SPRING VALLEY FORMERLY USED DEFENSE SITE PROJECT

September 11, 2012
7:00 – 8:30 p.m.

BASEMENT MEETING ROOM
ST. DAVID'S EPISCOPAL CHURCH
5150 MACOMB ST NW, WASHINGTON, DC

Agenda

7:00 p.m. **I.** **Administrative Items**

Co-Chair Updates
- Announcements, Introductions

Task Group Updates

7:10 p.m. **II.** **USACE Program Updates**

Arsenic Soil Removal
Additional Soil Sampling

Groundwater Study

4825 Glenbrook Road – Status Report
- Draft Remedial Design & Remedial Action Work Plan

7:30 p.m. **III.** **Community Items**

RAB Request
George Vassiliou, RAB Member

Spring Valley Follow-On Health Study Update
Mary Fox, Johns Hopkins University

EPA Update: Arsenic Toxicity
Dawn Ioven, Toxicologist, USEPA, Region 3

8:05 p.m. **IV.** **Open Discussion & Future RAB Agenda Development**

Possible Upcoming Meeting Topics*:
- Consider Joint RAB/Community Meeting in October- Focus on the 4825 Glenbrook Road Work Plan
- Focus on the Groundwater Study Results and Plans
- ATSDR's 4825 Glenbrook Road Health Consultation Update

8:15 p.m. **V.** **Public Comments**

8:30 p.m. **VI.** **Adjourn**

**** RAB meetings are not held in August or December***

Spring Valley
Formerly Used Defense Site

Restoration Advisory Board Meeting

September 11, 2012

"The USACE Mission in Spring Valley is to identify, investigate and remove or remediate threats to human health, safety or to the environment resulting from past Department of Defense activities in the area."

US Army Corps of Engineers
BUILDING STRONG®

Agenda Review

- Co-Chair Updates
  - Introductions, Announcements, Task Group Updates
- USACE Updates
  - Arsenic Soil Removal
  - Additional Soil Sampling
  - Groundwater Study
  - 4825 Glenbrook Road NW: Status Report
    - Draft Remedial Design & Remedial Action Work Plan
- Community Items
  - RAB Request – George Vassiliou, RAB Member
  - Spring Valley Follow-On Health Study Update
    - Mary Fox, Johns Hopkins University
  - EPA Update: Arsenic Toxicity
    - Dawn Ioven, Toxicologist, USEPA, Region 3
- Open Discussion & Agenda Development
- Public Comments

Co-Chair Updates

Introductions

Co-Chair Updates

❖ Announcements

- **Option: Joint October RAB/Community Meeting**
- **Limited amounts of a variety of documents are available for RAB members to take home**
- **Website Updates:**
  - ✓ **July and August 2012 Monthly Project Summary**
  - ✓ **June 2012 RAB meeting materials (agenda, presentation, minutes)**

Task Group Updates

❖ Membership Committee

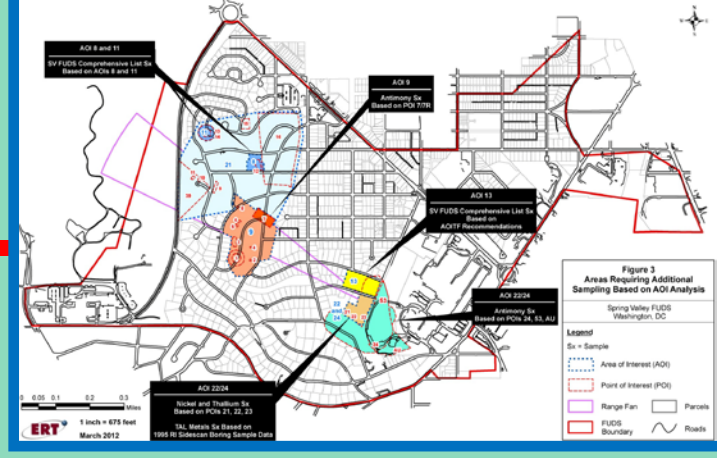
- ➢ **Two RAB member positions are now available**
  - **Mario Aguilar regretfully has resigned from his position**

Arsenic Soil Removal

Purpose: Remove the area surrounding a soil boring containing arsenic slightly above the Spring Valley action level of 20 parts per million.

- **5100 block of Tilden Street**
  - Delineation field effort completed in late July.
  - Removal effort planned to start tomorrow.
  - Excavate soil from a small 4 ft x 4 ft area to a depth of 6 ft, and then restore the area. The effort is expected to last approximately 1 - 2 days unless delayed by weather conditions.

Supplemental Sampling

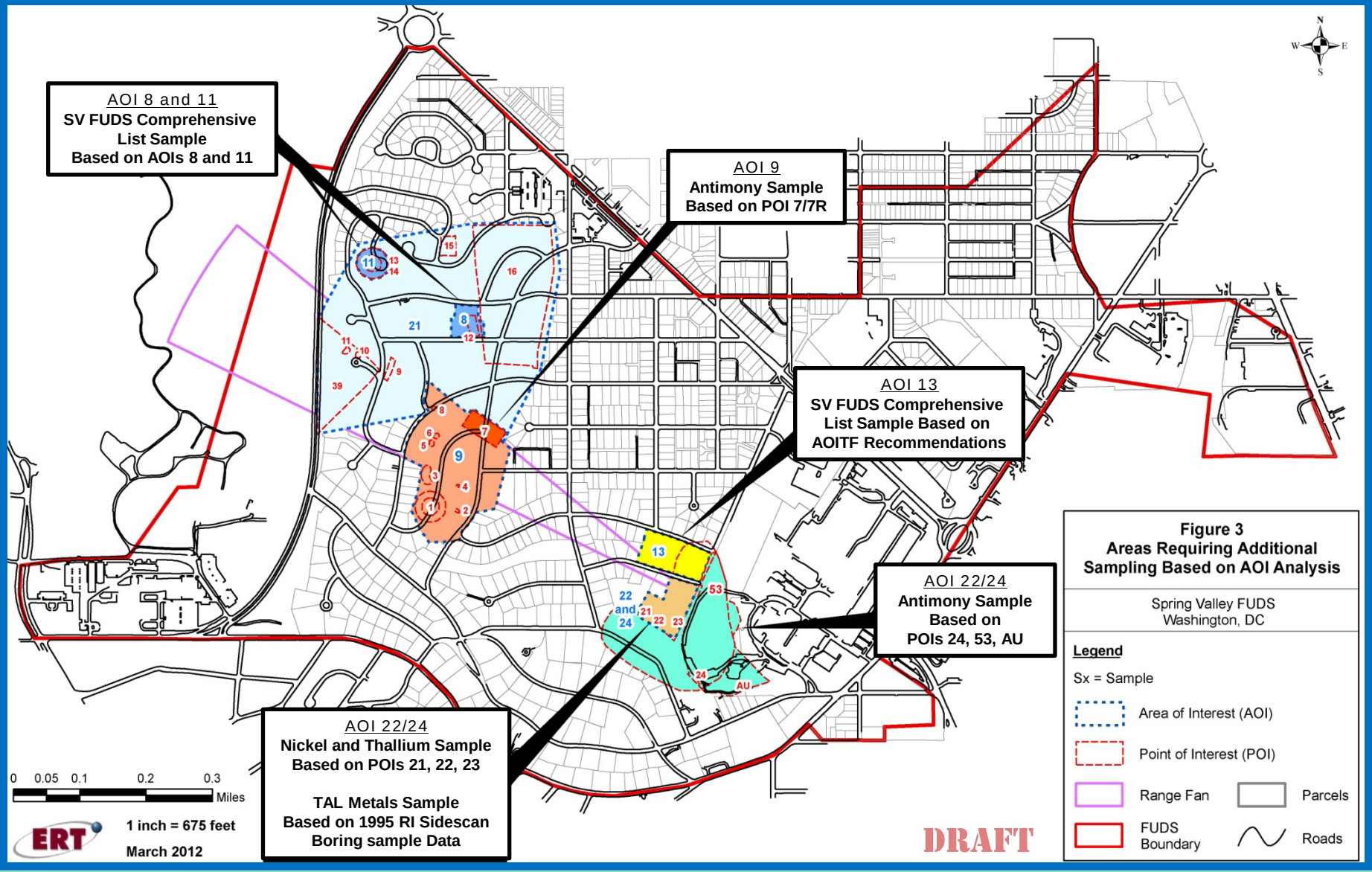


Upcoming effort this month:

- AOI 9 will be sampled for antimony.
- AOI 13 will be sampled for the Spring Valley Comprehensive List (not including arsenic).
- AOI 22 and 24 will be sampled for SVFUDS metals (not including arsenic). Includes POIs 21, 22, and 23.
- AOI 22 and 24 (at POIs AU, 24, and 53) will be sampled for antimony.

This sampling effort includes 17 residential properties.

AREAS REQUIRING ADDITIONAL SAMPLING



Supplemental Sampling

Purpose: To supplement the soil sampling data collected previously in the Spring Valley project area, to ensure sufficient information exists to make human health and ecological risk determinations.

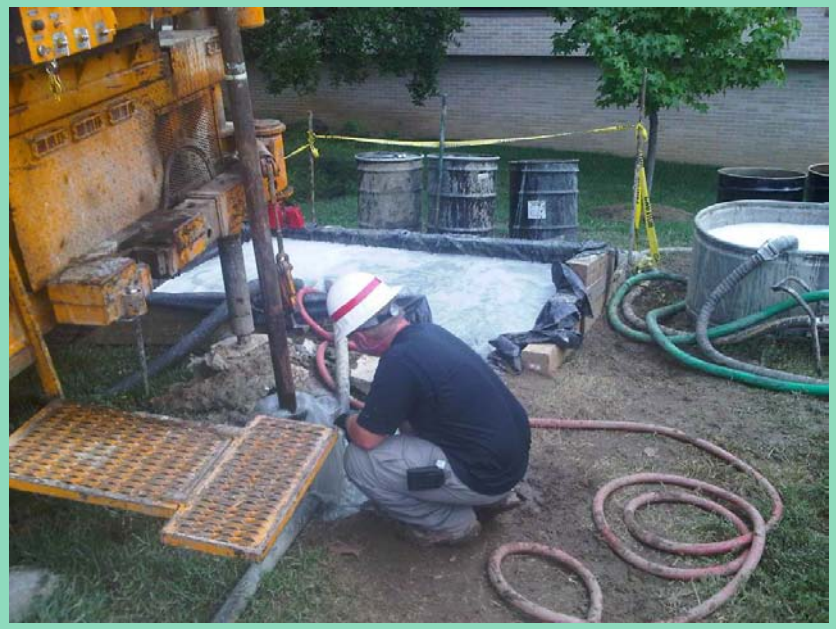
- **An upcoming *Site-Wide Remedial Investigation Report* will**
  - Summarize all the investigative data collected in the project area
  - Characterize any environmental contamination resulting from historic World War I related activities, and
  - Assess the risk to human health and the environment.

