



**SPRING VALLEY FORMERLY USED DEFENSE SITE PROJECT**  
**RAB Meeting**

**November 13, 2012**  
**7:00 – 8:00 p.m.**

**UNDERCROFT 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  
AOI Additional Sampling  
Groundwater Study  
4825 Glenbrook Road
- 7:30 p.m.      III.      Community Items**  
**RAB discussion of the TAPP report from P. deFur:**  
*Comments on the Draft Work Plan for the Remedial Design/Remedial Action at 4825 Glenbrook Rd*
- 7:45 p.m.      IV.      Open Discussion & Future RAB Agenda Development**  
Possible Upcoming Meeting Topics\*:  
    ▪ Groundwater Meeting Summary  
    ▪ 4825 Glenbrook Road Health Consultation Update (ATSDR)  
    ▪ JHU Follow-On Health Study and Survey
- 7:50 p.m.      V.      Public Comments**
- 8:05 p.m.      VI.      Adjourn**

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

# Spring Valley

Formerly Used Defense Site

## Restoration Advisory Board Meeting

November 13, 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

## ❖ USACE Updates

- Arsenic Soil Removal
- AOI Additional Sampling
- Groundwater Study
- 4825 Glenbrook Road NW

## ❖ Community Items

RAB discussion of the TAPP report on the Draft Work Plan for 4825 Glenbrook Rd. from P. deFur

## ❖ Open Discussion & Agenda Development

## ❖ Public Comments



# Co-Chair Updates

---

## Introductions



# Co-Chair Updates

---

## ❖ Announcements

### ➤ Website Updates:

- ✓ October 2012 Monthly Project Summary
- ✓ September 2012 RAB meeting materials (agenda, presentation, minutes)



# Task Group Updates

---

## Membership Committee

- **One RAB member position is still available**  
**(FYI: AU students are eligible to apply)**



# Arsenic Soil Removal

## Follow-On Efforts

### ➤ 5100 block of Tilden Street

- 4'x4'x6' removal in response to boring sample
- Planned effort delayed due to storms
- Removal effort performed from September 12-15, 2012



# Arsenic Soil Removal



Getting set up with mini excavator, safety signage, and neat excavation area



# Arsenic Soil Removal



**Encountered  
large tree roots**



**BUILDING STRONG®**

# Arsenic Soil Removal



**'After' photo of  
the front yard, 10  
days later.**

**The grass looks  
strong and green.**



# AOI Additional Sampling

---

**AOI sampling was conducted at 17 residential properties and the AU campus**

- **48 soil samples were taken during this additional sampling phase**
- **Sampling was completed at AU and 16 of the residential properties in September**
- **Sampling at the last property (3900 block of Fordham Road) was completed on November 7th**

**Currently awaiting the sampling results**



# AOI Additional Sampling



**Location**



**Acquire**



**Package**

# AOI Additional Sampling



**3900 block of Fordham Road**



**BUILDING STRONG®**

# Groundwater Study

---

**Meeting postponed until November 14<sup>th</sup>**

**To be discussed:**

- ✓ **Completed and upcoming groundwater efforts**
- ✓ **Review sampling results**
- ✓ **Proposal for ongoing efforts: Determine if more wells or data are needed to complete the RI**
- ✓ **Finalize ongoing groundwater monitoring requirements at existing wells and surface water locations**
- ✓ **Isotopic Analysis results**



# Isotopic Analysis

---

## UNIQUE PERCHLORATE ISOTOPIC SIGNATURES

- SYNTHETIC, MAN-MADE PERCHLORATE
- NATURALLY OCCURRING SOURCES
  - **Atacama Desert, Chile**
  - Southern High Plains (West Texas and New Mexico)
  - Death Valley



**4825 Glenbrook Road**

**Update**



# 4825 Glenbrook Road

## Follow up discussion from the October RAB/Community Meeting:

**Any questions or concerns from the community based on the materials presented?**



# 4825 Glenbrook Road



## Overall Schedules for the Remedial Design(RD)/Remedial Action (RA)

- **August 31, 2012 – Draft Final RD/RA Work Plan**
- **November 2012 – Final RD/RA Work Plan**
- **November 2012 – Final Chemical Safety Submission (Anticipated Acceptance)**
- **Week of November 26<sup>th</sup>, 2012 – Demolition begins**
- **December 2012 through January 2013 – Site Preparation/ Initial Low Probability Work**
  - **Test pits in backyard and re-locating utilities**
- **February 2013 through December 2013 – ECS Set Up and High Probability Excavation**
- **January 2014 and March 2014 – Final Low Probability Excavation**
  - **Areas A and B**
- **April 2014 – Site Restoration**



# 4825 Glenbrook Road

## Maximum Credible Event

---

This is used for contingency planning for the maximum release of a chemical agent that while unlikely, could occur as a result of an unintended, unplanned, or accidental incident.

- The MCE has been updated since the October RAB to account for comments received from our Partners and the Property Owner



**Spring Valley**  
**STATEMENT OF PRINCIPLE: Public Protection Plan**  
**Voluntary Shelter-in-Place Procedures for**  
**the Remedial Action at 4825 Glenbrook Road**

1. An important determining factor for safe operations at CWM recovery sites is the quality of the personnel conducting the work, and the extensive amount of training they have received to do their job.
2. It is the determination of U.S. Army chemical warfare materiel experts that engineering controls proposed for the Remedial Action at 4825 Glenbrook Rd. will limit the calculated Maximum Credible Event (MCE) to the confines of the engineering control structure.
3. **The MCE for this activity is the evaporative release of one (1) liter of Arsenic Trichloride over a one hour period. If there were NO engineering controls in place, the Temporary Emergency Exposure Limit (TEEL)-1 distance for this MCE would be 194 feet (59 meters).**
4. It is the determination of the U.S. Army that the Engineering Control Structure (ECS) and the Chemical Air Filtration System (CAFS) will offer effective protection should CWM related items be discovered during the excavation work at the site.
5. The U.S. Army has high confidence in the engineered structure's redundant controls and barriers to safely contain the effects of the MCE, yet acknowledges that non-technical concerns call for well-defined additional precautions. These concerns include the close proximity of occupied private residences and academic buildings, and the certainty that this high-probability investigation will encounter CWM related materials.
6. The U.S. Army Corps of Engineers, Baltimore and its contractors will make available a voluntary Shelter-in-Place program for those individuals and organizations who reside, work, or routinely operate within 194 feet of the site located at 4825 Glenbrook Road.
7. The Shelter-in-Place program will be similar in method and procedure to that used by the Army during the Burial Pit 3 Operations and the Lot 18 Anomaly Investigation.
8. The U.S. Army will provide information and updates, through mailings, Spring Valley newsletter, Northwest Current, neighborhood canvassing, public meetings, and one-on-one meetings with those residents and organizations that request it. The information and knowledge will allow potentially affected individuals and organizations to decide for themselves whether or not to participate in the Shelter-in-Place training and drills that the Army will offer.



