



## Military Helicopter Flyover

In mid to late June, the Corps will be using a military helicopter from Dover Air Force Base to fly over the DuPont Chambers Works site to take new aerial photos of the site. These new aerial photos will aid in the Corps' cleanup efforts at the plant. George Bock, the U.S Army Corps Project Manager, anticipates that the flyover will last 10-20 minutes. The Corps is using a military helicopter for the flyover because it is a very convenient and cost effective way for the Corps to take aerial photographs. In light of the September 11 events, the Corps will be contacting local and state police in advance to inform them of the purpose and timing of the flyover. The Corps will also issue a press release to the local newspapers prior to the flyover to inform the public.



Military Helicopter

## Army Corps Begins Sampling in June

If you work at the DuPont Chambers Works facility, you may start noticing Army Corps contractors on site conducting sampling in the former Building 845 and F Parking Corral areas. The Army Corps of Engineers will begin sampling soil, concrete/building foundations, and groundwater this month at these two areas of concern in Operable Unit 1 (also referred to as OU-1). Fieldwork in this 7.5-acre area will take 5-8 weeks to complete. These sampling efforts are being conducted as part of a study called a Remedial Investigation (RI). The purpose of the RI is to define the nature and extent of Manhattan Engineer District-related radiological contamination. The Corps will be testing for Uranium-235, Uranium-238, and Thorium-234.

George Bock, the Army Corps project manager, had his technical support team and contractors on hand at the April 9 Restoration Advisory Board meeting. They demonstrated the field sampling equipment that will be used on site and the Level B protective clothing that will be worn by the field team.

Level B protective clothing is necessary to prevent field personnel from exposure to potential chemical contaminants. Army Corps work sites will be restricted to field personnel during the sampling effort.



Personnel in Level B Protection with Rad Instrumentation

The Environmental Protection Agency (EPA) and the New Jersey Department of Environmental Protection (NJDEP) have reviewed and approved the Corps' work plan for this study. A variety of field investigation methods are being used to characterize radiological contamination including:

- a gamma walkover survey,
- a geophysical survey,
- sampling of soil and concrete/building foundations,
- groundwater sampling.