This will be the basis for evaluating options for a final remedy for the SV FUDS, including 'no further action'.

Groundwater Study

Groundwater Study

Installation of a deep well (MW-45) on the American University (AU) campus near Kreeger Hall was completed in August



Purpose: Help characterize the extent of vertical perchlorate contamination in the area.

Groundwater Study

Two well screens were placed at approximately 120’ and 150’ which will allow sampling from those specific depths within the well.

The deep well was drilled to approximately 175 feet.

Groundwater Study
Kreeger Hall Area

Sampling of MW-45 was completed last week. Results are expected in October.

Summary: Monitoring Wells in the Kreeger Hall vicinity:

Monitoring Well #	Screening Depths
PZ-4S	27 - 47 feet
PZ-4D	52 - 62 feet
MW-44	80 - 95 feet
MW-45S	119 - 124 feet
MW-45D	147 - 152 feet

Groundwater Study
MW-2

Recent sampling results for MW-2 (Deep well on the 4800 block of Glenbrook Road) confirmed the previous sampling effort completed in early 2012.

- Elevated levels of arsenic and perchlorate in different groundwater flow depths between 35 and 160 feet below ground surface.

The plan for future groundwater study activities will be discussed at the next interagency groundwater meeting, scheduled for October.

4825 Glenbrook Road

4825 Glenbrook Road
Work Plan

The **Remedial Design/Remedial Action Work Plan** is currently under review by the Spring Valley Interagency Partners.

- A **Public Protection Plan** accompanies the Work Plan.
- An **October Community Meeting** is being planned to brief the community on both the *Work Plan* and the *Public Protection Plan*. A meeting date will be announced as soon as it has been determined.

4825 Glenbrook Road

Tentative Schedule

- **October 2012**
  - ***Final Remedial Design and Remedial Action Work Plan***
  - ***Demolition***
  - ***Initial Low Probability Work***
    - **Test pits in backyard and re-locating sewer line**
- **November – December 2012: *Site Set-Up for High Probability Work***
- **January – September 2013: *High Probability Removal Actions***
- **October – November 2013: *Final Low Probability Removal Actions in Areas A and B***
- **December 2013: *Restoration***

Community Items

RAB Request

- George Vassiliou, RAB Member

Spring Valley Follow-On Health Study Update

- Mary Fox, Johns Hopkins University

EPA Update: Arsenic Toxicity

- Dawn Ioven, Toxicologist, USEPA, Region 3

Spring Valley FUDS
Restoration Advisory Board

Community Items

Spring Valley Follow-On Health Study Update

Presented by: Mary Fox, Johns Hopkins University

JOHNS HOPKINS BLOOMBERG SCHOOL of PUBLIC HEALTH

Johns Hopkins Spring Valley Public Health Study Progress Update

RAB Meeting
September 11, 2012
Washington, D.C.

Mary Fox, PhD, MPH
Patricia Truant, MPH

Project Timeline

Project extension through this calendar year

(December 2012)

Final report expected in early 2013

Update: Analysis phase

Environment Component

- Exposure pathway review
- Community environmental health portraits
- Water data (drinking, surface and groundwater)

Health Component

Part I: Mortality and Cancer Data Analysis

- Community mortality
- Cause-specific cancer mortality

Update: Data gathering phase

Health Component

Part I: Mortality and Cancer Data Analysis

- Cancer incidence data request in process at the Cancer Registry

Update: Data gathering phase

Health Component

Part II: Community Survey

- Voluntary
- Anonymous
- Eligibility:
  - For people who have ever lived, worked or attended school in 20015 or 20016 only
  - Individuals may respond for themselves and other household members (including deceased household members)

Update: Data gathering phase

Community Survey Contents

- Residential/work/study history in Spring Valley/Chevy Chase
- Overall health status
- Specific health conditions with age of onset
- Ranking of public health and community concerns
- Input on public health and community concerns

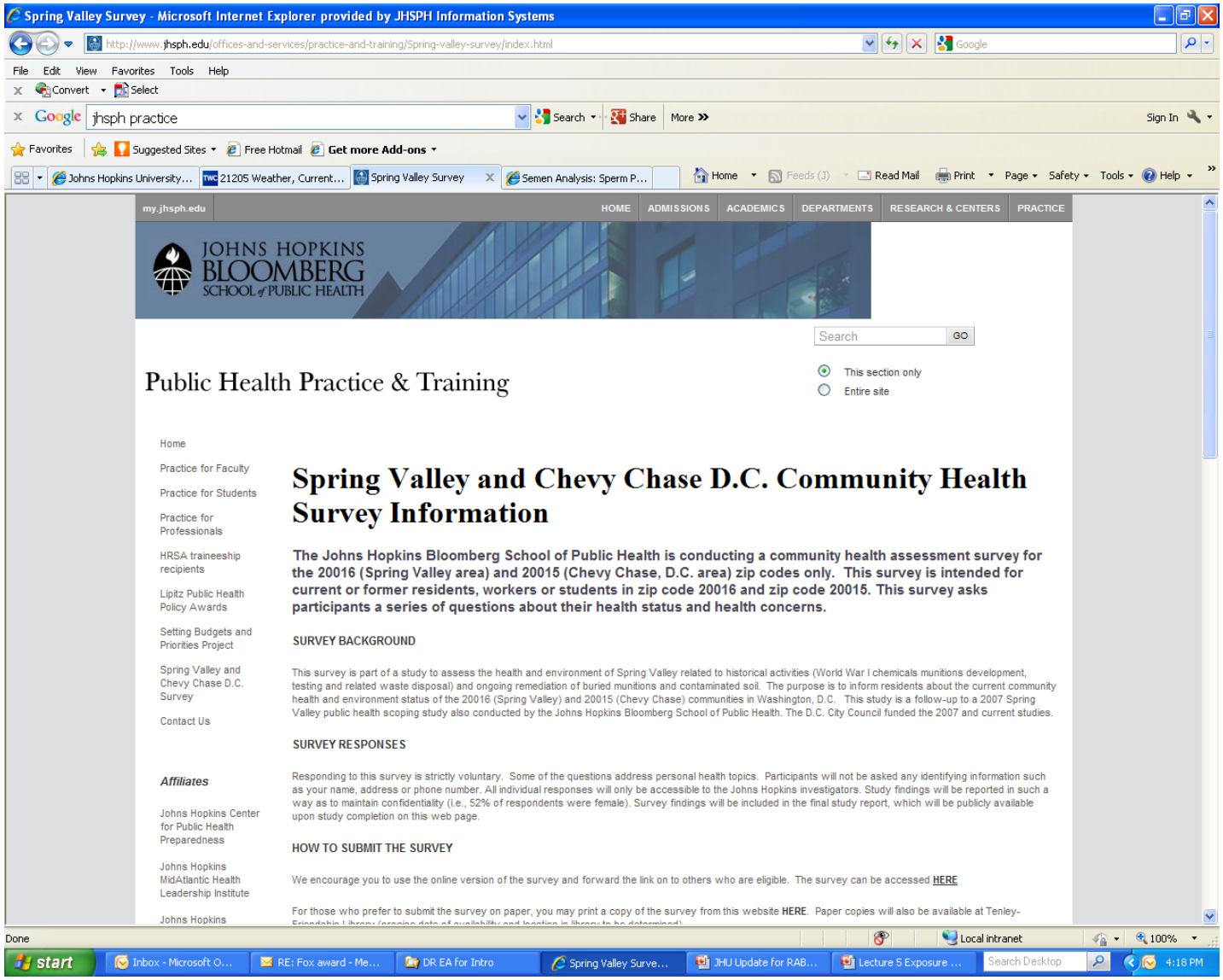
Community Survey

- Online and printable versions
- Access to online and printable surveys as well as other background information will be available at: http://www.jhsph.edu/offices-and-services/practice-and-training/Spring-valley-survey/index.html
- Or direct access: http://tinyurl.com/svccsurvey

- Paper copies at Tenley-Friendship library by Sept. 14
- Survey open through November 16

Finding the survey online (1)

Finding the survey online (2)



Survey items to address

1) How best to describe the communities?

We reference zipcodes for consistency with other health analyses – they also cover multiple neighborhoods

Just zipcodes?

Zipcode and Spring Valley area/Chevy Chase area?

2) Basic map fits the general description of the FUDS boundary but there may be specific properties not captured?

If a respondent is unsure – is there a way for s/he to confirm?

Community Survey Outreach

- Multi-prong approach
  - List-servs
  - Neighborhood associations
  - Local media
  - ANC
  - Websites
  - Social media
- Word-of-mouth: respondents are encouraged to forward the survey link to other eligible respondents
- Other groups?

Final Report components

Report will feature three sections:

1. Environmental Assessment
    - Exposure pathway review
    - Community environmental health portraits
    - Water data evaluation
2. Health Assessment
    - Mortality and cancer data analyses
3. Outreach Report
    - Community health survey

Thank you!

Mary Fox

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Beth Resnick

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410-614-5454

Spring Valley FUDS
Restoration Advisory Board

Community Items

EPA Update: Arsenic Toxicity

Presented by: Dawn Ioven, Toxicologist, USEPA, Region 3

Spring Valley FUDS
Restoration Advisory Board

- **Open Discussion**

- **Possible Upcoming Meeting Topics**

  - **4825 Glenbrook Road Work Plan (October)**
  - **Focus on the Groundwater Study Results and Plans (November)**
  - **Update on ATSDR's 4825 Glenbrook Road Health Consultation**

Spring Valley FUDS
Restoration Advisory Board

- **Public Comments**
- **Wrap-Up**

U.S. Army Corps of Engineers
Spring Valley Joint Restoration Advisory Board Meeting
St. David's Episcopal Church
Minutes of the September 11, 2012 RAB Meeting

RESTORATION ADVISORY BOARD MEMBERS PRESENT AT THIS MEETING	
Dan Noble	Military Co-Chair/USACE, Spring Valley MMRP Manager
Greg Beumel	Community Co-Chair
Mary Bresnahan	Community Member
Kathleen Connell	Community Member
Dr. Peter deFur	Environmental Stewardship Concepts/RAB TAPP Consultant
Mary Douglas	Community Member
Steve Hirsh	Agency Representative- US Environmental Protection Agency Region III
William Krebs	Community Member
Linda Argo	Interim At Large Representative – American University
Lawrence Miller	Community Member
Lee Monsein	Community Member
Malcolm Pritzker	Community Member
James Sweeney	Agency Representative – District Department of the Environment
George Vassiliou	Community Member
John Wheeler	Community Member
RESTORATION ADVISORY BOARD MEMBERS NOT PRESENT AT THIS MEETING	
Paul Dueffert	Community Member
Alma Gates	At Large Representative – Horace Mann Elementary School
ATTENDING PROJECT PERSONNEL	
Todd Beckwith	USACE, Spring Valley Project Manager
Brenda Barber	USACE, Spring Valley Project Manager
Lan Reeser	USACE, Technical Manager
Carrie Johnston	Spring Valley Community Outreach Program Manager
Maya Werner	Spring Valley Community Outreach Program
Jessica Bruland	ERT

HANDOUTS FROM THE MEETING
I. Final Agenda for the September 11, 2012 RAB Meeting II. Army Corps of Engineers Presentation III. Johns Hopkins Follow-up Spring Valley Health Study Update Presentation

AGENDA

Starting Time: The September 11, 2012 RAB meeting began at 7:06 PM.

