Remedial Investigation, will determine the location and extent of the arsenic contamination throughout Spring Valley. In those areas where contamination is found, a risk assessment will be conducted to determine whether there is a risk to human health. In those cases where a risk is found to exist, the Corps will evaluate response alternatives, and propose a recommended course of action for comment by regulators and the community. Once a final decision is made regarding the appropriate course of action, the Corps will carry out the response. All of this work is conducted in close coordination with the Environmental Protection Agency, the District of Columbia Department of Health, and the community.

The Corps is committed to taking whatever response actions are called for by the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). Neither CERCLA nor the NCP specify cleanup standards for particular contaminants. Rather, they set the guidelines for how to arrive at appropriate cleanup standards. The Corps has followed these guidelines in developing its protocols for how to remediate the arsenic in the soil.

Munitions are not defined under CERCLA as "hazardous substances," but the Corps is responsible for cleaning up munitions left behind by the Department of Defense. Any additional munitions found in the Spring Valley area will be safely removed by the Corps.

7.) What has the Army spent thus far? What is the cost of sampling each of the 1,200 properties? How much is budgeted for sampling and remediation?

Through the end of fiscal year 2001, the Army will have spent approximately $50 Million for investigations and response actions at the Spring Valley site.

Under the Army's current sampling plan for all 1,200 residential properties and 400 non-residential lots located within the Spring Valley formerly used defense site, the first round of sampling is called "composite sampling." The purpose of this sampling is to serve as a screening tool to identify which properties may have contamination and may require additional investigation.

Composite sampling involves subdividing the property into 2 to 4 smaller units, and within each unit we collect surface soil samples from several locations and mix them together. Each of these mixtures is analyzed for arsenic, so that there is a separate result for each of the sub-units on the property. The resulting arsenic concentration represents an "average" value for that sub-unit. Based on our knowledge of historical activities at each property (including aerial photography and historical records), we may also take subsurface samples, and we may analyze for other contaminants in addition to arsenic.

The average cost per property for the composite sampling is $2,100.00.

If the analysis results from the composite sampling finds an arsenic concentration less or equal to 12.6 parts per million, then our sampling plan indicates that no further action is necessary. If the analysis results find an arsenic concentration that is greater than 12.6 parts per million, then a second round of sampling is performed, called "grid sampling."

Grid sampling involves laying out an imaginary grid over the entire property, 20 feet by 20 feet, and taking a discrete soil sample from within each grid. These samples are not mixed together; rather, each discrete sample is analyzed separately. Thus, each property ends up with approximately 50 individual sample results (depending on the size of the property) which can be used to conduct a human health risk assessment. If this risk assessment finds an unacceptable risk, then the Army will recommend that it be allowed to remediate the property.

The average cost per property for the grid sampling is $10,000.00.

Please note that the above costs are averages. Actual costs at individual properties may be higher or lower depending on the property size, the need for subsurface sampling, and the need to analyze for contaminants other than arsenic.

The Army has programmed $34 Million to complete investigation and response activities at this site.

8.) What action do you contemplate taking if you do not obtain the requisite number of properties to be sampled to ensure that your analysis and conclusions regarding how safe the area is?

The nature of the former use of the Spring Valley area distinguishes it from the pattern of contamination more usually encountered in the environmental cleanup arena. The more usual pattern resulted from spills or releases from particular point sources, and the resulting contamination is more likely to be in the form of a plume or some other continuous area. At Spring Valley, the Corps has found a few discrete small burial areas containing munitions or chemical contamination. In addition, multiple pieces of ordnance scrap have been recovered throughout the site. The Corps has also found elevated levels of arsenic in the soil surrounding the burial areas. Arsenic was used at the site by the Army, and is also a chemical agent breakdown product. The Corps has found arsenic at various concentrations at other discrete areas in Spring Valley, as well. There is no discernible pattern to the location of these elevated-concentration areas, perhaps because Spring Valley has been heavily developed since 1920 when the Army left the site and the soils have been moved around extensively.

As a result of the random location of the contamination, each investigative sample carries unique significance. One cannot assume that because no elevated levels of arsenic are found in soil on one property, the same will be true just across that property line.

The current investigative plan for Spring Valley is to sample every property within the formerly used defense site boundary (approximately 1,200 residential properties, plus approximately 400 non-residential lots). Prior to sampling a property we must obtain a right-of-entry (ROE) from the property owner. As of August 27, 2001, we have obtained 917 ROEs or approximately 76% of the total properties.

Based on the arsenic sampling results received through August 20, 2001, approximately 12% of the properties sampled have results that exceed our soil screening level (SSL) of 12.6 ppm. This means that these properties will require follow-on action, which will include grid sampling, risk assessments, and perhaps soil removals if necessary. Based on the current trend, if we did not receive any more ROEs, there would be a potential for 30 to 40 properties out of 1,200 (about 3%) that do not get sampled that could have arsenic levels above our SSL. Since our pursuit of additional ROEs is ongoing and productive, this percentage will continue to be reduced. Therefore, it can be concluded that the overall sampling effort will be highly successful in identifying and addressing arsenic and other specific chemicals at the site.