# 4825 Glenbrook Road

## Draft Public Protection Plan

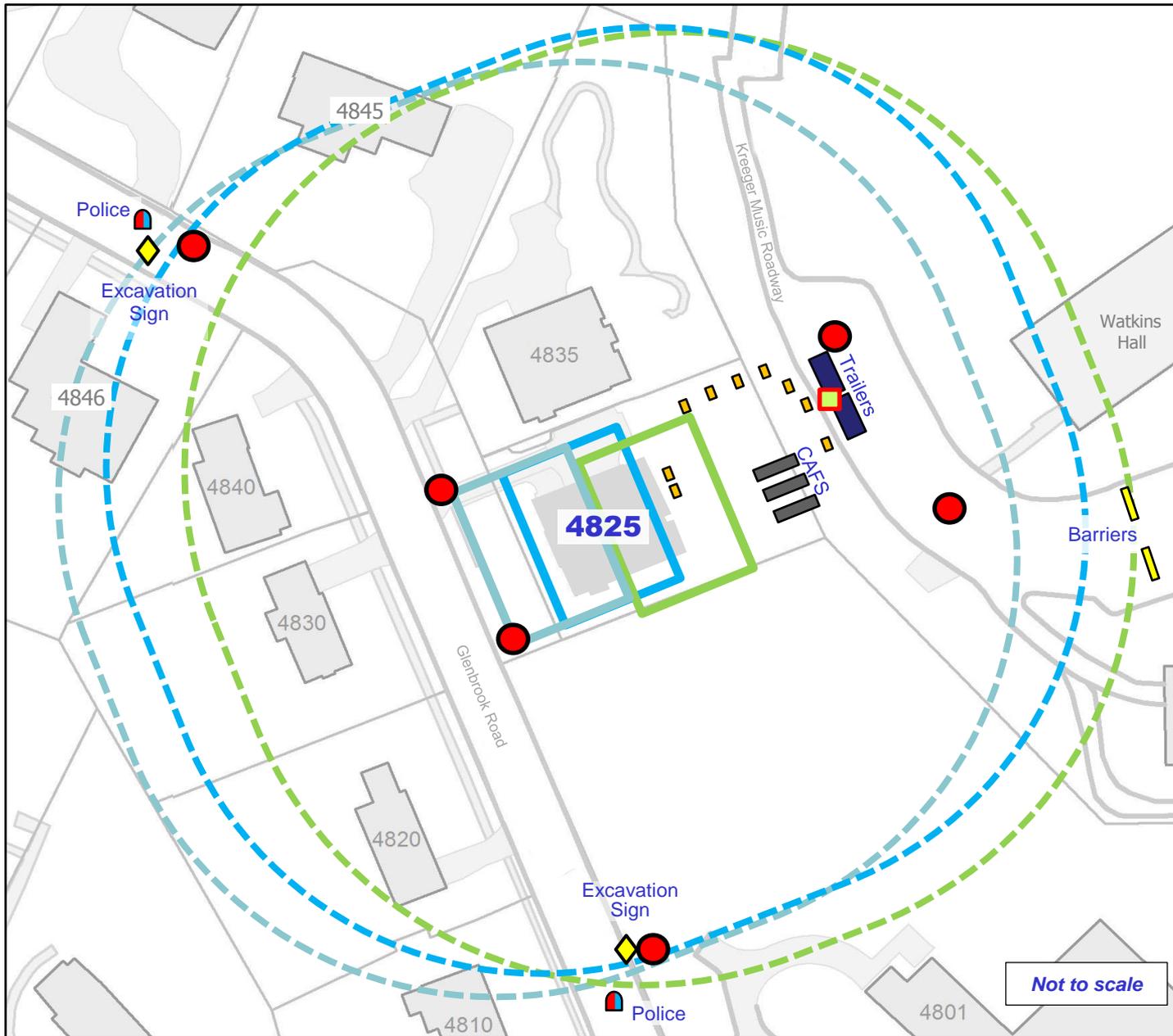
---

**Draft is currently under agency and Partner review.**

- One-on-one meetings are underway with residents at the 8 properties that are within the Shelter-in-Place Zone.
- Alert system design and installation plans are underway.



# Shelter-In-Place Zones During High Probability Operations



**Key**

- ECS 1
- ECS 2
- ECS 3
- - - Zone 1
- - - Zone 2
- - - Zone 3
- ◆ Test Pits
- ◻ Base Station
- Strobe & Speaker

The first scheduled Engineering Control Structure (ECS) location (purple) is in the front yard towards Glenbrook road. Then the ECS moves towards the backyard and Kreeger Music Roadway (green).

Three Chemical Agent Filtration System (CAFS) units will be utilized for this operation

District of Columbia-Metropolitan Police Department (MPD) District 2 will cut and pull traffic during an emergency. This map indicates the 2 locations they will respond to, after receiving a 'Code 1' notification. All MPD District 2 officers working during operation times will be briefed prior to operations starting.

*Not to scale*

# Alert System



**New Public Address  
Horn / Speaker**



**Wall/Ceiling-  
Mount Strobe  
Light**



**Magnetic Mount  
Antenna**



# Alert System



Wireless Public Address



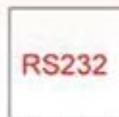
Wireless Strobe Lights



VS4500 Compact Wireless Paging Controller



Telephone Interface



Serial Data

## Compact Wireless Paging Controller



**BUILDING STRONG®**

# Spring Valley FUDS Restoration Advisory Board

---

## Community Items:

### Discussion

**The TAPP report from Peter deFur on the  
*Remedial Design/Remedial Action Work Plan  
at 4825 Glenbrook Road***



# **Spring Valley FUDS Restoration Advisory Board**

---

- **Open Discussion**
- **Upcoming Agenda Items**
  - **Groundwater Meeting Summary**
  - **Summary of the JHU Health Study Survey**
  - **4825 Glenbrook Road Health Consultation Update (ATSDR)**



# 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 November 13, 2012 RAB Meeting**

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

Rebecca Yahiel	Spring Valley Community Outreach Program
Jessica Bruland	ERT
<b>HANDOUTS FROM THE MEETING</b>	
I. Final Agenda for the November 13, 2012 RAB Meeting II. Army Corps of Engineers Presentation III. Dr. Peter deFur’s TAPP report on the Work Plan for Remedial Design and Remedial Action at 4825 Glenbrook Road IV. Statement of Principle for the 4825 Glenbrook Road Public Protection Plan (Voluntary Shelter-in-Place Procedures)	

**AGENDA**

**Starting Time:** The November 13, 2012 RAB meeting began at 7:04 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. He noted that this is the last RAB meeting of 2012 (RAB meetings are not held in August or December) and the group will meet again in January 2013. He reviewed the evening’s agenda.