I. Administrative Items

A. Co-Chair Updates

Greg Beumel, Community Co-Chair, opened the meeting.

Dan Noble, Spring Valley Project Manager and Military Co-Chair, welcomed the group after the August meeting hiatus (RAB meetings are not held in August or December). He reviewed the evening's agenda.

B. Introduce Guests

Dr. Mary Fox and Patricia Truant of Johns Hopkins University attended the meeting to present an update on the follow-on Spring Valley public health study.

Dawn Ioven, Toxicologist for USEPA Region 3, attended the meeting to present a status update on the EPA's re-evaluation of arsenic toxicity.

Officer McElwee of the District of Columbia Metropolitan Police Department 2nd District briefly attended the meeting. He answered questions regarding the 2nd District's role in Spring Valley operations.

Question from Nan Wells, ANC3D Commissioner – Has your department made plans for which officers will be present at 4825 Glenbrook Road during house demolition and property cleanup efforts? Could you briefly give us the details?

Officer McElwee explained that he will coordinate with the Spring Valley project team. All traffic concerns will be discussed with the Captain of the MPD 2nd District prior to the demolition effort. The traffic control plan will be designed fairly quickly and Officer McElwee will likely be involved with on-site traffic controls in some capacity.

C. General Announcements

D. Noble announced that recent website updates include the June 2012 RAB minutes and associated materials, along with the July and August 2012 monthly project summaries. Limited numbers of Spring Valley final documents with CDs, as well as various project maps, were available at the back of the room for interested RAB and community members, in lieu of recycling extra documents.

D. Noble mentioned that Betsey Hutton, who has served on the Spring Valley Community Outreach team for the past year or two, has accepted a new role at ERT. ERT recently hired a new Community Outreach team member who will be introduced at an upcoming RAB meeting.

D. Noble mentioned that Mario Aguilar regretfully resigned from the RAB due to schedule conflicts, and he attended his last meeting in July 2012. D. Noble expressed appreciation for M. Aguilar's efforts and time devoted to the Spring Valley project during the past several years. M. Aguilar was a great addition to the RAB and his presence will be missed.

D. Noble announced that the October RAB is planned to be another combined RAB/Community meeting. The purpose of this meeting is to present and discuss details of the Remedial Design and Remedial Action Work Plan for 4825 Glenbrook Road, which will be implemented during the cleanup phase of the project (following completion of house demolition). This suggestion was recently made to RAB members via e-mail, with positive responses. The meeting may be scheduled for the normal date (the second Tuesday of the month) or another date to allow flexibility with respect to 4825 Glenbrook Road demolition progress and the remedial action start date. Potential meeting dates will be proposed to the RAB in late September.

G. Beumel added that based on e-mail responses, no objections were voiced by RAB members.

Question from Allen Hengst, Audience Member – Do you plan on holding another poster session or a formal meeting where community questions and USACE responses are part of the record? The July 2012 combined meeting did not provide time for public comments and discussion.

D. Noble replied that an open house poster session provides work plan details and enables in-depth conversation between project team members and community members. An open community question and answer section of the meeting can potentially be included as part of the agenda for the upcoming meeting.

Question from N. Wells, ANC3D Commissioner – Speaking on behalf of the Spring Valley community, I think it is very important that community members have the opportunity to hear the concerns and interests of other community members. The open house poster session does not provide this type of interaction. I urge you to include an open question and answer session in the meeting agenda.

D. Noble agreed to take this suggestion under consideration.

Question from N. Wells, ANC3D Commissioner – Do you expect Congresswoman Norton to attend the combined RAB and public meeting?

D. Noble replied that the Congresswoman's meeting attendance plans are not known at this time. USACE will inform her office of the meeting topic and date, and she will likely attend if her schedule allows.

N. Wells emphasized the importance of providing community members with time to ask questions and provide comments.

Question from Kent Slowinski, Audience Member – Will this meeting be held prior to or after the 4825 Glenbrook Road house is demolished?

D. Noble explained that the October 2012 combined RAB and public meeting will be scheduled independently of the demolition time frame. The July 2012 combined meeting focused on the demolition plan details, while the upcoming meeting will focus on the post-demolition remedial action details.

Question from K. Slowinski, Audience Member – When is the house scheduled to be demolished?

D. Noble replied that the demolition schedule will be presented during USACE updates.

D. Task Group Updates

Malcolm Pritzker, RAB Member, noted that two open RAB membership positions are currently available for interested members of the Spring Valley community. One vacancy has been available for more than a year, and now a second vacancy has opened up. Membership applications are welcome. Any knowledge of community members who may be interested in serving on the RAB, as well as suggestions for further publicizing these open membership positions, would be appreciated.

Question from N. Wells, ANC3D Commissioner – Do you know if American University (AU) students are eligible to serve on the RAB?

M. Pritzker replied that the specific eligibility rules for RAB membership have been discussed at previous RAB meetings, and offered to briefly review and remind the group of these rules. [The following information was provided during USACE updates and moved here for clarification purposes.]

M. Pritzker reminded the group that according to the RAB rules, community members are "individual residents and/or workers in the Spring Valley area who may be affected by environmental restoration activities in the Spring Valley FUDS and who provide options, judgments, and advice."

M. Pritzker added that he and Mary Bresnahan both joined the RAB at the same time, when Lee Monsein was part of the membership committee. Based on his recollection, residents of the Spring Valley FUDS are interpreted as community members who live in the neighborhood on a long-term basis. This definition would exclude local university students.

Comment from N. Wells, ANC3D Commissioner – I can appreciate the evaluation of the definition of residents, but the rules also include workers who might be affected.

M. Bresnahan noted that these membership rules were defined years ago.

Question from N. Wells, ANC3D Commissioner – Who are the RAB membership committee members?

M. Pritzker clarified that all RAB members are technically part of this effort. A formal membership committee within the RAB does not exist. Instead, M. Pritzker's membership role is to remind the RAB that membership vacancies are available.

II. USACE Updates

D. Noble, Spring Valley Project Manager and Military Co-Chair, provided an update on follow-on arsenic removal and additional proposed sampling efforts within AOIs.

T. Beckwith, Spring Valley Project Manager, provided an update on the groundwater investigation.

B. Barber, Spring Valley Project Manager, provided a brief status update on the Decision Document for 4825 Glenbrook Road and the associated Remedial Design and Remedial Action Work Plan.

A. Arsenic Removal

Nearly all planned arsenic soil removal efforts for the Spring Valley FUDS have been completed to date.

All arsenic sampling results from the Spring Valley arsenic sampling and removal project were recently reviewed to assess whether any arsenic soil samples above 20 parts per million (ppm) at depth (associated with soil borings) were inadvertently not addressed. (Details were provided at the February 2012 RAB meeting.)

Tilden Street: One property owner requested removal of the soil containing the slightly elevated arsenic. This elevated soil sample (22.8 ppm arsenic at a depth of 5 feet) was located at a residential property on the 5100 block of Tilden Street.

Delineation soil sampling was completed in mid-July 2012. The purpose was to delineate the remaining arsenic contamination and determine how far the field team must excavate around the boring to remove all arsenic-contaminated soil. Based on analytical laboratory results, a small area of 4 feet by 4 feet will be excavated to a depth of 6 feet to remove all remaining elevated arsenic levels in the soil.

Soil removal is scheduled to begin tomorrow (mid-September 2012) with an anticipated completion time frame of 1 to 2 days, followed by property restoration. No weather-related delays are anticipated.

Question from Audience Member (gentleman) – How did you determine the 4-foot by 4-foot area that needed to be removed?

D. Noble explained that the original arsenic exceedance was associated with a single discrete sample within a soil boring. Delineation soil samples were collected in all four cardinal directions at a selected

distance from the original boring location. These samples were analyzed and the excavation area was defined based on the first distance where all levels were below 20 ppm.

Question from Audience Member (gentleman) – Do you have any ideas as to why an arsenic exceedance would be present at this location as a point deposit?

D. Noble clarified that the source of the elevated arsenic sample is unknown, and no elevated arsenic levels were detected in the surrounding soil samples. This exceedance was located at the 1918 soil horizon below 5 feet of fill. As described at the July 2012 RAB meeting, soil elevations in the Spring Valley neighborhood have changed over the past several decades as soil was removed or added, which is referred to as cut and fill.

Question from K. Slowinski, Audience Member – Was this arsenic exceedance associated with a particular AOI, POI, or ground scar?

D. Noble did not have this information available at the meeting.

Question from K. Slowinski, Audience Member – Weren't most soil borings situated within ground scars?

Lan Reeser, Spring Valley Technical Manager, replied that the vicinity of this soil boring was tentatively identified but never confirmed as the location of POI 38 (Major Tolman's Field).

K. Slowinski asked if POI 38 was the persistency test area.

D. Noble said no.

B. Supplemental Soil Sampling Within AOIs

Background: As described at the June and July RAB meetings, the site-wide remedial investigation (RI) report for the Spring Valley FUDS is currently in the early stages of preparation. This report will summarize all investigative data collected in Spring Valley, characterize any environmental contamination resulting from historical World War I related activities, and assess risks to human health and the environment. (Details of the work plan for this effort were provided at the July 2012 RAB meeting.)

Purpose: Additional soil sampling is proposed at several Areas of Interest (AOIs) to provide additional data for analysis within the RI report. These data will supplement the large amount of soil sampling data collected previously in Spring Valley. Supplemental soil sampling will ensure that sufficient data exists to make human health and ecological health risk determinations. The site-wide RI report will provide the basis for evaluating final remedy options (including no further action) for the Spring Valley FUDS.

Scope: Most samples will be collected from surface soil using a hand trowel and will be minimally invasive with minimal damage to the surrounding grass. A limited number of subsurface soil samples will be collected using a hand auger. The constituents of interest at each area are primarily metals. Sampling locations include AOI 9 (antimony), AOI 13 (the Spring Valley comprehensive parameter list, excluding arsenic), AOIs 22/24 (Spring Valley FUDS metals, not including arsenic, at a property on the 4700 block of Woodway Lane; nickel and thallium at POIs 21/22/23; and antimony at POIs AU/24/53).

Rights-of-Entry: Samples will be collected at a total of 17 residential properties and at portions of AU's campus. Currently, rights-of-entry have been obtained from all properties proposed for supplemental sampling, except one.

Tentative Schedule: The supplemental soil sampling effort is planned for mid to late September 2012. Sampling results will be shared with the RAB when they become available.