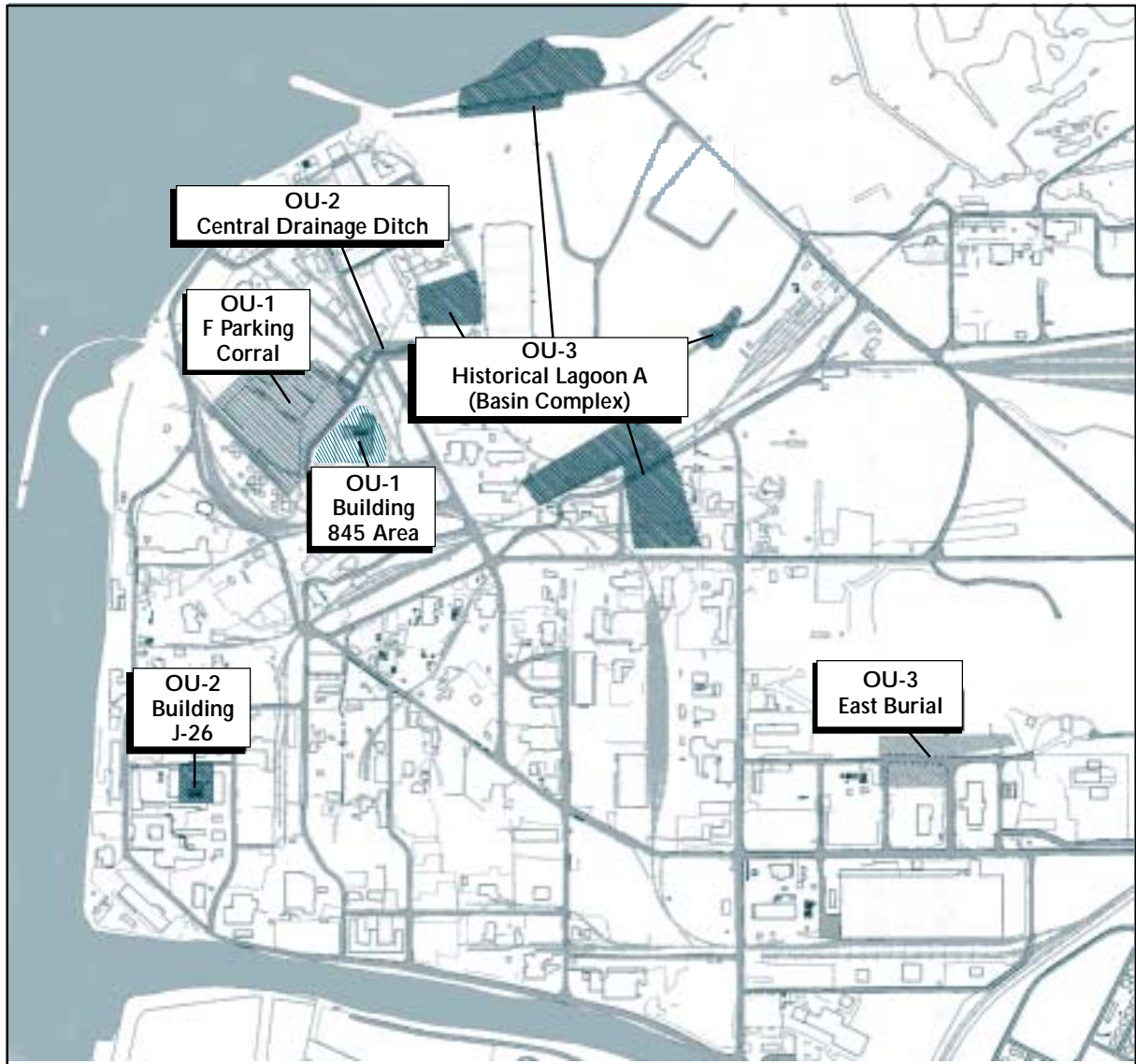
## Gamma Walkover Survey

The Corps has completed a gamma walkover survey of the former Building 845 area in OU-1. This survey helped the Corps identify sampling

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# Project Site Map.....



This GIS map shows the locations of the six Areas of Concern and the three Operable Units at the site.



**Operable Unit 1**  
F Parking Corral  
Building 845 Area



**Operable Unit 2**  
Building J-26  
Central Drainage Ditch



**Operable Unit 3**  
East Burial Area  
Historical Lagoon A (Basin Complex)

*(continued from page 1)*

locations and the horizontal extent of the study area. It also provided information on potential hazards (hot spots) for additional sampling. A gamma walkover survey will be conducted in the F Parking Corral area in mid June.

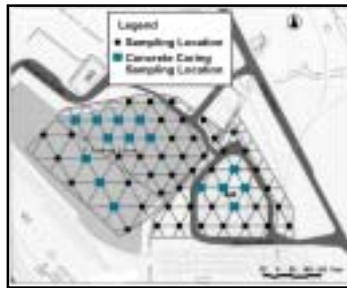
## Geophysical Survey

The Corps has also completed a geophysical survey of the former Building 845 area. Geophysical surveys are a cost-effective way to locate buried utilities, foundations, and other features. "This information is essential for the upcoming drilling/soil sampling efforts," says George Bock, U.S. Army Corps Project Manager. The geophysical survey for the F Parking Corral area will also be conducted in mid June.

## Subsurface Soil Sampling

The Corps will be taking soil samples in over 70 sampling locations throughout OU-1. Each sampling location is 50-100 feet apart. Concrete core sampling will also be a part of the subsurface sampling effort. The Corps anticipates sampling depths will be between 6 and 18 feet, however, they will sample at depths necessary to address any radiological contamination that may exist.