**B. Introduce Guests**

No guest introductions were made.

**C. General Announcements**

D. Noble mentioned that USACE updates will be brief and focus on project activities conducted since the September 2012 RAB meeting. The brief nature of these updates is due to the recent meeting schedule. The October combined RAB/Community meeting focused exclusively on 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). The planned October 30, 2012 Partnering meeting was cancelled due to weather conditions during Hurricane Sandy. The Groundwater Partnering Meeting was rescheduled for November 14, 2012 and the next regular Partnering Meeting is planned for December 11, 2012.

D. Noble announced that recent website updates include the September 2012 RAB minutes and associated materials, along with the October 2012 monthly project summary.

**D. Task Group Updates**

Malcolm Pritzker, RAB Member, provided a membership task group update. There has been recent discussion among community members on whether American University (AU) students are eligible to serve on the RAB. As noted in the presentation materials, AU students are eligible to apply for membership. No AU students have applied for RAB membership to date.

M. Pritzker noted that during his several years of tenure on the RAB, no applicants for RAB membership have been rejected. The RAB has made numerous efforts to advertise and fill available membership vacancies and will continue to do so.

M. Pritzker emphasized that the membership rules were discussed and established before he joined the RAB. [Eligibility rules for RAB membership were briefly reviewed at the September 2012 RAB meeting, in response to a community member's inquiry, and have been discussed in greater detail at previous RAB meetings.] Based on procedures outlined in the membership rules, each applicant fills out the necessary forms, and all RAB members review and vote on the completed application. Membership applications are currently being sought for existing vacancies, but no inquiries or applications have been received.

Comment from Nan Wells, ANC3D Commissioner – I am acquainted with one community member who applied for RAB membership and was rejected. The applicant was a chemical engineer who graduated from Princeton University, and had lived in the Spring Valley neighborhood for fifteen years.

M. Pritzker asked how many years ago this occurred.

N. Wells was uncertain as to when the community member submitted their RAB membership application.

M. Pritzker emphasized that no applicants were rejected during his RAB tenure, indicating that this membership rejection occurred before he joined the RAB.

N. Wells commented that the applicant may not know the reason why his application was rejected.

## II. USACE Updates

D. Noble, Spring Valley Project Manager and Military Co-Chair, provided an update on follow-on arsenic removal and additional 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 tentative demolition schedule 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. A status update was provided at the September 2012 RAB meeting.)

**Tilden Street:** One property owner requested removal of the soil containing slightly elevated arsenic. This elevated soil sample (22.8 ppm arsenic at a depth of 5 feet) was located in the front yard at a residential property on the 5100 block of Tilden Street. Delineation soil sampling was completed in July 2012 to delineate the remaining arsenic contamination and determine how far the field team must excavate around the location of the boring to remove all arsenic-contaminated soil. Based on analytical laboratory results, a small area of 4 feet by 4 feet was defined for excavation to a depth of 6 feet to remove all remaining elevated arsenic levels in the soil. The planned soil removal effort was delayed due to weather conditions.

Soil removal was completed in mid-September 2012 using a small excavator, with a completion time frame of 2 days. Signs were posted for safety purposes, and large tree roots were encountered and addressed within the excavation area. Property restoration included clean backfill and reseeding. The area was regularly watered by USACE and the homeowner, resulting in strong, green, and healthy grass.

All arsenic soil removal efforts at this property are complete and the site-specific removal report will be submitted to the Regulatory Partners (EPA and DDOE) to obtain final approval.

## B. Supplemental Soil Sampling Within AOIs

[Most of the following information was presented at the September 2012 RAB meeting and is included below for clarification purposes.]

**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 was proposed at several Areas of Interest (AOIs) to provide additional data for analysis within the RI report. This 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:** 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), and AOIs 22/24 (Spring Valley FUDS metals, excluding 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).

**Sampling Effort:** A total of 48 samples were collected at a total of 17 residential properties and at portions of AU's campus. Most samples were collected in September 2012, and the remaining samples were collected last week in early November 2012 at a 3900 block of Fordham Road residential property.

Most samples were collected from surface soil using a hand trowel and were minimally invasive with negligible damage to the surrounding grass. A limited number of subsurface soil samples were collected using a hand auger. Each sample was packaged and sent for laboratory analysis.

**Results:** Laboratory analyses are underway, and receipt of analytical data is pending. Sampling results will be shared with the RAB when they become available.

**Follow-On Efforts:** As described at the September 2012 RAB meeting, 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.

## 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 September 2012 RAB meetings.]

**Future Groundwater Study Efforts:** Plans for future groundwater study activities will be discussed with the Partners at the upcoming interagency groundwater meeting on November 14, 2012. This meeting was originally planned as part of the October 2012 Partnering Meeting, which was cancelled due to hurricane weather conditions.

Topics planned for Partner discussion at the November 14<sup>th</sup> interagency groundwater meeting include completed and upcoming groundwater efforts, review of the most recent deep monitoring well sampling results, finalization of ongoing groundwater monitoring requirements at existing wells and surface water

locations, and isotopic analysis results. Proposed ongoing efforts will also be discussed to determine if additional wells or sampling data are necessary to prepare and complete the site-wide groundwater RI report.

**Isotopic Perchlorate Analysis:** Two perchlorate samples were collected at AU's campus and near Sibley Hospital, where some of the highest perchlorate concentrations in the Spring Valley project area have been detected to date. At each location, a large volume of water was pumped through a specialized resin to collect a sufficient amount of perchlorate for conducting isotopic analyses. (Details of the isotopic perchlorate analysis effort were provided at the July 2012 and various prior RAB meetings.)

The purpose of this effort is to determine whether these two perchlorate plumes originated from the same source. Perchlorate is comprised of chlorine and oxygen, and specific isotope ratios of these elements can reveal information about the perchlorate source. Unique isotopic signatures include synthetic man-made sources, such as fertilizers, and naturally-occurring sources with distinctly different isotope ratios, such as the Atacama Desert (northern Chile), the Southern High Plains (western Texas and New Mexico), and Death Valley (California).

Analyses were conducted by the University of Chicago and analytical results were recently received. Both samples of perchlorate collected in Spring Valley originated from the Atacama Desert in northern Chile. These results, their implications, and their significance will be discussed by the Partners at the upcoming interagency groundwater meeting.

Question from N. Wells, ANC3D Commissioner – Can you tell whether the isotopic signatures are the same for the Sibley Sump and the AU campus Kreeger Hall area?