Follow-On Efforts: Depending on the sampling results and ongoing review of existing data, a Phase II sampling effort may be proposed to collect additional samples within other areas of the Spring Valley

FUDS. The rationale for further supplemental soil sampling will be discussed with the Partners to obtain concurrence.

Question from Leigh Giangreco, AU Student Reporter – Regarding the sample that will be collected behind the AU campus, what exactly is antimony?

D. Noble replied that antimony is a metal of interest on the Spring Valley Comprehensive list.

T. Beckwith added that antimony may have been present in some munition fuze components, but it was not used extensively at the American University Experiment Station (AUES).

Question from L. Giangreco, AU Student Reporter – Why is antimony significant? What are the health effects?

Steve Hirsh, USEPA Region 3, explained that all sampling data collected in Spring Valley were compared to screening levels. Some sampling results for a specific metal are below that metal's screening level, thus that metal within the sample does not pose a risk to human health. Other metals exceed their screening levels and must be evaluated as part of a risk assessment.

S. Hirsh added that risk assessments require sufficient data (such as a minimum number of samples) for evaluation. The project team has been reviewing all past exceedances to decide whether there is sufficient information to comprehensively assess human health and ecological risks for each location, or whether additional samples are needed. For example, antimony was detected in previous soil samples, and additional samples are needed to assess antimony risks and determine whether this metal poses an unacceptable risk at those sampling locations. Although antimony is not a special metal or a project concern, all metals have toxicity at a certain level, and potential human health and ecological risks of these metals must be evaluated.

Question from L. Giangreco, AU Student Reporter – You mentioned that you are sampling for various compounds. What is classified as a compound of interest?

D. Noble replied that numerous compounds have been identified and sampled as compounds of interest since the Spring Valley project began.

S. Hirsh added that based on Superfund language, contaminants of potential concern (COPCs) are developed and evaluated within these risk assessments. During the risk assessment process, these COPCs may become contaminants of concern (COCs) depending on the concentrations, exposure routes, and degree of limited or widespread nature. A significant volume of data was collected in Spring Valley during the past 17 years, followed by evaluation and decisions regarding remedial action. The project team is currently using a more complex risk assessment process to evaluate the long-term impact of these compounds in Spring Valley and potential long-term remedial actions.

Question from L. Giangreco, AU Student Reporter – So these compounds evolve in interest from a COPC to a COC?

S. Hirsh clarified that the term "contaminant of concern" is more closely related to which contaminants the U.S. Army may be responsible for having left at the site upon closure of the AUES.

Comment from Lee Monsein, RAB Member – The audience member may be unfamiliar with how these chemicals were selected for inclusion in Spring Valley project sampling efforts. When the Spring Valley project began, it was not practical to sample for an infinite number of metals and chemicals that could potentially be present. Based on historical records, the project team compiled a list of 400 contaminants of potential concern from the WWI era that may still remain in Spring Valley soil.

C. Groundwater Investigation

[Previous groundwater study efforts were described at the November 2010 RAB meeting as well as various earlier RAB meetings. Additional planned groundwater study efforts were described at the May 2011 RAB meeting as well as various subsequent RAB meetings. Recently completed and upcoming groundwater study efforts were summarized at the January 2012 through July 2012 RAB meetings.]

Follow-on efforts are underway to provide additional groundwater investigation data.

MW-45: This additional deep monitoring well was installed near Kreeger Hall on AU's campus in early August 2012. The purpose of this well is to further delineate the vertical extent of elevated perchlorate at depth in this area. This well is situated near PZ-4S/4D where the highest perchlorate levels in Spring Valley were detected to date, and in the immediate vicinity of MW-44 where elevated perchlorate was recently detected at depths of less than 100 feet.

Installation of this well was planned to match the existing deep well depths (200 feet). Unfortunately, the drillers encountered extremely hard rock which broke the drill rig drive before the planned well depth could be reached. The well was completed as a traditional monitoring well instead of a multi-port FLUTe well. The final well depth was 175 feet, and traditional well screens were installed to allow sampling at two areas of groundwater flow at 120 feet and 150 feet deep. This screened well was originally referred to as MP-1 and was renamed **MW-45**.

During well development, a steel well casing was installed to a depth of 100 feet to prevent loose weathered bedrock from falling into the borehole, due to bedrock conditions similar to those previously observed at MW-44. Sampling of MW-45 was completed in early September 2012. Receipt of analytical laboratory results is anticipated in October 2012. The results will tentatively be shared at the November 2012 RAB meeting.

A total of five sampling intervals (at different depths) in this area allow further characterization of the vertical extent of elevated perchlorate at depth. These sampling depths include PZ-4S (27 to 47 feet), PZ-4D (52-62 feet), MW-44 (80 to 95 feet), MW-45S (119 to 124 feet), and MW-45D (147 to 152 feet).

MP-2: This deep well is located on the 4800 block of Glenbrook Road, across the street from the 4825 Glenbrook Road site. In Spring 2012, perchlorate and arsenic were both detected above the current drinking water standards in several well depth intervals as deep as 160 feet. These detections were unexpected based on previous sampling results from the other deep wells. (Details of the sampling results were provided at the June 2012 RAB meeting.)

Purging and re-sampling of all MP-2 intervals were completed in July 2012 to confirm that these arsenic and perchlorate detections are truly representative of groundwater chemistry in the aquifer, and to ensure that these detections were not influenced by well construction. (Details of the purging and re-sampling effort were provided at the July 2012 RAB meeting.)

Analytical laboratory results confirmed the previous detections at groundwater flow depths between 35 feet and 160 feet below ground surface (bgs). These results will be discussed with the Partners at the upcoming interagency groundwater meeting in October 2012.

Future Groundwater Study Efforts: Plans for future groundwater study activities will be discussed with the Partners at the upcoming interagency groundwater meeting in October 2012.

Question from A. Hengst, Audience Member – Were the perchlorate and arsenic levels the same in March 2012 and August 2012?

T. Beckwith confirmed that the re-sampling results at MP-2 were very similar to the original sampling results obtained in March 2012.

Question from A. Hengst, Audience Member – What is the status of the isotopic perchlorate analysis?

T. Beckwith explained that the isotopic perchlorate analyses are still pending. Analyses are being conducted by the University of Chicago. Receipt of analytical results is anticipated in a few weeks, and

these results will tentatively be presented at the October 2012 RAB meeting. (Details of the isotopic perchlorate analysis effort were provided at the July 2012 and various prior RAB meetings.)

D. Military Munitions Response Program

4825 Glenbrook Road

Completed Documents

Final 4825 Glenbrook Road CERCLA-related documents are posted on the Spring Valley Project website and are also available at the Information Repository at the Tenley-Friendship Branch Library. (Details of previously finalized documents were provided at the October 2011 and previous RAB meetings).

Fact sheets for these documents are also provided electronically on the Spring Valley website and at the local library, to explain the key elements (purpose, organization, and contents) of the document as well as the next steps prior to cleaning up the property. These fact sheets are designed for use as a reference during review of the finalized documents.

Decision Document: The Decision Document (DD) was signed and authorized in July 2012. The DD formally selects Alternative 5 (removal of the house and cleanup to residential standards providing for unrestricted future use of the property) as the cleanup alternative for the 4825 Glenbrook Road site. Details were provided at the July 2012 RAB meeting.

Demolition and Disposal Plan: The Demolition and Disposal Plan describes the removal and disposal of the 4825 Glenbrook Road house and associated debris, and was finalized in February 2012. The details of this plan were presented at the March 2012 RAB meeting, and were subsequently shared with the community at the July 2012 Joint RAB/Community meeting.

Tentative Schedule (Next Steps)

Remedial Design and Remedial Action Work Plan: The 4825 Glenbrook Road remedial design and remedial action work plan (which includes the Public Protection Plan) describes the intrusive activities designed to achieve remedial objectives. The draft final work plan is currently under review by the Regulatory Partners, and the accompanying Public Protection Plan is currently in preparation.

Community Meeting: An informational community meeting is tentatively planned in October 2012 following the demolition phase and prior to beginning high-probability excavations at the site. The purpose of this meeting is to present the details of the remedial action and how these cleanup activities will be implemented at the site, and to present the details of the public protection plan. This meeting will promote discussion of these topics among project team members and the community. The meeting date will be announced to the community as soon as it is selected.

Demolition Phase: House demolition is anticipated to begin in October 2012. All demolition and remedial action dates from this point forward are tentative and are subject to change.

Site Cleanup: The tentative remedial action schedule was recently updated to reflect the revised cleanup time frame and is subject to change depending on unanticipated delays.

- Initial low-probability soil removal work may begin as early as October 2012. These efforts include several backyard test pits and relocation of a sewer utility that could interfere with implementation of remedial activities at the site.
- With completion of initial low probability efforts, site preparations for high-probability work will begin, tentatively in November/December 2012. These preparations include installation of all engineering controls, tabletop exercises, and equipment testing to ensure that all equipment functions properly.

- High-probability excavation is currently scheduled for January through September 2013.
- Remaining low probability removal actions in Areas A and B as scheduled for October and November 2013 following completion of the high probability excavations.
- Site restoration is tentatively scheduled for December 2013. The property will then be returned to the property owner, AU.

Question from (unidentified) – Will the cleanup remediation begin after the house is demolished?

B. Barber confirmed this.

Question from (unidentified) – Will the October RAB/Community meeting be held here or at the previous community meeting location [Metropolitan United Methodist Church]?

B. Barber replied that the meeting date and location have not been determined. The community will be informed as soon as a date and location are selected.

Question from W. Philip Thomas, ANC3D Commissioner – How will weather play a role in the cleanup effort?

B. Barber explained that weather impacts are not anticipated during high-probability work, barring severe weather such as snow. High-probability excavations will be completed under enclosed tents with workers wearing personal protective equipment (PPE). Weather conditions will be taken into account when conducting open-air excavations during low-probability work.

Question from L. Giangreco, AU Student Reporter – Does the high-probability effort include test pits?

B. Barber clarified that all remaining test pits will be excavated during low-probability removals just after house demolition is completed. These backyard test pits will complete and finalize the incomplete test pit investigation at the property.

Comment from Dr. Peter deFur, RAB TAPP Consultant – As the RAB TAPP advisor, I want to ensure that the RAB is aware that I am currently reviewing the draft final work plan and will submit comments.

Question from A. Hengst, Audience Member – Will the backyard test pits extend beyond the fence onto the grassy area between 4825 Glenbrook Road and the Kreeger Music Roadway?

Brenda confirmed this.

Question from Audience Member (gentleman) – Have you completed all coordination efforts with AU?

B. Barber confirmed that the site access agreement with AU has been finalized. There are no remaining impediments that require resolution.

B. Barber noted that receipt of the demolition permit is the final requirement before demolition can begin.

Question from N. Wells, ANC3D Commissioner – Are Spring Valley residents aware of the new demolition and remedial action schedule? Is this schedule posted on the project website?