Corps contractors will use a geoprobe rig to collect the soil and initial groundwater samples and a drill rig to collect concrete samples.



OU-1 Sampling Grid

The field team will screen all soil samples using an onsite radiological lab and will send select samples to a full-scale offsite laboratory for analysis (see insert for photos of sampling equipment).

## Groundwater Sampling

The Corps will characterize the nature and extent of any possible groundwater contamination that has resulted from the uranium processing for the Manhattan Engineer District. Groundwater samples will initially be collected from the geoprobe boreholes. The Corps will then install monitoring wells in hot spots that are identified through the subsurface soil and geoprobe groundwater sampling efforts. These wells will allow the Corps to perform long-term monitoring.

The groundwater sampling data will be incorporated into a computerized groundwater model. This model will help the project team determine how groundwater moves on site.

## Project Schedule

### OU-1

The Corps will mobilize for the Remedial Investigation (RI) field work at Operable Unit 1 in

May 2002 and will complete field efforts at the former Building 845 and F Parking Corral areas by August 2002. From August through November 2002, the Corps will be working on the RI Report, updating the Geographic Information System, performing groundwater modeling runs, and reviewing the data. A draft RI report will be forwarded to the state (NJDEP), EPA and DuPont for review in the Winter 2002 prior to public release. Preliminary results of this field work will be presented at the September 10, 2002 RAB meeting. The RI report will be available for public review at the Salem Community College Library in Winter 2003.

### OU-2

Currently, the Corps is trying to secure funding for work in OU-2, which includes the Central Drainage Ditch and Building J-26 area. OU-2 is approximately 1.75 acres. If funding is secured, the Corps will begin developing the Work Plan for OU-2 in July 2002 while the field work is being completed for OU-1. The Corps expects to submit a work plan for review by the regulatory agencies and DuPont in Winter 2003. The work plan will be presented to the public at a RAB meeting in Spring 2003.

### OU-3

OU-3 is approximately 15.75 acres and includes the Historical Lagoon A area (now known as the Basin Complex) and the East Burial area. Using a similar work plan as OU-1 and OU-2, the Corps hopes to complete the work plan for OU-3 and submit it to the regulatory agencies and DuPont for review in Winter 2003. The work plan will be presented to the public at a RAB meeting in Summer 2003.

The Corps anticipates that field sampling will be completed at all three Operable Units by Winter 2003.

## What is "FUSRAP?"

The Department of Energy (DOE) created the Formerly Utilized Sites Remedial Action Program (FUSRAP). It addresses potential radiological contamination remaining at sites used by the Manhattan Engineer District (MED) and the Atomic Energy Commission (AEC) from the 1940s through the 1960s. FUSRAP was transferred from the DOE to the U.S. Army Corps of Engineers (the Corps) in 1998. There are currently 21 FUSRAP sites being addressed by the Corps.

## A Remarkable History at the DuPont Chambers Works Site

The DuPont Chambers Works site is noteworthy for its role in top-secret research related to the development of the atomic bomb for World War II.

The company was involved in processing uranium for the Manhattan Engineer District (MED) and the Atomic Energy Commission (AEC) in the 1940s.

The DuPont Chambers Works site was reviewed for radiological contamination in 1949 by the AEC, and in 1977 and 1983 by the Department of Energy (DOE) under the Formerly Utilized Sites Remedial Action Program (FUSRAP). The FUSRAP program was established to address radiological contamination from MED and AEC activities.

The FUSRAP program was transferred to the U.S. Army Corps of Engineers (the Corps) in 1998. The Corps and Dupont executed a General Release Agreement in October 1998 to conduct FUSRAP activities at the site. The Corps will be doing one final federal review of the site using today's safety standards and technology.