T. Beckwith explained that the original naturally-occurring source region is the same for both sampling locations. Isotopic analyses do not provide information on whether the perchlorate in Spring valley groundwater was caused by the same source event (during which perchlorate was initially released into the Spring Valley environment: soil, groundwater, and/or surface water).

T. Beckwith added that the University of Chicago, who conducted the analyses, clearly stated that these results are definitive, with no doubt that the perchlorate originated from a naturally-occurring source region in northern Chile's Atacama Desert.

Question from Mary Douglas, RAB Member – Are you saying that the perchlorate in Spring Valley groundwater is the same as the perchlorate in Chile, instead of similar to the Chilean perchlorate?

D. Noble confirmed that the perchlorate in Spring Valley groundwater originated from Chile.

M. Douglas asked if this is a bizarre finding.

D. Noble clarified that this finding is not unusual. Perchlorate is contained in Chilean nitrate ore, which was heavily mined since the early 1800s and exported world-wide for various commercial uses including fertilizers and explosives. Some ore continues to be shipped to the United States for specific agricultural purposes, with limitations established to reduce environmental contamination associated with nitrates.

Question from N. Wells, ANC3D Commissioner – Do you know what perchlorate sources were used as accelerants at the American University Experiment Station (AUES)?

D. Noble replied that the original source of perchlorate used at the AUES is purely speculative. Based on current historical knowledge, the U.S. Army used large amounts of gunpowder since the early 1800s, and this gunpowder was produced using nitrates extracted from Chilean nitrate ore. Agricultural activities were common across the Spring Valley area, and the present-day perchlorate plumes may have originated from the use of fertilizers that were manufactured using Chilean nitrate ore. If agriculture was the source of perchlorate groundwater contamination, the project team would expect to detect more widespread perchlorate contamination across the Spring Valley FUDS, but there are potential explanations for why perchlorate may be concentrated in specific areas of groundwater.

Question from (unidentified woman), Audience Member – I understand that women are significantly more sensitive to perchlorate contamination (by a factor of 10) compared to men, and women develop thyroid issues from exposure to perchlorate. This is a common health problem in my neighborhood. Do you think that any perchlorate is stored underground in bunkers that have not been located yet?

D. Noble was uncertain but emphasized that Spring Valley residents do not drink the local groundwater.

Comment from (unidentified woman), Audience Member – I understand that a resident can be exposed to groundwater simply by walking their dog in the rain.

Dr. Lee Monsein, RAB member, clarified that the resident would have to ingest groundwater through their mouth in order for exposure to occur.

Question from (unidentified woman), Audience Member – Can rainwater be absorbed through the skin and cause perchlorate exposure?

L. Monsein said no. He explained that in order to affect thyroid health, the resident would need to ingest gallons of rainwater per day based on the perchlorate levels currently detected in Spring Valley groundwater.

Question from (unidentified woman), Audience Member – What is the source of your information?

L. Monsein replied that he would be happy to discuss this topic following the meeting.

Question from A. Hengst, Audience Member – It has taken two years to plan, conduct, and obtain results from the isotopic perchlorate analysis. Since you mentioned that an agricultural source of perchlorate would be more widespread across the site, would it be worth exploring this issue further by collecting additional perchlorate samples in other locations, for the purpose of testing whether the perchlorate was released from agricultural activities versus munitions? It seems like this effort has taken a long time to get this far and perhaps my expectations are unrealistic. I thought that you could determine whether the perchlorate plumes were caused by munitions-related activities or agricultural fertilizer, but it took a significant waiting period to find out that the original naturally-occurring perchlorate source is the same for both locations. It seems that this effort should be taken one step further to investigate whether the perchlorate plumes were caused by a point source or a more widespread agricultural source.

D. Noble replied that details of this topic will be discussed with the Regulatory Partners' groundwater experts at the interagency groundwater meeting on November 14, 2012. This discussion will address the significance of the isotopic analysis results and the potential ongoing and future actions that are necessary based on current knowledge of Spring Valley groundwater. The resulting conclusions and decisions about further groundwater study efforts will tentatively be shared with the RAB at the January 2012 RAB meeting.

D. Noble added that USACE wanted to share the overall isotopic analysis results with the RAB prior to the January 2012 RAB meeting. Both perchlorate plumes contain naturally-occurring perchlorate that originated from northern Chile's Atacama Desert, and the significance of these results will be a major focus of the site-wide groundwater RI report.

Question from N. Wells, ANC3D Commissioner – This question is directed to EPA or DDOE. Is there an allowable perchlorate exposure level for humans?

Steve Hirsh, U.S. Environmental Protection Agency Region III, replied that current health guidance specifies a health advisory level of 15 ppb perchlorate in groundwater, based on a specific consumption rate for a certain duration. This is the degree of perchlorate-contaminated groundwater exposure that L. Monsein referred to earlier during the isotopic analysis discussion.

#### **D. Military Munitions Response Program**

**4825 Glenbrook Road**

**Tentative Schedule (Next Steps)**

**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. These documents include the Decision Document (DD), which 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. These documents also include the Demolition and Disposal Plan, which describes the removal and disposal of the 4825 Glenbrook Road house and associated debris. (Details of finalized documents were provided at the September 2012 and previous RAB meetings).

**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. (Details of this plan were shared with the RAB and the community at the October 2012 Joint RAB/Community meeting.)

Work plan finalization is pending and is anticipated in late November 2012. All comments from the Regulatory Partners and the property owner (AU) have been or are currently being addressed.

Follow up questions and concerns focused on the material presented at the October 2012 Joint RAB/Community meeting are incorporated into the RAB discussion below. [Some of these questions address topics that were subsequently discussed in detail during the presentation.]

**Chemical Safety Submission:** The 4825 Glenbrook Road Chemical Safety Submission (CSS) must be approved before high-probability excavation can begin. The final CSS has been reviewed by the USACE's Center of Expertise (CX) and the U.S. Army Technical Center for Explosives Safety (USATCES). Final approval from the Department of Defense Explosives Safety Board (DDESB) is anticipated in late November or early December 2012.

**Demolition Phase:** All demolition and remedial action dates from this point forward are tentative and will be determined pending resolution of any remaining issues. House demolition is anticipated to begin in late November 2012, after the Thanksgiving holiday, with completion anticipated prior to the winter holidays. The Spring Valley community will be notified via e-mail and newsletter as soon as a demolition start date has been selected. (Details of the finalized Demolition and Disposal Plan, which describes the removal and disposal of the 4825 Glenbrook Road house and associated debris, were presented at the March and July 2012 RAB meetings.)