B. Barber replied that this newly revised schedule has not been shared with the community before tonight.

C. Johnston clarified that the newly revised schedule has not been posted on the website yet.

Comment from G. Beumel, RAB Community Co-Chair – Additional questions can be asked during the Public Comments portion of the meeting to ensure that all important presentations are shared with RAB members who need to leave early.

IV. Community Items

A. RAB Request

George Vassiliou, RAB Member, presented a request from a Spring Valley community member regarding safety concerns associated with the upcoming 4825 Glenbrook Road demolition and remedial action. Prior to the RAB meeting, this request was shared with G. Beumel and G. Vassiliou, who emphasized that one role of the RAB is to bring community concerns forward for discussion.

G. Vassiliou presented the following information regarding the community member's request: Christine Dieterich, her husband, and her two young children live directly across the street from 4825 Glenbrook Road. She expressed concerns regarding the safety of her family during the 4825 Glenbrook Road demolition and remedial action due to their proximity. She recently wrote a letter to USACE requesting that their family be relocated elsewhere in the Spring Valley neighborhood during the 4825 Glenbrook Road demolition and remedial action time frame. This temporary leave request was reviewed and subsequently rejected by USACE based on the security, safety, and site monitoring precautions that will be in place.

Request: C. Dieterich has requested support from the RAB during her appeal to secure temporary relocation while the 4825 Glenbrook Road demolition and cleanup efforts are underway.

G. Vassiliou noted that he has not yet formed an opinion on whether the demolition and remedial effort will pose a serious risk despite the planned engineering controls and safety precautions.

G. Beumel noted that he will e-mail C. Dieterich's letter to the RAB members for their reference.

Statement from C. Dieterich, Glenbrook Road Resident – My family would like the option of being relocated during the time period when USACE is conducting excavations across the street at the 4825 Glenbrook Road property. My husband and I are not willing to take risks with the safety of our two young children (1 and 5 years old) when high-probability excavations are taking place yards away from our property for the purpose of recovering remnants of items such as chemical weapons.

Question from M. Pritzker and G. Vassiliou, RAB Members – Can you elaborate on what you mean by the term "leave" in your letter to USACE?

Response from C. Dieterich, Glenbrook Road Resident – Our property is situated directly opposite of the 4825 Glenbrook Road property. I would like to obtain the RAB's support for being relocated during excavation time frames when chemical weapons and other items may be encountered. Although USACE has described numerous measures for reducing risks to our health and especially our children, no engineer can completely exclude all risks. If it were just my husband and I, we would not make this request as we are out of the house for most of the day, but our children play daily in close proximity to where high-probability excavations will take place. My husband and I are unwilling to potentially expose our children to residual risks and potential detrimental health impacts. Based on previous documentation provided by USACE, the narrowest safety arc parameter ends on our property at our doorstep. This presents an immediate direct risk to our property, much more so than risks to other nearby properties. After obtaining initial positive responses from USACE, they reviewed and rejected our initial request and our subsequent appeal. We are asking for the RAB's support, as we do not want our children to be present in our house when excavations are underway. I urge you to support our request for relocation.

Comment from G. Vassiliou, RAB Member – I apologize, as I need to leave early to attend another meeting. In the interest of time, I read the correspondence between C. Dieterich and USACE. Two very substantial points mentioned in USACE's response are that the protective containment structure will contain all hazardous emissions, and air monitoring systems are present in the unlikely event of a breach. What is the basis for your concern regarding potential exposure of your children to a chemical release?

C. Dieterich replied that this concern is based on a common sense statement that precautions fail and things go wrong. She expressed her appreciation for all of the precautions taken by USACE, but the remaining marginal risk is too large of a risk for her children.

Question from G. Beumel, RAB Community Co-Chair – Dr. Peter deFur (RAB TAPP Consultant) has read the draft final work plan. Do you have any comments to share on this topic?

P. deFur replied that his review of the draft final work plan has not been completed yet. Based on his impressions so far, there are two general categories of potential risk sources. These include chemical risks from recovered weapons and risks presented by construction-related activities. Overall, USACE implemented a more stringent, conservative, protective approach in consultation with EPA.

Question from G. Vassiliou, RAB Member – Peter, will you develop a report on the work plan contents, and will you include a recommendation associated with this relocation request and potential danger?

P. deFur clarified that his report will be in the form of comments on the technical adequacy of the draft final work plan. These comments will address issues such as whether or not the most likely and worst case scenarios have been considered and whether the correct toxicological endpoints were used. These issues are similar to those considered during review of previous remedial action work plans.

G. Vassiliou asked whether the word "adequacy" includes possible future risks from construction and chemical weapon recovery aspects of the cleanup.

P. deFur confirmed this. He explained that he will review whether the work plan identifies possible future risks, takes mitigating steps to address these risks, and describes the likely effectiveness of these mitigations (such as a project's familiarity and experience with putting up a protective flash shield).

G. Vassiliou requested a ballpark idea of when Peter's work plan comments will be completed.

P. deFur replied that his comments may be completed as early as Friday (September 14), but meeting this requested deadline is unlikely.

Question from L. Monsein, RAB Member – Peter, without having seen your final report, can you provide a 100 percent guarantee that there will be no miniscule risk of any kind to C. Dieterich's family? Can you guarantee that a demolition truck will not lose control and run into C. Dieterich's front yard, or that one munition item will not explode and exceed all of the safety protocols?

P. deFur replied that he cannot provide a 100 percent guarantee that nothing will go wrong.

Question from L. Monsein, RAB Member – What risk level is considered acceptable for C. Dieterich's family to continue living across the street during 4825 Glenbrook Road excavations? Although risk assessments address reasonable and unreasonable risks, it is difficult to decide what constitutes a reasonable and unreasonable risk for someone else (such as C. Dieterich). Any statistician will explain that children have a higher risk of being harmed in a car accident than they do from remedial efforts at 4825 Glenbrook Road. I don't have an answer regarding what risk level is acceptable and whether or not the RAB should support C. Dieterich's request.

P. deFur replied that he does not have an answer to these questions either. L. Monsein's first point is absolutely correct: there is no such thing as zero risk. Regarding L. Monsein's second point, risk evaluations always take two questions under consideration simultaneously: what are the chances of a harmful event occurring, and what are the consequences if the harmful event occurs? Both of these scales must be considered at the same time.

Question from M. Douglas, RAB Member – Are you the only neighboring family with young children?

C. Dieterich confirmed that her family is the only one with children whose house is encompassed within the safety arc parameters at 4825 Glenbrook Road. The only other house encompassed within these parameters is the house owned by AU.

Question from M. Douglas, RAB Member – For how many months are you asking USACE to relocate your family? Roughly 7 to 8 months?

C. Dieterich replied that relocation is requested for as long as it takes USACE to complete excavations at the 4825 Glenbrook Road property. A time frame of 7 to 8 months is optimistic.

L. Monsein mentioned that the remedial action is planned for a time frame exceeding one year.

Question from Larry Miller, RAB Member – There is an emotional aspect to this request because children are involved, but the RAB's decision to provide support must also be based on science and to some extent money. It will be helpful for RAB members to review the correspondence between C. Dieterich and USACE. You are requesting relocation for the entire duration of remedial action?

C. Dieterich confirmed this.

Question from L. Miller, RAB Member – What type of accommodations are you thinking about?

C. Dieterich replied that a residence in the Spring Valley neighborhood vicinity would be important because her son attends Horace Mann Elementary School. It does not need to be similar to their current living arrangements, but her family needs a place where her children can stay during the daytime if health risks are present at 4825 Glenbrook Road.

Question from L. Miller, RAB Member – Are there portions of this remedial action time frame where a more accommodating and reasonable request could be made? It sounds like you approve of the conservative safety measures taken by USACE, and there may be time frames during the remedial action schedule when relocation may not make sense.

Comment from G. Vassiliou, RAB Member – C. Dieterich is in a difficult position, and I understand the emotional and logical portions of the RAB's decision to support her request. Currently the RAB does not have access to the details. As a RAB member, I would like to know whether the USACE safety expert can summarize for the RAB the precautions that will be implemented at 4825 Glenbrook Road. In the meantime, the RAB will receive copies of C. Dieterich's and USACE's letters and can reconvene once RAB members are more familiar with the details.

G. Beumel replied that the U.S. Army will not share their viewpoint on C. Dieterich's request because her appeal is in pre-decisional status. Once he receives a copy of USACE's first response letter, he will send copies of both letters (the initial request denial and the initial appeal denial) to the RAB for review.

Comment from L. Miller, RAB Member – The RAB does not have a time frame of one month available to discuss and decide whether to support C. Dieterich's request.

G. Beumel agreed that the RAB needs to discuss this topic within the next couple of weeks. Ideally, next week P. deFur can provide his thoughts on the adequacy of protective measures for the closest receptors (C. Dieterich and her family) for the RAB's consideration. The RAB may agree that USACE should reconsider C. Dieterich's relocation appeal, in which case the RAB can provide a letter in support of this appeal. Alternatively, the RAB may decide tonight to immediately support C. Dieterich's appeal, as living across the street with protective measures in place will not reduce potential risks to zero. Either way, the RAB can only provide their support and cannot make decisions on how to spend USACE's money.

G. Beumel added that there is one other set of children receptors: the Horace Mann Elementary School walking school bus whose route includes Glenbrook Road.

Comment from Liz Whisenant, Horace Mann Elementary School Principal – We promote families gathering and walking to school via Glenbrook Road and Loughboro Road. Alternative options include using the AU campus back gate, which has been discussed with AU, or temporarily disbanding the walking school bus. However, the presence of two young children across the street from 4825 Glenbrook Road cannot be disbanded unless this RAB voices their support for relocation of C. Dieterich's family. One of these children spends the entire day within a safety parameter zone, and there are no acceptable risks in this situation. If C. Dieterich's relocation appeal is approved, there will not be a domino effect in the neighborhood because she is the only homeowner impacted in this manner. Despite all of the care

taken to address "what if" scenarios, all potential risks cannot be predicted and planned for. To date, USACE has responded with "no" to C. Dieterich's relocation request and her first of two appeals.

Question from M. Pritzker, RAB Member – I would like to review the correspondence before forming an opinion on this request. Regarding RAB communication and decision making, we need to know the deadline for deciding whether or not to support C. Dieterich's appeal, and knowledge of the appeal process would be helpful. The more information that is provided to the RAB, the more quickly an informed decision can be made. What is the specific deadline for the RAB's decision?

B. Barber explained that USACE cannot share the specific details of the ongoing appeal cannot be shared with the RAB due to legal and privacy rights. In general, the appeal process begins with the initial request letter. USACE conducts a technical review based on relocation regulations that USACE must abide by. In this case, USACE determined that the requirements had not been met to warrant relocation and denied the request. This was based on the safety protocols and protective technologies that will be in place and thus no unacceptable risk. A 60-day appeal process allowed the submission of a relocation appeal, which was also denied. The next step in the appeal process is for the appeal to be submitted to the USACE North Atlantic Division, where it is currently under review. A response is anticipated as early as this week (mid-September). The appeal then continues on to USACE Headquarters. The process is administratively complete once USACE Headquarters issues their final decision (which is anticipated in late September 2012).