When we reach the point where no additional ROEs can be obtained by voluntary means, we will assess whether sampling at the remaining properties seems necessary for completion of the remediation of Spring Valley. If deemed necessary, we may seek to compel access to some or all of the remaining properties.

Although used in only extreme cases, CERCLA grants the government authority to compel access to a property "where any hazardous substance or pollutant or

contaminant may be or has been generated, stored, treated, disposed of, or transported from... [or] from which or to which a hazardous substance or pollutant or contaminant has been or may have been released... [or] where such release is or may be threatened... [or] to determine the need for response or the appropriate response or to effectuate a response action...."

When munitions are involved, the Corps may ask the Attorney General of the U.S. to compel access, if appropriate. If other types of contamination are involved, the Corps would notify the Environmental Protection Agency, the District of Columbia Health Department, and the local government agency responsible for safety. One or more of these agencies may decide whether to compel access.

Batt, Matthew

From: S. S. Shapley [ssshap@starpower.net]
Sent: Tuesday, September 04, 2001 8:23 PM
To: Vazirani-Fales, Heea; Batt, Matthew
Cc: Harvey, Damon
Subject: SPRING VALLEY TESTIMONY - ANSWERS

Importance: High

.....Hello Matthew Batt and Heea Vazirani-Fales,
Here are my answers to the four questions posed in your letter of August 17 pursuant to my testimony at the July 27 hearing by the DC Subcommittee on "Spring Valley - toxic Waste Contamination in the Nation's Capital".

1 - QUESTION = You are a citizen representative but you work for the EPA - please explain your position and responsibilities at the EPA.
ANSWER = As I said in my response to the selection committee of the Restoration Advisory Board, I am and have been an employee of the US EPA here at Headquarters in Washington, DC. My relevant experience there has included being Liaison with the chemical industry for the Toxic Substances Control Act and being the signatory authority for the US EPA for the Consent Decree implementing the assessment and clean-up activities required of the Texas Eastern Natural Gas Pipeline Company. I currently serve in a staff role for the Director of the Office of Pollution Prevention and Toxics to establish an historical function as a model for the office and the agency. I volunteered for the Board and expressed a willingness to serve as it Co-chairman because of my civic interests.

2 - QUESTION = FROM WHOM DID YOU PURCHASE YOUR HOME? DID THE SELLER PROVIDE ANY DISCLOSURE THAT THE PROPERTY MAY CONTAIN HAZARDOUS MATERIALS?
ANSWER = My home, located at 4710 Upton Street, NW, was built in 1935. When I purchased it in 1995, both the seller and myself, the buyer, were represented by real estate agents from the Spring Valley office of WC & AN Miller. There was no disclosure to me concerning any history of contamination or the historical activity in the area of the American University Experimental Station.

3 - QUESTION = DO YOU KNOW OF ANY INSTANCES WHERE THE GOVERNMENT HAS PROVIDED WARRANTIES FOR THE WORK THAT IT HAS PERFORMED, ESPECIALLY WHEN THE WORK HAS INVOLVED REMEDIATION OF CONTAMINATED SOIL?
ANSWER = No, I know of no such warranties, in my capacity as a private citizen and my experience with the US EPA has not involved any reason to know of such a practice or policy.

4 - QUESTION = ARE YOU SATISFIED WITH THE JOB BEING DONE BY THE ARMY CORPS OF ENGINEERS? ARE YOU SATISFIED WITH THE JOB BEING DONE BY THE EPA?
ANSWER = Yes, I am myself satisfied that the Corps is complying with the technical protocols agreed with the US EPA for its field sampling and analysis and that the US EPA, as currently represented, is diligent and constructive in its role in the partnership with the Corps for Spring Valley. With the current project management of the Corps I, as the advisory board's co-chairman, have a good, full and frank working relationship. They clearly respect their obligation to the community, as embodied in the advisory board, and its agenda is as much mine and

ours as it is theirs. The community members do intend to use the mechanism afforded by the federal government of Technical Assistance for Public Participation (TAPP) to obtain independent advice.

.....

Sarah Stowell Shapley
Community Co-Chair,
Spring Valley Restoration Advisory Board
4710 Upton Street, NW
Washington, DC 20016-2370
202-Adams7-7530

Reply to Chairwoman Mrella's
letter of August 17, 2001

"Spring Valley – Toxic Waste Contamination in the Nation's Capital"

Questions for William C. Harrop

1.) Where do you live relative to where the discoveries of buried munitions or high concentrations of arsenic?

2.) When did you purchase your home and did the seller disclose that hazardous waste may be located on the property? Who did you purchase the property from?

3.) Are you satisfied with the job being done by the Army Corps of Engineers? Are you satisfied with the job being done by the EPA?

1) Less than 100 yards from the major concentrations at the Korean Embassy and the adjoining property on Glenbrook Road.

2) We purchased the property in 1969 from private owners named Schenk. The seller did not disclose the possibility of hazardous waste on the property. I very much doubt if he knew of it.

3) I believe that there are very real questions about the behavior of the Army Corps of Engineers, EPA and American University in earlier years. I am satisfied that the Army and EPA are now doing a responsible clean up job. The same can not be said for the dilatory performance of the D.C. Department of Health in executing a long overdue health survey.

W C Harrop