**Site Cleanup:** The tentative remedial action schedule was recently updated to reflect the revised cleanup time frame and currently extends from early November 2012 (the demolition phase) through December 2013. This schedule is subject to change pending resolution of any remaining issues and any findings of concern at the site.

- Initial low-probability soil removal work will tentatively begin in January 2013. These efforts include several backyard test pits and relocation of a sewer utility that would interfere with implementation of remedial activities at the site.
- Following completion of initial low probability efforts, site preparations for high-probability work will begin, tentatively in January 2013. 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 February through December 2013.
- Remaining low probability removal actions in Areas A and B (including the driveway and a small portion of the backyard) are tentatively scheduled for January through March 2014 following completion of the high probability excavations.

- Site restoration is tentatively scheduled for April 2014. The project team anticipates turning the remediated and restored property over to the property owner (AU) in April 2014.

### **Updated Contents of Remedial Design and Remedial Action Work Plan**

**Maximum Credible Event:** The maximum credible event (MCE) presented at the October 2012 Joint RAB/Community meeting has been updated to account for and resolve additional comments received from the Partners and the property owner (AU). The MCE was recalculated to account for higher seasonal summer temperatures, resulting in the revised MCE of 194 feet (59 meters). This revised MCE is reflected in the draft final work plan and in the associated Public Protection Plan (PPP).

- The MCE serves as a contingency plan in the highly unlikely event of the maximum release of chemical warfare materiel (CWM). Specifically, the MCE of 194 feet around the site represents the instantaneous release of 1 Liter of arsenic trichloride over the duration of 1 hour, and is based on the assumption that this release occurs simultaneously with the failure of both the protective tent and the CAFS. This MCE is put into place to identify which nearby residents could potentially be affected by such a chemical release.
- If all engineering controls are in place and functioning properly, as anticipated by the project team, then the MCE is essentially zero feet with no impacts beyond the interior of the tent structure.

### **Public Protection Plan**

**Tentative Schedule:** The draft Public Protection Plan is currently under review by the Regulatory Partners and other agencies. (Details of the Public Protection Plan, which highlights all of the safety plans and protocols to be established in advance for communicating with the surrounding neighborhood, were presented at the October 2012 Joint RAB/Community meeting.)

**Outreach:** Community Outreach and USACE Public Affairs personnel have begun to canvas the neighborhood prior to and during the remedial effort, and are currently meeting individually with residents whose properties are impacted by the MCE distance of 194 feet. Community Outreach personnel hope to schedule and conduct the remaining individual meetings by mid-December 2012. A total of 8 residential properties are partially or completely within the Shelter-in-Place zone.

- As described at the October 2012 Joint RAB/Community meeting, the public protection plan will be implemented specifically based on feedback from potentially affected residents, including preferred method(s) of communication and accurate contact information for use during an emergency. This plan is designed to protect individual residents during an incident at the site. This is a shared effort between USACE and the community that emphasizes safety as the first priority. Based on the engineering controls and very conservative protective procedures that will be established at the site, the project team feels that there is no unacceptable risk to the site workers or the surrounding community.
- Design of a visual and auditory alert system is currently underway. This alert system will be installed in addition to preferred method(s) of communication expressed by each resident, and the details are being shared with residents during individual meetings. This system consists of a small public address speaker with a strobe light, which communicates with antennae mounted around the property's perimeter. Depending on individual resident preferences, this system is capable of integrating with personal home security systems and a wireless paging system that controls the strobe light and sends a mass e-mail to all SIP residents in the event of an incident at the site. To date, no residents have requested installation of this system as part of their personal home security system.

**Question from Kathleen Connell, RAB Member** – Have you received any additional community feedback that the RAB should be aware of?

B. Barber replied that no additional comments were received from Spring Valley residents.

B. Barber added that a brief status update on the walking school bus pattern for Horace Mann Elementary School students will be shared by Alma Gates, At Large Representative for Horace Mann. This issue was briefly discussed at the September 2012 RAB meeting and at the October 2012 Joint RAB/Community meeting.

Question from N. Wells, ANC3D Commissioner – Have meetings been held with all families that reside within the Shelter-in-Place zone?

B. Barber replied that most of these meetings have been conducted.

N. Wells noted that she recently spoke with a SIP family that had not been briefed.

Question from unidentified gentleman, Audience Member – Will house demolition be completed prior to the December holidays?

B. Barber confirmed that the project team hopes to begin demolition during the last week of November with completion anticipated by December 19, 2012.

Question from N. Wells, ANC3D Commissioner – Will you start demolition before all SIP residents have been fully informed of SIP protocols?

B. Barber replied that the Public Protection Plan finalization is anticipated in mid-December 2012. Initial low-probability efforts, during which SIP protocols will be in place, will not begin until January 2013.

Question from N. Wells, ANC3D Commissioner – Demolition is not considered low-probability?

B. Barber clarified that the demolition effort is classified as standard construction.

Question from Alma Gates, At Large Representative for Horace Mann – What is the distance between the 4825 Glenbrook Road site and the closest residential property?

B. Barber replied that 4825 Glenbrook Road is situated approximately 8 feet from the neighboring 4835 Glenbrook Road residence.

Question from K. Connell, RAB Member – What is the status of the walking school bus pattern for Horace Mann Elementary School students? At the October 2012 Joint RAB/Community meeting, I requested a status update on this issue at the next RAB meeting.

A. Gates explained that AU will not grant access to the AU campus via one of the gates at University Avenue. [Access was requested by Principal Whisenant of Horace Mann Elementary School, for the purpose of providing a walking school bus route detour around the 4825 Glenbrook Road site in lieu of using an existing alternative walking route to school. Details of this request were provided at the October 2012 Joint RAB/Community meeting.]

A. Gates added that she has communicated with Principal Whisenant regarding AU's response. She invited Principal Whisenant to attend tonight's RAB meeting but has not received a response.

A. Gates noted her assumption that all necessary precautions will be taken for the purpose of protecting neighborhood children, and it is likely that Principal Whisenant will disband the walking school bus due to cold winter weather conditions.

Question from K. Connell, RAB Member – Will Principal Whisenant coordinate with USACE regarding the safety of the walking school bus during the site cleanup?

A. Gates confirmed this.

B. Barber added that from the project team's perspective, disbanding the walking school bus is unnecessary because appropriate engineering controls will be in place and the children will not be exposed to unnecessary risks. Principal Whisenant may choose to disband the walking school bus.

Question from Leigh Giangreco, AU Student Reporter – How will AU students be informed of an incident at the property? Will AU students, particularly those on the southern portion of the campus, be briefed on public protection measures?

B. Barber explained that the revised Shelter-in-Place zone now touches Watkins Hall, and this information has been shared with the AU administration. AU typically prepares their own Public Protection Plan and provides their own communication measures to ensure student safety.