Question from L. Miller, RAB Member – Has anyone estimated the cost of relocating C. Dieterich's family, and can this value be shared with the RAB?

B. Barber replied that relocation costs were calculated but cannot be shared with the RAB at this time.

Question from L. Miller, RAB Member – Although you are confidentially protecting this information, is it permissible for the appellant to share such information with the RAB?

B. Barber confirmed that the appellant can share with the RAB any correspondence she has with USACE.

Question from L. Miller, RAB Member – When will we receive copies of the correspondence between C. Dieterich and USACE? RAB members can plan the decision making time frame based on your response.

G. Beumel replied that correspondence will be forwarded to RAB members following tonight's meeting, and September 19 is the earliest completion date for receiving P. deFur's work plan review.

C. Dieterich added that she has shared all available information, including letters and photographs, and would be happy to provide the rest of the correspondence to G. Beumel and the RAB.

Comment from C. Dieterich, Glenbrook Road Resident – I am disappointed, as I hoped to obtain the RAB's support tonight and I need your help. I have pursued relocation twice and been denied both times.

Question from L. Monsein, RAB Member – The RAB will make a decision whether to offer advice and support for or against the relocation appeal. When the final decision is made at USACE Headquarters, will the RAB's advice be incorporated into their decision making criteria, or are we simply spinning our wheels? Will the RAB's viewpoint potentially influence the final decision?

B. Barber clarified that the USACE relocation criteria do not account for opinions expressed by the RAB, but it may sway the decision made by the higher level at USACE Headquarters.

D. Noble added that USACE must adhere to the existing relocation regulations, but USACE Headquarters follows policies and can potentially change existing policies.

Question from L. Monsein, RAB Member – Can you paraphrase the USACE relocation policy? It sounds as though you are saying that USACE at the project team level is currently following regulations that must be followed. Otherwise, the project team would be breaking the law.

B. Barber explained that for relocation to be granted, the situation must present a proven risk that USACE feels cannot be adequately mitigated via engineering and safety controls. At this time, USACE feels that all risks can be adequately mitigated and they do not feel that relocation is warranted.

L. Monsein asked for confirmation that USACE must follow a regulation checklist, and at this level USACE's hands are tied with respect to providing relocation support.

B. Barber confirmed this. USACE Headquarters can decide to grant relocation despite these regulations.

G. Beumel mentioned the possibility that P. deFur's work plan review may conclude that risks have not been adequately mitigated.

Question from L. Monsein, RAB Member – Are there any other venues such as a civil court system that can put an injunction on the remedial action until the court decides whether it presents unacceptable risks (in agreement with C. Dieterich) or not (in agreement with USACE).

C. Dieterich clarified that her attorney explained that she could only sue the government to obtain financial compensation following completion of the intrusive efforts. She would have to sue the government to pay for incurred rental expenses. In the meantime, during the intrusive efforts, her family would need to rent temporary living accommodations while paying their existing mortgage.

Comment from L. Monsein, RAB Member – We have a couple of attorneys present within the RAB. An injunction process exists that can halt an upcoming project until the judge's questions are answered.

L. Miller replied that he does not practice that type of law. Remedial harm must be shown, and in this case any potential harm can be remediated with money. C. Dieterich's attorney likely provided her with the correct information. Even if the correspondence documents and relocation regulations were available at the meeting, he would still choose to ask questions and discuss the issue with the RAB prior to taking a stand on the issue and supporting one side of the decision.

M. Pritzker added that he does not practice this type of law either.

Question from M. Pritzker, RAB Member – It appears that P. deFur's review of the work plan is the crucial deciding factor. Every appeal is an emotional appeal, but the RAB can make a recommendation supported by Peter's report. Once we have received P. deFur's report and the correspondence documents, how should the RAB pursue further discussion? The RAB appears obligated to make a pro or con decision and make an effective recommendation. An unsupported quick one-sentence recommendation will receive zero tolerance at USACE Headquarters, while they are more likely to read a well-written recommendation that is supported by P. deFur's work plan review.

Comment from Kathleen Connell, RAB Member – Based on my years of experience addressing emotional appeals, my heart and concern are with C. Dieterich. Tonight the RAB has held a lengthy discussion and expressed empathy toward her family. We appear to be sidestepping a major issue, however, which is that the RAB does not currently have the necessary information to make a decision to support or not support this relocation appeal. In my experience, this conversation cannot move forward until three factors are met. One, we need full awareness of specific USACE guidelines and stipulations for relocation and harm, irreversible harm, and mitigation. Two, we need Peter's final work plan report. Third, even if the RAB chooses to express sympathy and support for this relocation appeal (and I think all of would intentionally do so), we need to know whether our recommendation will have any leverage during the appeal process considering our limited time frame. Our efforts may be halted by the ultimate time constraint: the final USACE Headquarters decision.

K. Connell made a motion to hold a formal RAB teleconference for the purpose of discussing all available information. Hopefully P. deFur can participate, along with someone from USACE to respond to legal questions. This appears to be the most effective way to address all concerns and make a decision, as it will provide an opportunity for organized dialogue and presentation of information.

M. Pritzker seconded this motion.

G. Beumel asked the RAB to vote, and all RAB members were in favor of this motion.

M. Douglas added that the RAB teleconference will allow currently absent RAB members to participate.

Question from N. Wells, ANC3D Commissioner – Can you hold a formal RAB teleconference without making it public, according to the RAB rules? All ANC meetings must be held in public session.

M. Pritzker replied that this situation is different because the RAB members have been asked to make a decision whether they are willing to support a community member's request, followed by a RAB recommendation as appropriate. The decision must be the RAB's "pro or con" recommendation. The protocol would be different if the community were pushing for a decision to be made.

Question from N. Wells, ANC3D Commissioner – Isn't the RAB considered a public body?

L. Miller clarified that RAB members are not considered representatives of the community.

M. Pritzker added that the RAB can simply provide "pro or con" support.

Suggestion from N. Wells, ANC3D Commissioner – Support could also be provided by public representatives such as Congress and the DC City Council, as well as formal lobbyists.

M. Pritzker replied N. Wells' affiliation with the ANC puts her in a more appropriate position to pursue this type of support.

Comment from C. Dieterich, Glenbrook Road Resident – Although my family will be unable to relocate to a residence similar to our permanent home, this will involve a period of approximately 13 months.

The RAB briefly discussed the cost of rent in the Spring Valley area.

Comment from G. Beumel, RAB Community Co-Chair – We have two additional community topics tonight. Additional questions can be asked during the Public Comments portion of the meeting.

B. Spring Valley Follow-On Health Study Update

Dr. Mary Fox, Assistant Professor at Johns Hopkins University Bloomberg School of Public Health, provided an update on the follow-on Spring Valley health study.

Background: A detailed overview of the follow-on Spring Valley health study (including the overall scope, objectives, project team, funding, tentative schedule, and a summary of the original 2007 Spring Valley Public Health Scoping Study) was provided by M. Fox at the September 2011 RAB meeting, followed by a status update at the February 2012 RAB meeting.

Status: The project has been extended through December 2012, and administrative elements of this project extension are being coordinated with DDOE. The project team continues to gather data that will be analyzed to further examine potential contamination exposures, health risks, and associated concerns of the Spring Valley community. Data collection will continue through December 2012. The final report is anticipated in early 2013.

Environmental Exposure and Analysis: Available groundwater and surface water data and exposure pathways are currently being evaluated as the primary environmental issue of interest.

- Analysis is underway for substantial portions of the environmental study component. Surface water and groundwater exposure pathways are currently under review, and drinking water data is also being evaluated. Environmental health portraits for the Spring Valley community are being developed.

Community Health Assessment (Cancer Data): Potential site-related health effects and concerns are currently under evaluation, with the goal of providing an updated Spring Valley community health status and addressing health outcomes that were identified in the original 2007 scoping study as warranting additional attention.

- Additional data on potential site-related health effects, such as arsenic-related cancers and mortality, were received from the DC Department of Health.
- Additional cancer incidence data were requested from the DC Department of Health's cancer registry. Receipt of this additional health data is pending, and the data request is currently in process according to recent correspondence with DOH.

Community Health Assessment (Community Survey): The community survey is currently being finalized to gather input from Spring Valley residents to further understand any ongoing site-related health concerns. Necessary approvals were obtained by the internal Johns Hopkins University Institutional Review Board (IRB) and the DC Department of Health IRB.

- Pilot testing of the draft survey was conducted during Summer 2012. Interested members of the Spring Valley community participated in the pilot testing phase, including a couple of RAB members. A broad spectrum of survey feedback was provided by AU students, residents of surrounding areas, and Johns Hopkins University individuals who were unfamiliar with Spring Valley project issues. The survey wording (such as the specific description of the word "community") and online system logistics were fine-tuned based on the pilot testing results.
- The draft survey includes questions about overall health status, specific health conditions and age of onset, and ranking of public health and community concerns, along with the opportunity to provide additional comments. Survey questions will also address residential, work, and study history in Spring Valley versus Chevy Chase, MD, for comparison purposes. The draft survey content is organized into five major sections, and a hard copy of the document was provided in the back of the room.
- The final survey will be made available to Spring Valley residents for two months, beginning on September 14 and concluding on November 16, 2012. The survey will be available online via an automatic survey system, with links provided on the Johns Hopkins website, and in hard copy format at the Information Repository at the Tenley-Friendship Library. The survey is designed to collect individual responses. Individuals can also respond to survey questions for a household member (including deceased household members) using the online version. The survey is voluntary and anonymous. All individuals who have ever lived, worked, or attended school within the 20015 and 20016 zip codes (roughly corresponding to the Chevy Chase and Spring Valley study areas) are eligible to respond to the survey.
- Community survey outreach will be conducted via multiple sources including e-mail listservs, neighborhood associations, local media outlets, the ANC, websites, and social media. Survey respondents are encouraged to forward the survey link to other eligible respondents via a word-of-mouth approach. Suggestions for additional outreach venues are welcome.

Final Report Overview: The final report will contain three sections. The environmental assessment portion will summarize exposure pathway review, community environmental health portraits, and data evaluation for groundwater, surface water, and drinking water. The health assessment portion will summarize cancer data and mortality analyses. The outreach portion will summarize information collected using the community health survey.

Remaining Issues Identified During Pilot Testing: Two issues identified during pilot testing must be addressed before the survey can be finalized.

- The Spring Valley and Chevy Chase communities must be described using wording that most accurately reflects the eligibility of residents to complete the survey. Currently, zip codes are used to provide consistency with other sources of health data, and as a convenient tool for potential respondents to identify their eligibility. USACE and RAB input is requested to help address concerns, such as zip codes that extend beyond the specific neighborhood of interest, and the possibility of using both a zip code and a community name to determine eligibility.
- The survey eligibility map matches the basic description of the FUDS boundary but must capture all eligible properties. This is a technical issue where USACE and RAB input would be valuable.