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### Information Repository

Salem Community College Library  
Donaghay Hall  
Phone: (856) 351-2653  
Hours: M, Th, F: 8:30 a.m. to 4:30 p.m.  
T, W: 8:30 a.m. to 8:00 p.m.  
Closed on weekends

### Project Website

[www.nap.usace.army.mil/fusrap](http://www.nap.usace.army.mil/fusrap)

For More Information



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### OU-1 Site History

**Building 845** – (also referred to as Miscellaneous Stores) was a four-story, 50,000-square foot steel frame building previously used for MED activities.



*Building 845*

DOE performed a preliminary study of the building and completed interior surface decontamination of the building in 1996. Their report concluded that exposure from the residual radiological contamination in the building was substantially below DOE's protection guidelines of 100 mrems/year. The report indicated a maximum of 9 mrem/year of exposure for DuPont employees and concluded that the residual of radioactive material remaining in the building did not pose a potential threat of future exposure.

In 1998, the Corps removed 9 drums of mixed waste and approximately 40 bags of personal protective equipment that was stored on the first floor of the building from DOE's efforts.



*Steel Pile from Building 845*

DuPont completed demolition of the building in 1999 and the Army Corps disposed of the structural steel from the building in a licensed disposal facility in Texas. DOE detected low-level uranium contamination in the soils surrounding the former building.

**F Parking Corral** – This 150-foot by 175-foot area is a paved parking lot. This was the former site of demolished buildings used for MED activities. In a preliminary study, DOE detected low-level uranium contamination in the soils.

### OU-1 Subsurface Sampling Equipment

Corps contractors will use a geoprobe rig to collect the soil and initial groundwater samples and a drill rig to collect concrete samples. The field team will screen all soil samples using an onsite radiological lab.



*Geoprobe Rig*



*Soil Screening Equipment*

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### Corps Seeks Public Input

#### Restoration Advisory Board is Formed

Do you want to get involved and learn more about the Corps' activities at the DuPont Chambers Works site? If so, the Restoration Advisory Board (RAB) is your forum.

#### The mission of the RAB

is to identify problems, communicate to the community, provide local input on the decision making process, and provide accurate information to the public.

The Corps established a RAB in March 2000. It consists of representatives from the community, EPA, New Jersey Department of Environmental Protection (NJDEP), and DuPont.

The group meets on a regular basis to discuss the Corps' restoration efforts at the DuPont facility.

RAB meetings provide an opportunity for community input and are open to the general public.

Meetings are advertised in *Today's Sunbeam*. All interested parties are encouraged to attend.

The next meeting is scheduled for Tuesday, September 10, 2002 from 7 p.m. to 9 p.m. at the Hampton Inn in Pennsville, NJ. If you are interested in receiving more information about the RAB, please return the reply card below.

# RAB Restoration Advisory Board members

**Janet Agnew**  
Community

**Mel Beals**  
Pennsville Township

**Robert Bender**  
Community

**George Bock**  
USACE, Govt. Co-Chair

**John Clemente, Jr.**  
Community

**H. Glen Donelson**  
Pennsville School Dist.

**Frank Faranca**  
NJ DEP

**Francis Faunt**  
Community Co-Chair

**Armando Fernandez**  
Community

**James Kates**  
Carneys Point Rep

**Mayor Paul Morris**  
Borough of Penns Grove

**Andrew Park**  
EPA, Region II

**Stephen Rogers**  
DuPont Chambers works

**James Warner**  
Salem County Rep.



Field Equipment Presentation at April 9, 2002 RAB Meeting

### Reply Card

#### U.S. Army Corps of Engineers, Philadelphia District DuPont Chambers Works FUSRAP Project

- I'd like to receive more information about joining the RAB.
- I'd like to receive RAB meeting summaries and notices.
- I'd like to be taken off the mailing list.

#### Topics I'd like to see in future issues of *The Bulletin Newsletter*:

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Name \_\_\_\_\_  
 Street Address \_\_\_\_\_  
 City \_\_\_\_\_ State \_\_\_\_\_ Zip Code \_\_\_\_\_  
 Affiliation \_\_\_\_\_ Phone \_\_\_\_\_