B. Barber added that a siren and audible alarm will be situated in two locations near the project trailers on AU's campus, which will provide visual and auditory alerts for project personnel in the event of an incident at the site. Student notification decisions will be deferred to AU, who have handled previous protective measures associated with the AU campus.

Question from unidentified male, AU Student Reporter – Will a guard be posted at the site to prevent AU students or other individuals from accessing the property late at night?

B. Barber replied that the project trailers on AU's campus and the entire 4825 Glenbrook Road site will be fenced. At the end of each work day, during non-working hours, a guard will be present to provide stationary and roving security until the following morning. These protective measures will hopefully eliminate all potential incidents of AU students accessing the property.

Question from Kent Slowinski, Audience Member – The Shelter-in-Place zone map shows a proposed barrier in the Kreeger Hall parking lot. Will there be any notice at the campus intramural field?

B. Barber replied that the project team is working with the athletic director to ensure that athletic activities and emergency situations at the intramural field are not impacted. The planned barrier in the Kreeger Hall parking lot provides an appropriate gap width for emergency vehicle access.

Question from Kent Slowinski, Audience Member – How will AU students playing sports on the athletic field be notified?

B. Barber replied that AU will notify their students based on their established process. Previous public involvement plans developed for previous Spring Valley project efforts have been shared with AU, who in turn developed their own public protection plan tailored specifically toward students. The project team is open to participating in this PPP development process if AU wishes.

Comment from Kent Slowinski, Audience Member – In the past, signs were displayed on AU's campus to inform students that they should proceed to a particular location in the event of an incident.

B. Barber clarified that signs in the form of auditory and visual cues will be posted by USACE, but AU has chosen to take responsibility for communicating safety information to students on their campus.

D. Noble added that all safety-related signs on AU's campus are placed by AU, not by USACE.

Question from N. Wells, ANC3D Commissioner – Has the Shelter-in-Place zone changed due to the revised MCE?

B. Barber explained that the revised MCE of 194 feet impacts the same 8 residential properties. In some cases, a larger portion of those properties are encompassed within the SIP zone. This expanded zone now touches Watkins Hall at AU's campus.

Question from N. Wells, ANC3D Commissioner – Does the wind velocity have any impact on the MCE distance and the Shelter-in-Place zone?

B. Barber explained that atmospheric conditions such as wind velocity were taken into account during MCE calculations and will be measured daily using an on-site weather station during site activities.

Question from Mary Douglas, RAB Member – You mentioned that a total of 8 families could potentially be impacted by the MCE. One family in particular expressed strong concerns for their safety, resulting in

a supportive letter from the RAB. Can you provide an update on the status of Christine Dietrich's relocation appeal?

[Details of this issue were provided at the September 2012 RAB meeting, a follow-up RAB conference call, and the October 2012 Joint RAB/Community meeting.]

B. Barber replied that the final decision regarding C. Dietrich's relocation appeal is still pending, as of 3 hours ago. She emphasized two separate decisions made by USACE Headquarters:

- USACE Headquarters granted approval to proceed with the house demolition, initial low-probability work, and site preparations for high-probability excavation. They deemed that all planned engineering controls and protective protocols are acceptable for these activities as planned. They will not provide relocation during these early site cleanup activities. C. Dietrich's family was notified of the decision to proceed with house demolition.
- USACE Headquarters is currently finalizing their review of all high-probability engineering controls and protective protocols. They hope to make a final decision in a timely fashion, to determine whether relocation will be provided to C. Dietrich's family during high-probability excavations.

M. Pritzker noted that C. Dietrich shared her concerns with the RAB during the September 2012 RAB meeting and follow-up RAB conference call. At the October 2012 Joint RAB/Community meeting, she thanked the RAB for their support.

Question from Malcolm Pritzker, RAB Member – Who is responsible for making the final relocation appeal decision and at what level?

B. Barber explained that the final decision for relocation requests are made at USACE Headquarters. The real estate division, the senior executive staff, and the senior U.S. Army leadership are fully engaged in this decision process.

Question from M. Pritzker, RAB Member – Have they asked for additional information? In addition to actions already taken, is there something else that the RAB can do to expedite the decision process?

B. Barber clarified that USACE Headquarters personnel are currently finishing their technical review of the relocation appeal.

Question from George Vassiliou, RAB Member – Technically the RAB has until February 2012 to provide any additional assistance in this matter, because that is when high-probability excavation is scheduled to begin, correct?

B. Barber confirmed this.

Question from William Krebs, RAB Member – I recall that the relocation appeal has been already reviewed at multiple levels within USACE, with the final decision made by USACE Headquarters in Washington, DC. Within this process, where is the appeal currently under review?

B. Barber explained that the original request and the first appeal were both submitted to and rejected by the USACE Baltimore District. The final appeal was rejected by the USACE North Atlantic Division (which encompasses districts including Baltimore), and is now subject to the final administrative decision at USACE Headquarters.

Question from W. Krebs, RAB Member – So a decision was already made by the North Atlantic Division?

B. Barber confirmed this.

Question from K. Connell, RAB Member – Regarding the relocation appeal process time frame, what is the final date at which C. Dietrich’s family will be notified of the decision? If the family is not satisfied with this decision, is there an additional appeal process that they can pursue?

B. Barber explained that an estimated final decision date has not been provided by USACE Headquarters. The pending decision represents the final appeal process within USACE. If C. Dietrich’s family is not satisfied with the decision, their only other recourse is to pursue legal action for relocation reimbursement.

Question from M. Pritzker, RAB Member – Do you expect that the final decision date will be before high-probability excavations begin?

B. Barber confirmed this and explained that USACE Headquarters has not granted authorization to proceed with high-probability excavations. This authorization is pending completion of their review of all high-probability excavation controls and protocols, including whether relocation is warranted. High-probability excavations cannot begin until USACE Headquarters simultaneously issues their final relocation decision and the approval to proceed.

Question from unidentified woman, Audience Member – Have you incorporated input from pediatric toxicologists as consultants during your MCE assessment and decision-making process?

B. Barber replied that when the risk assessment was performed, the project team took all data associated with children and adult exposures into account during preparation of engineering controls and safety protocols for this project.

Question from unidentified woman, Audience Member – Were any toxicologists or medical doctors that understand the effects of chemicals on the human body involved in the assessment process?

D. Noble explained that this process included published health standards typically used by toxicology risk assessors. These toxicological standards were not necessarily generated by USACE but were generated by toxicologists and risk assessors. The project team uses the current available standards when preparing safety plans.

Question from unidentified woman, Audience Member – I wonder how careful the process was with respect to the effect on human life. Although standards are available, individuals can make mistakes. How much scrutiny was brought to bear on this quality of this MCE evaluation?