Question from L. Monsein, RAB Member – Do you have a map of both zip codes? Where is Chevy Chase in relation to the Spring Valley FUDS?

M. Fox replied that Chevy Chase, MD is the control community for comparison purposes. A zip code map was not available at the meeting.

L. Miller and G. Beumel noted that the 20016 zip code extends well beyond the Spring Valley FUDS boundary into other neighborhoods.

M. Fox noted that part of the community survey includes identifying individuals who have lived, worked, or studied inside the Spring Valley FUDS. Three distinct groups will be identified: within the FUDS, outside of the FUDS, and the Chevy Chase comparison area.

Question from M. Bresnahan, RAB Member – Can the community survey area be defined by ANC districts within the 20016 zip code?

N. Wells clarified that ANC districts can be provided but they will not necessarily be helpful, because the specific address is what defines whether a property is situated within the Spring Valley FUDS.

Comment from L. Monsein, RAB Member – At some point, the exact property address will be necessary for the survey responses to be of value.

M. Fox clarified that the survey was designed to be anonymous.

L. Miller replied that the residential street and block number could be provided.

Question from L. Miller, RAB Member – How will survey respondents know whether they live within the Spring Valley FUDS is they are unfamiliar with the FUDS boundary?

M. Fox explained that a description of the Spring Valley FUDS area will be provided along with a boundary map. She is currently coordinating with T. Beckwith to ensure that the survey boundary definition is consistent with USACE's definition of the project site.

Question from L. Miller, RAB Member – When all of the survey results are under evaluation, will you have any idea whether a resident expressing particular health concerns lived near a burial pit or a significant distance from any project area of concern? Portions of the FUDS are located close to cleanup areas while other portions are not.

M. Fox replied that this detail is not included in the survey design and will not be analyzed. The primary location focus is whether the respondent lived, worked, or studied inside the FUDS. Respondents can voluntarily provide this information if they wish.

Comment from G. Beumel, Community Co-Chair – After taking the survey a couple of times using different approaches, I found conflicting definitions of inclusion within the study area. These include the 20016 zip code, the Spring Valley neighborhood, and the status of living/working/studying within the FUDS. Survey answers may be skewed depending on how an individual interprets their inclusion within the study area. For example, AU Park is part of the FUDS, while portions of the 20016 zip code are not and would be classified as background data.

M. Bresnahan emphasized the importance of defining the Spring Valley FUDS boundary. According to the current survey definition which refers to the FUDS as the Spring Valley neighborhood, neither she nor G. Beumel reside within the FUDS, when in reality they do.

L. Miller mentioned that he resides within the 20016 zip code but apparently not within the FUDS. The term "neighborhood" does not equate with the zip code.

M. Fox replied that the project team will ensure that the Spring Valley FUDS boundary provided in the community survey is consistent with the map currently available on the Spring Valley project website.

S. Hirsh added that the study area should be defined as the Spring Valley FUDS boundary, because the Spring Valley neighborhood boundary does not exactly match the FUDS boundary. This will solve most problems when determining whether an individual resides within the study area, although issues at the edge of the FUDS boundary are inevitable.

P. deFur commented that he and his staff participated in the pilot testing and felt that ambiguity was present in the survey: the respondents were being asked to state whether they live within the FUDS, which is loosely described as the Spring Valley neighborhood.

L. Monsein emphasized the difficulty in determining where one neighborhood ends and the next begins.

M. Douglas emphasized the need for accuracy and consistency when describing the study area.

M. Fox replied that zip codes may be appropriate for the purpose of the survey. The term "neighborhood" is potentially confusing and the zip codes correlate with previously completed health data collection. The Spring Valley FUDS dataset will still be able to be analyzed separately from the remaining respondents.

Suggestion from G. Beumel, Community Co-Chair – An online zip code map was mentioned in the pilot testing survey. It would be helpful to be able to zoom in on the map to identify property locations.

M. Fox confirmed that an online map will be available along with links to supplemental follow-on health study information and previously-completed health data analyses.

Patricia Truant, Johns Hopkins University, added that the large Spring Valley FUDS map on the project website provides the ability to zoom in on specific areas and may be acceptable for use during the survey.

Question from L. Monsein, RAB Member – How do you plan to identify respondents from Chevy Chase?

G. Beumel added that defining the Chevy Chase control group is important because the 20015 zip code encompasses portions of multiple neighborhoods.

M. Fox explained that the zip code classification was selected to maintain consistency with other health study aspects and the original 2007 scoping study.

Question from S. Hirsh, EPA Region 3 – How will the third group of respondents (within the 20016 zip code but outside of the Spring Valley FUDS) fit into the analyses and final report?

M. Fox replied that each group will be assessed separately using a stratified analysis. All survey responses will be provided to the DC Department of Health who expressed interest in obtaining general community input including survey responses from residents beyond the FUDS boundary.

Question from G. Beumel, Community Co-Chair – What type of existing data is organized by zip code?

M. Fox replied that zip codes are associated with previous anecdotal reports from the 1990s time frame. (These individuals will not be contacted and their anecdotes will not be verified as part of the community survey.) Zip codes are also associated with DC Department of Health data, which will be analyzed separately to assess potential consistency or patterns.

M. Fox clarified that DC cancer registry data are identified by census tracts. The advantage of the larger zip code areas is that everyone is familiar with their own zip code, in contrast to census tracts and other classifications.

Question from L. Miller, RAB Member – Wouldn't people who believe that they have suffered adverse health effects in Spring Valley be more likely to respond to the survey compared with healthy residents? This scenario would create a self-selected skewed group of survey respondents.

M. Fox clarified that the survey information will be summarized in a purely descriptive manner.

Question from L. Miller, RAB Member – Can individuals complete the survey multiple times?

M. Fox confirmed that this is logistically feasible but the project team will perform common sense checking of survey results to ensure that the exact same responses have not been duplicated. Each computer is limited to completing the online survey only once.

Question from M. Douglas, RAB Member – What is the purpose of analyzing health data from residents close to but outside of the FUDS boundary?

M. Fox explained that respondents from outside the FUDS but within the 20016 zip code will provide a second control group for comparison purposes, along with the Chevy Chase comparison group. Survey responses will be divided into three groups: within the FUDS, within the 20016 zip code but outside of the FUDS, and within the 200015 zip code.

Question from L. Monsein, RAB Member – How do you plan to recruit survey respondents?

M. Fox briefly reviewed planned community survey outreach venues, most of which will be online or via neighborhood associations. A link to the survey will tentatively be provided on DDOE's website.

Question from L. Monsein, RAB Member – The survey design potentially allows skewed results caused by concerned residents who are driving the community support for the health study. These residents are likely to encourage all of their friends and family to respond and describe their detailed concerns. If 100 highly sensitive residents provide anecdotal information about serious health concerns potentially related to AUES activities, while 100 Chevy Chase residents are relatively unconcerned about serious health issues and do not recruit health-sensitive residents, then it will be difficult to accurately report the comparative health status of both communities. This is likely to happen. How will you explain results such as these to the RAB once the data have been analyzed and summarized?

M. Fox replied that a variety of health data (including the DC health department data and the original scoping study's conclusion about good community health in Spring Valley) should provide sufficient support for the study's conclusions.

L. Monsein replied that this response does not satisfactorily answer his question. He stated that he will inquire about the same concern once the final report in 2013 reflects his predicted results.

Comment from M. Pritzker, RAB Member – The draft survey provided the pilot testing phase appears to focus on community opinions about general health. Some concerns such as obesity and domestic violence are not relevant to health conditions potentially associated with historical use of the Spring Valley neighborhood. Additionally, some of the health conditions listed in the survey may be caused by genetics or other reasons unrelated to Spring Valley. I was surprised by the survey's contents and am trying to understand the survey's substance. What will the final report reveal about the Spring Valley community?

M. Fox explained that the community survey was included in the follow-on health study to further address anecdotal health reports described in the original 2007 scoping study. The survey is designed to provide an opportunity for community input and to develop a general health update. Other agencies such as the DC DOH expressed interest in obtaining community input on some of the seemingly unrelated health concerns.

M. Pritzker asked for confirmation that the survey goes beyond the scope and function of the Spring Valley RAB, and that concerns unrelated to specific medical conditions were intentionally included.

M. Fox confirmed that the community survey was designed as a general health survey.

Comment from L. Monsein, RAB Member – During the past month, DC has been conducting a half-hour health survey by telephone. I was randomly selected as a study participant and they persistently sought my responses. This suggests that there is extensive health data available for DC residents that are organized by specific location.

M. Fox replied that the follow-on health study will reference health data obtained from DC DOH.

L. Monsein emphasized that this DC health survey appears to be the most thorough health survey effort conducted to date in DC, and data collection is currently ongoing.

M. Fox clarified that the results will then only be available after the follow-on health study time frame.

Question from L. Miller, RAB Member – How do you interpret their survey data as being available after the follow-on health study time frame? DC is currently collecting health data, while the JHU community survey has not been released to the Spring Valley and Chevy Chase communities.

M. Fox clarified that JHU is under contract to complete specific follow-on health study tasks.

M. Pritzker noted that he would like to list the existence of this new DC health survey data as a concern.

Comment from L. Miller, RAB Member – If it turns out that the community survey sampling methodology and responses are of good quality, then health findings may be useful. For example, a high incidence of learning disabilities or thyroid disease may be concentrated in a particular area.

L. Monsein noted that it will be difficult to determine high incidence of health concerns in particular areas because the community survey responses will be submitted anonymously, without a denominator to classify the respondents' locations within the Spring Valley FUDS.

Question from L. Miller, RAB Member – Who should we speak with regarding any questions about the overall survey or specific survey items?

M. Fox replied that questions can be directed to either Beth Resnick or herself.

C. USEPA Update on Arsenic Toxicity: Upcoming Revisions to the Arsenic Cleanup Standard

Dawn Ioven, Toxicologist for EPA Region 3, presented an update on arsenic toxicity with emphasis on upcoming revisions to the current arsenic cleanup standard. (Details of the risk and biology of arsenic from a RAB member's medical expertise perspective were presented at the May 2012 RAB meeting.)

Introduction: Arsenic in soil is the primary contaminant of concern at the Spring Valley FUDS.

Background: Several years ago, EPA conducted a reassessment of the arsenic cleanup criteria and associated human health risks. Their scientific advisory board (consisting of a panel of experts) concurred with EPA's approach in 2007, and EPA revised their report only to have the effort halted by Congress. At the request of Congress, EPA is reassessing arsenic cancer and non-cancer risks to determine whether the current arsenic cleanup criteria require revision. This reassessment includes review of additional arsenic toxicity studies that may support a more stringent cleanup level.

Arsenic Toxicity Update: A preliminary EPA report will be submitted soon to the National Academy of Sciences for a stringent review period spanning the next two to three years. Details of this new EPA guidance are not available for public release at this time.