B. Barber clarified that a tremendous amount of scrutiny was involved.

Question from unidentified woman, Audience Member – Was any of this scrutiny conducted by medical professionals?

B. Barber explained that risk assessors from USACE and other U.S. Army agencies participated in the MCE evaluation process at all levels of document review.

D. Noble noted that the published toxicological standards were developed and reviewed with a high level of scrutiny. The project team chose a fairly conservative MCE, and one reason for this was to account for the perceived level of rigor that was used to develop the toxicological standards. The project team also chose the most conservative available standard for the primary chemical of concern (arsenic trichloride). At this point, there does not appear to be anything more that can be done from a toxicological standpoint.

Question from K. Slowinski, Audience Member – You mentioned that the MCE is based on finding a bottle of arsenic trichloride, which is considered the most conservative chemical of concern. Why aren’t you using an MCE for finding an explosively-configured arsine-filled round?

B. Barber explained that the project team does not anticipate recovery of additional munitions at the site. The primary safety concern at the site is chemical warfare materiel (CWM), and the current MCE of 1 L

of arsenic trichloride was selected based on CWM that the project team feels may be found during the remedial effort.

Question from K. Slowinski, Audience Member – How many items containing arsenic trichloride have you found at the site? For comparison, how many arsine-filled rounds items have been recovered at the site?

B. Barber replied that 1 glassware item containing arsenic trichloride and a total of 6 arsine-filled rounds were previously recovered to date.

Question from K. Slowinski, Audience Member – How much evidence do you have that additional arsine-filled rounds will not be recovered?

B. Barber emphasized that based on previous findings at the site, the project team does not expect to find any additional munitions.

D. Noble added that these conclusions are based on a probability assessment conducted for the 4825 Glenbrook Road site.

Comment from K. Slowinski, Audience Member – The previous findings, consisting of 6 arsine-filled rounds and 1 item containing arsenic trichloride, suggest otherwise.

D. Noble replied that the USACE Baltimore District Commander approved and signed off on the current MCE of 1 L of arsenic trichloride.

Question from K. Slowinski, Audience Member – If chemical agent is encountered in low-probability areas of the backyard, what is the process for switching to high-probability protocols?

B. Barber replied that in the unlikely event that CWM is recovered in the backyard, the site workers will immediately change into personal protective equipment (PPE), stop the chemical release, and back out of the excavation area. The project delivery team (PDT) including site supervisors and the Partners will meet to discuss the next step.

Question from K. Slowinski, Audience Member – How long will the process take for switching to high-probability protocols?

B. Barber replied that a week is the minimum time frame for discussing the findings, determining the next steps, and establishing high-probability excavation protocols.

S. Hirsh added that the likely time frame depends on findings at the site. If a protective metal structure is required, preparations for high-probability excavation may take several months.

D. Noble emphasized that this process could take as little as one week or more than one year, but regardless of the time frame, the appropriate path forward will be pursued based on all available site information.

Question from K. Slowinski, Audience Member – In light of the fact that the 4825 Glenbrook Road backyard is the most probable location of the burial pit, as determined by the 1999 EPA EPIC report, can I encourage you to investigate the backyard using high-probability protocols?

D. Noble clarified that decisions regarding low-probability and high-probability excavation areas at the site have already been made.

### **III. Community Items**

#### **A. RAB Discussion of the TAPP Report to the Restoration Advisory Board on the Work Plan for 4825 Glenbrook Road**

G. Beumel provided a brief summary of the TAPP Report which describes the contents and adequacy of the Work Plan for Remedial Design and Remedial Action at 4825 Glenbrook Road. This short report was prepared by Dr. Peter deFur, RAB TAPP Consultant, who reviewed the draft final work plan from a technical perspective and submitted comments to USACE. A copy of this document was previously provided to, and read by, the RAB members.

G. Beumel noted that the previous MCE of 171 feet (cited in the TAPP report) was recently expanded out to 194 feet, as described earlier during the meeting. In many cases, the Shelter-in-Place zone touched the front property line of nearby residential properties, and now touches the back property line instead.

Highlights of this report are as follows:

- P. deFur emphasizes that the MCE is based on the highly unlikely situation where all safety precautions fail simultaneously during a release of arsenic trichloride. P. deFur agreed with the calculations, which indicate that the quantitative risk of this occurring is 1 in 50 million. It is important to recognize this assumption, because under expected conditions the release of arsenic trichloride within the protective tent will be fully mitigated by the engineering controls put into place (such as filtration systems and stability of the protective tent).
- P. deFur believes that the filter system has been properly evaluated and will effectively capture all airborne contamination in the event of an arsenic trichloride release within the protective tent.
- P. deFur acknowledges that the possibility of encountering CWM during low-probability excavation cannot be quantified or ruled out. Based on a qualitative probability assessment, the chance of encountering CWM in these areas is considered seldom and unlikely but possible to occur.
- P. deFur believes that psychosocial stress, which can potentially affect residents, is mitigated by numerous USACE efforts to ensure the community remains well-informed of project activities.
- P. deFur's final comments mention a discrepancy in the calculated MCE distance in different locations within the document. (The correct recalculated MCE distance of 194 feet is now reflected throughout the work plan.)
- P. deFur examined the protective toxicological standards used to calculate the MCE and believes that the selected standards are appropriate. These standards are an important factor for establishing protective safety distances. In the event of an arsenic trichloride release to the outside environment without any functioning engineering controls, an individual standing 194 feet away from the release would only experience minor discomfort. Based on air modeling, the concentrations that the individual would experience are below that minor discomfort level. P. deFur is a toxicologist and an adjunct professor at Virginia Commonwealth University. [G. Beumel emphasized this point in response to toxicology-related questions asked by an audience member earlier during the meeting.]

Overall, P. deFur did not identify any issues associated with calculations or planned cleanup activities, engineering controls, and safety protocols. He asked a couple of questions that will presumably be accounted for in the Final Work Plan.

Question from W. Krebs, RAB Member – P. deFur's report mentions that sensitive populations are factored into the public exposure guidelines. Does this specifically refer to children as the lowest common denominator, or does this include other sensitive groups such as the elderly?

G. Beumel replied that these EPA exposure standards were calculated based on child exposure as the lowest common denominator, with a built-in uncertainty factor to provide additional protection. Most toxicological values are based on experimentation with adult animals, which are then applied to adult humans, and the built-in extra factor accounts for exposure of potentially-sensitive child populations

instead of healthy animals bred specifically for laboratory experiments. The resulting assumption is that a safe exposure dose is lower than the safe dose determined via experimentation.

Question from W. Krebs, RAB Member – C. Dietrich’s family, who submitted a relocation appeal to USACE, includes infants?