It is unclear whether the arsenic cleanup level will increase (indicating that arsenic is less toxic than previously believed) or decrease (indicating a higher arsenic toxicity than previously believed). At this time, further discussion of possible cleanup level revisions is presumptive.

Bioavailability of Arsenic: The potential impact of revised arsenic cleanup criteria is influenced by arsenic bioavailability. Bioavailability is a factor used during calculations of potential exposure risks, for the purpose of determining how much of the arsenic is actually absorbed into the human body and into tissues versus how much of the arsenic is excreted without causing any harm.

S. Hirsh added that risk calculations generally assume 100 percent bioavailability of a chemical, which is almost always an overestimation of the chemical's actual bioavailability.

D. Ioven explained that during the risk assessment process, toxicology criteria are used to estimate cancer and non-cancer risks associated with chemical exposure. These toxicology criteria are developed based on laboratory animal responses to ingestion of high chemical doses. However, chemicals such as arsenic are more soluble and bioavailable when ingested via food and water, and are less bioavailable when the ingested arsenic is bound to soil particles.

Numerous site-specific bioavailability studies are conducted by EPA for metals such as arsenic and lead. Juvenile swine are exposed to arsenic in soil to determine how much arsenic they absorb. These test animals were selected because their gastrointestinal tract mimics ours. Recent studies have provided evidence for a wide range of arsenic bioavailability in soil, ranging from 10 percent to 60 percent bioavailability depending on the specific type of arsenic, the type of soil, and other environmental factors.

S. Hirsh re-emphasized that the overestimated highly conservative 100 percent arsenic bioavailability was previously used for risk calculations in Spring Valley. Based on the upper end of the bioavailability range as determined by toxicological studies, 60 percent bioavailability will be used as the default factor during risk calculations. As a result, current predicted risks will decrease by 40 percent. However, it is still possible that the risk-based cleanup goals may increase by a small percentage.

Potential Impact at Spring Valley: Revised arsenic cleanup criteria may not impact previously completed and ongoing cleanup efforts in Spring Valley. The current 20 ppm arsenic cleanup level represents acceptable cancer and non-cancer risks based on conservative 100 percent bioavailability.

Question from L. Monsein, RAB Member – The details of your presentation are interesting because I presented information on the risk and biology of arsenic at the May 2012 RAB meeting. At that time, based on the latest version of the EPA reassessment, it appeared that the arsenic risk would be significantly greater than predicted by current cleanup criteria. The major arsenic exposure risks now appear to be associated with lung and bladder cancer. Revised cleanup criteria were predicted to be significantly lower than 20 ppm, and many cities would go bankrupt if they attempted to remediate soil to the originally projected new arsenic cleanup levels of 1 or 2 ppm. If extremely low cleanup criteria are approved, then existing cancer risks will exceed 1 in 30,000 individuals. Will Spring Valley soil be cleaned up to 1 ppm arsenic?

D. Ioven clarified that further Spring Valley soil cleanup will depend on bioavailability as well as the revised cleanup level. She was originally provided with similar information indicating that the arsenic carcinogenic factor would be at least one order of magnitude more stringent. However, more recent information suggests that the arsenic carcinogenic factor will shift in the other direction, but this is presumptive until the National Academy of Sciences releases their reassessment review.

D. Ioven noted that the revised arsenic cleanup level also depends on linear or non-linear extrapolation of arsenic toxicity. During toxicological testing, responses to high chemical doses are recorded and low doses of the same chemical are extrapolated. Linear modeling is currently assumed, but others believe that a non-linear model should be used instead.

Question from L. Monsein, RAB Member – In order to reduce excess arsenic cancer risks to 1 in 10,000 people, all Spring Valley soil needs to be remediated to a concentration of 20 ppm arsenic (assuming 100 percent bioavailability). The government states that any risk exceeding this 1 in 10,000 excess cancer risk must be addressed. If arsenic is classified as more potent in the EPA reassessment, what future cleanup efforts will be required in Spring Valley?

S. Hirsh replied that this scenario is addressed during 5-year reviews, which will evaluate whether unacceptable risks are now associated with the previously remediated soil. Risk management also plays a role, as background levels of arsenic in soil typically equal or exceed 2 ppm arsenic.

D. Ioven added that there are several naturally-occurring and anthropogenic chemicals whose background levels are higher than the calculated cleanup levels based on cancer risks. If a more stringent oral slope factor for arsenic is approved, then the site-specific background arsenic level will likely become the default cleanup goal at arsenic cleanup sites.

Question from M. Pritzker, RAB Member – Did I hear correctly that the revised arsenic cleanup level will not be released to the public for at least the next 2 to 3 years?

D. Ioven confirmed that this is the minimum anticipated length of time for the National Academy of Sciences to complete their arsenic toxicity assessment review.

M. Pritzker questioned the value of a lengthy discussion on this topic so far in advance.

Question from L. Miller, RAB Member – This presentation is valuable and much appreciated. What are the mechanisms by which arsenic in soil can become bioavailable in human systems?

D. Ioven explained that a small amount of soil is inadvertently digested during routine activities, particularly by children playing outdoors. Assumptions about the soil ingestion exposure route are currently based on an upper-bound estimate, using the highly conservative assumption that children will consume 200 mg per day (equivalent to one teaspoon of soil), that adults will consume 100 mg per day, and that workers will consume 50 mg per day over a 30-year period. Arsenic exposure can also occur when airborne contaminated soil particulates are inhaled, and sufficiently large particles cause individuals to cough, swallow, and ingest the contaminated particles.

Question from L. Miller, RAB Member – Can you elaborate on what 100 percent bioavailability refers to?

S. Hirsh explained that these percentages are part of the basic discussion of how much arsenic is actually absorbed by the human body. For example, if an individual can be exposed to a maximum of 20 ppm of arsenic without unacceptable risks, and 50 percent arsenic bioavailability is assumed, then the individual can safely be exposed to 40 ppm arsenic.

L. Monsein added that regulators conservatively assume that every molecule of arsenic is ingested and absorbed. A more reasonable estimate is 20 percent bioavailability, and the arsenic toxicity reassessment may settle on 60 percent bioavailability. An important take-home point is that recent studies have shown that not all ingested arsenic is absorbed.

D. Ioven added that these bioavailability calculations provide a more accurate estimate of arsenic risks.

Question from L. Miller, RAB Member – Background levels of arsenic vary depending on location, according to arsenic information previously shared with the RAB. What happens if the revised arsenic cleanup standard is below the Spring Valley background level?

D. Ioven and S. Hirsh confirmed that arsenic occurs naturally in earth's crust. The background level established for the Spring Valley area is 12.6 ppm arsenic.

D. Ioven explained that if arsenic is reassessed and deemed more carcinogenic than previously thought, the cleanup level may be reduced to below the current background level. If this occurs, the Spring Valley

background level of 12.6 ppm will become the cleanup standard. The same toxicity reassessment is underway for dioxin and potentially lead.

P. deFur added that the distribution of arsenic in natural soils of the East Coast ranges from 2 to 18 ppm. A couple of states have set their arsenic cleanup goals at the background level, while a couple of other states have calculated arsenic risk values as well as the background level. One state currently defines their cleanup goal of 1 ppm arsenic despite their naturally-occurring background level of 7.5 ppm arsenic. In Spring Valley, EPA estimated the 12.6 ppm screening level based on naturally-occurring arsenic concentrations in soil, and arsenic toxicity in soil is an issue that EPA has dealt with for many years.

S. Hirsh emphasized that safety factors such as 100 percent bioavailability were built into the assumptions about soil consumption, for the purpose of erring on the side of protecting human health. If arsenic is deemed more toxic than previously believed, the built-in conservative cleanup levels will hopefully ensure that completed site cleanups remain acceptable.

Question from N. Wells, ANC3D Commissioner – Does bioavailability depend on the substance in which the soil is present and coexistence of metals in the soil?

D. Ioven and S. Hirsh confirmed this. S. Hirsh added that early bioavailability studies were based on relatively young science with testing procedures that were not well documented. At that time, bioavailability testing was limited to national laboratories or universities, and the U.S. Army's study calculated 37 percent bioavailability of arsenic in soil. EPA and the U.S. Army could not agree on a scientifically defensible value, and the most conservative 100 percent bioavailability was chosen as the basis for the current arsenic cleanup level.

D. Ioven thanked the RAB for the opportunity to share this information.

IV. Open Discussion and Agenda Development

A. Next Meeting: Tuesday, October 9, 2012

Upcoming meetings will be held in October and November 2012.

RAB meetings are not held in August or December.

B. Future agenda topics

- 4825 Glenbrook Road Remedial Design and Remedial Action Work Plan (October 2012)
- Focus on the Groundwater Study Results and Future Plans (November 2012)
- Update on the ATSDR Health Consultation for 4825 Glenbrook Road (TBD)

C. Open Discussion

No additional topics were discussed.

V. Public Comments

Question from K. Slowinski, Audience Member – Will there be a future opportunity to provide public comments on the 4825 Glenbrook Road work plan?

B. Barber clarified that a public comment period will not be held to address the work plan. The contents of the work plan will be presented for questions, informal comments, and discussion at the October 2012 RAB/Community meeting.

Question from K. Slowinski, Audience Member – Will the last set of comments be provided by P. deFur?

B. Barber replied that the last work plan comments were and will be provided by the Regulatory Partners (EPA and DDOE), P. deFur, and AU.

P. deFur added that the Partners discussed the technical details of the remedial action work plan prior to draft work plan preparation. These discussions addressed details such as the remedial action components, risk mitigation measures, chemicals driving the risk evaluations, and protective tent planned locations.

Comment from Ginny Durrin, Audience Member – I do not understand why C. Dieterich's correspondence letters with USACE could not have been distributed to the RAB in a timely fashion. In my opinion she has very politely presented a valid request. Think about what it would be like to leave children at home at ground zero in Spring Valley. Millions of dollars have been poured into cleaning up the 4825 Glenbrook Road property, but the U.S. Army denied C. Dieterich's request to relocate her children during the remedial action, and I think this is appalling. When the U.S. Army left the Spring Valley neighborhood in 1995 and deemed the site clean, they stated that Spring Valley would provide a model for FUDS nationwide and community cooperation. I would think that USACE would like to leave the Spring Valley FUDS with the same idea of modeling and cooperation. Denial of C. Dieterich's request is beyond my comprehension, and I hope this issue is taken higher within the government and the RAB's recommendation is supported by scientific data. If this scenario is safe and risk-free, then USACE may as well remove the warning sign at the 4825 Glenbrook Road property and remove the caution signs from the work trucks. The idea that USACE real estate and legal departments are leading this rejection decision is crazy. Only a single residence would be evacuated, not a larger portion of the neighborhood.

G. Beumel thanked G. Durrin for her input and thanked everyone for attending.

VI. Adjourn

The meeting was adjourned at 9:29 PM.