G. Beumel confirmed this.

N. Wells added that C. Dietrich’s children’s ages are 1 year old and 5 years old.

G. Beumel emphasized that the built-in uncertainty factor is incorporated into the exposure guideline calculations for the purpose of protecting children.

#### **IV. Open Discussion and Agenda Development**

##### **A. Next Meeting: Tuesday, January 8, 2013**

Upcoming meetings will be held in January and February 2013.

RAB meetings are not held in August or December.

##### **B. Future agenda topics**

- Groundwater Meeting Summary / Focus on the Groundwater Study Results and Future Plans (January 2013)
- Update on the ATSDR Health Consultation for 4825 Glenbrook Road (TBD)
- Johns Hopkins University Follow-on Spring Valley Health Study and Community Survey (TBD)
- Update on Obtaining Access to a 3900 Block of Fordham Road Residential Property

##### **C. Open Discussion**

Suggestion from M. Douglas, RAB Member – I am curious about the progress toward obtaining access to the 3700 block of Fordham Road residential property for geophysical investigation purposes.

[This suggestion was added to the list of future agenda topics.]

Comment from G. Beumel, Community Co-Chair – Regarding the follow-on Spring Valley health study, I received an e-mail from Johns Hopkins University requesting that I encourage RAB members to fill out the community survey. I assume they encountered low participation from the community, because I also received a note slipped in my door encouraging residents to respond to the survey, but I already submitted my responses.

[The follow-on Spring Valley health study is currently being conducted by Johns Hopkins University Bloomberg School of Public Health. A detailed overview was provided by JHU at the September 2011 RAB meeting, followed by status updates at the February/September 2012 RAB meetings.]

M. Pritzker and W. Krebs noted that they also received community survey notes slipped in their doors or delivered door-to-door, respectively.

M. Pritzker commented on the startling nature of the photograph on the back of the survey reminder.

An unidentified audience member (the same unidentified woman cited below) noted that she delivered the door-to-door reminders.

Question from (unidentified woman), Audience Member – Has anyone else here tonight besides myself been exposed to chemicals in the Spring Valley neighborhood? Has anyone else lived in Spring Valley as a child, and grown up and seen younger children die from illnesses in a radius around your home, and required intravenous (IV) medical treatment just to remain alive from month to month? These health

issues are not imaginary. They are a real problem, but you have to be present in the neighborhood for generations to see the effects.

M. Pritzker replied that the point of the JHU original health study and follow-up community survey is to collect this type of information from Spring Valley residents. His earlier comment simply focused on the rationale for and source of the apparent scare tactic photograph printed on the back of the survey reminder.

Comment from (unidentified woman), Audience Member – It is important for the community to realize that JHU did not mail the survey to each residential home. The fact that the community survey is conducted despite no direct contact with residents, and the fact that not all households were contacted about the survey, is evidence of a study that is set up for failure.

M. Pritzker acknowledged these comments and emphasized that he has no issues with the front invitation of the survey reminder. He was simply curious about the photograph source and the decision to include it.

Question from K. Connell, RAB Member – Did Johns Hopkins University print this photograph on the back of the reminder?

An unidentified audience member clarified that the community survey reminders containing the photograph were not prepared nor distributed by JHU.

Suggestion from G. Vassiliou, RAB Member – I suggest that the concerned audience member attend and participate in an upcoming RAB meeting where JHU will present a status update on the follow-on health study.

The unidentified audience member asked when JHU will present this information.

D. Noble replied that the next JHU status update has not been scheduled. The scheduled presentation date will be shared with the community as soon as it is selected.

Comment from K. Connell, RAB Member – Before the community survey response period ends, I would be interested to know if a less than stellar survey participation has implications for the quality of the results. If JHU has not obtained the vigorous community response that is necessary for this survey, should the RAB take action (such as sending an e-mail to the community) to share with residents the importance of participating in the survey? I do not see the advantage of community survey results that are neither representative nor robust.

Comment from L. Monsein, RAB Member – An unbiased survey would not include a scare tactic photograph on the back of the reminder. If JHU did send this reminder, a copy should be forwarded to the university president.

L. Monsein explained that the RAB is very familiar with concerns regarding the representative and robust nature of the community survey. These issues have been discussed at various RAB meetings during the past several years. Spending \$250,000 to study the health impacts on a transient population of 10,000 residents is analogous to throwing a quarter at the issue and expecting quality results. One shortcoming of this follow-on health study is that DC decided that it was worth wasting money that could have been better spent elsewhere.

L. Monsein noted that the study design does not incorporate random recruitment of participants. The canvassed survey area does not approximate the FUDS boundary or the FUDS areas that present the greatest danger to human health. As a result, this effort is completely worthless from a statistical standpoint, and essentially provided funding for graduate students to work on a project. At the beginning of the follow-on health study I asked whether the results will prove anything, whether the outcome is positive or negative or simply a strong indication, and JHU stated that nothing will be proven as this is just a survey. This follow-on health study effort should be described as a survey, not a study, because regardless of the number of participants there will be no statistical significance to the results.

John Wheeler, RAB Member, added that no one will be satisfied with the results upon completion of the community survey and the overall follow-on health study.

Comment from Tom Smith, RAB Member – Residents cannot be forced to fill out the survey if they don't want to participate. From the perspective of someone who helped obtain the existing but insufficient amount of funding, the visual design of the survey does not provide much incentive for residents to submit their responses. Some residents mentioned their lack of confidence that participating in the survey was worth their time. The community appears to be well-informed of the survey's availability. Also, I share M. Pritzker's views regarding the survey reminder photograph, which seemed unduly alarmist, and which was not necessarily helpful or an incentive for residents to fill out the survey.

M. Douglas added that the community survey was publicized in the *Northwest Current*.

T. Smith added that announcements were made on two Spring Valley listservs.

Wheeler added that the survey was also announced on the Tenleytown listserv.

Question from M. Douglas, RAB Member – What volume of survey responses has JHU obtained to date?

Jim Sweeney, DC Department of the Environment (DDOE), replied that as of three weeks ago JHU had received approximately 150 survey responses.

Question from M. Pritzker, RAB Member – Approximately 150 survey responses were received, out of how many residents who could potentially respond?

J. Sweeney replied that there are around 20,000 potential survey participants.

Question from M. Douglas, RAB Member – What areas are the survey responses collected from?

J. Sweeney replied that the community survey includes two zip codes: 20015 and 20016.

Comment from J. Wheeler, RAB Member – I am guessing that survey results from both zip codes will be compared to each other, but the Spring Valley FUDS is a subset of the 20016 zip code.

## **V. Public Comments**

No additional public comments or questions were shared.

G. Beumel thanked everyone for attending.

## **VI. Adjourn**

The meeting was adjourned at 8:04 PM.