The Bulletin
DuPont Chambers Works
FUSRAP Site
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US Army Corps of Engineers
Philadelphia District

Army Corps Gears Up

Field sampling begins Spring 2002

You may be wondering what the Army Corps of Engineers (the Corps) has been up to at DuPont Chambers Works. Since the first project newsletter in September 1999, the Corps has been working on a site history investigation, a Geographic Information System (GIS) database, and establishing work plans for upcoming field sampling at the plant.

Screen shot of GIS database system showing field data, an aerial photo and a sampling grid.

Reconstructing the Past

Imagine 133 feet of historical documents to review. That's what the Corps has been doing over the last 6 months to determine which areas of the DuPont site require further investigation.

No new sites have been identified. The most significant findings from this effort so far relate to the actual size and location of the six Areas of Concern (AOCs) that were originally identified by Department of Energy. The Corps reviewed historical aerial photos and incorporated the information into the newly developed Geographic Information System. "Data from our review shows that the size of Historical Lagoon A (basin complex) is larger and in a slightly different location than we once thought," said George Bock, Army Corps project manager.

The initial site history investigation is complete. However, the Corps is continuing to gather background information on the 6 Areas of Concern. The Corps encourages anyone who has information on former MED activities at the DuPont site to participate in Restoration Advisory Board meetings. The site history investigation was discussed at the Restoration Advisory Board meeting on October 23. (See insert for details about the next meeting.)

Army Corps Goes High Tech

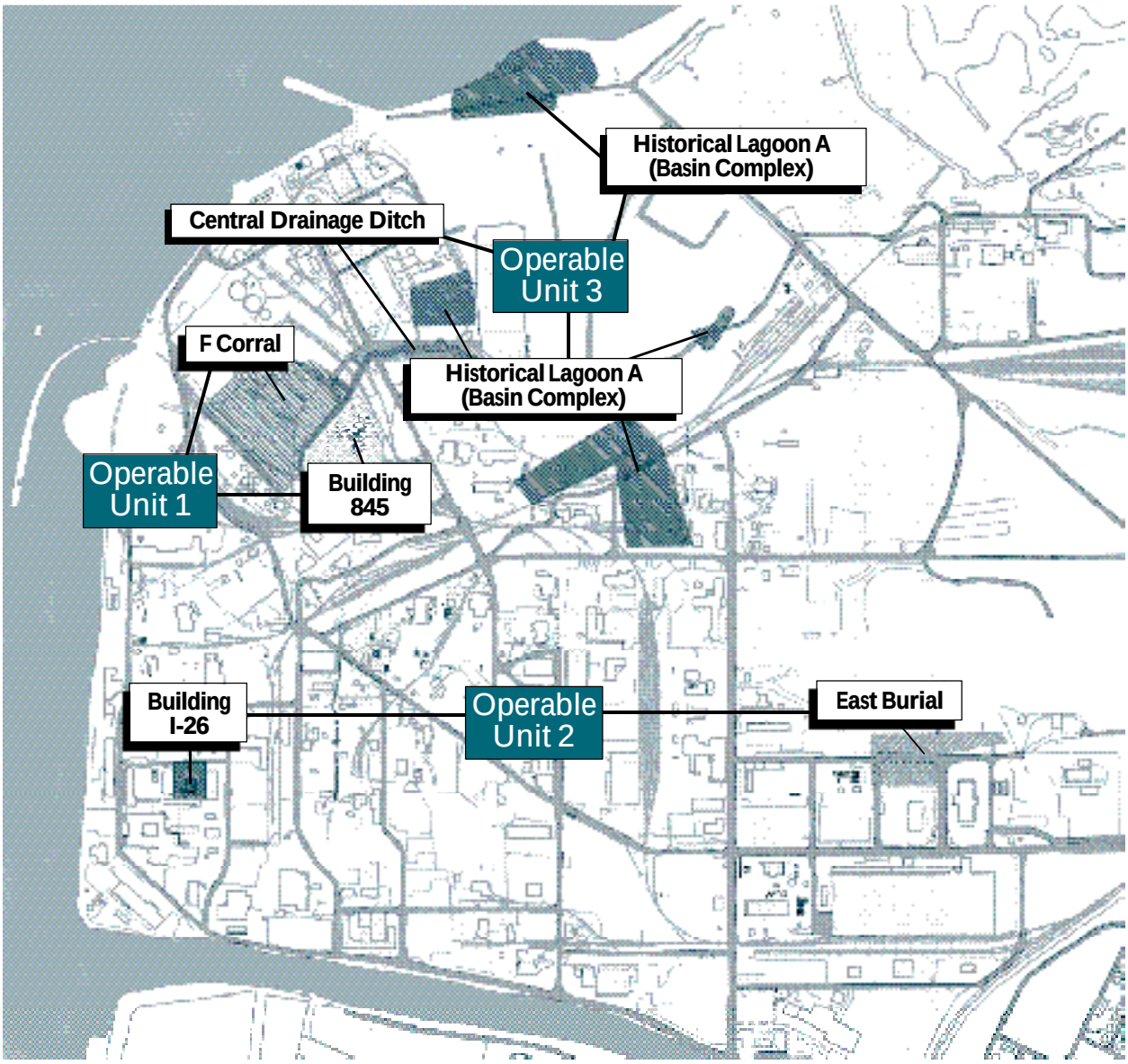
At the outset, one of the Corps' first considerations was what to do with all this historical information. The Corps' answer: a new GIS database that stores multiple layers of information about the DuPont site such as historical aerial photos, site maps, survey information and site data. It enables the project team to determine the best sampling locations and evaluate data.

What is "FUSRAP?"

The Department of Energy (DOE) created the Formerly Utilized Sites Remedial Action Program (FUSRAP). It addresses potential radiological con-tamination 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.

AOCs

Areas of Concern Update



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

Corps Divides AOCs into Operable Units

Six Areas of Concern (AOCs), which contain residual radio active contamination, were identified by the Department of Energy in 1983. In order to make the task of site investigation more manageable, the Corps has divided these AOCs into three Operable Units. Work plans are being developed for each Operable Unit. Field sampling will begin in Spring 2002. The work plan for Operable Unit 1 will be presented at the April 9, 2002 Restoration Advisory Board (RAB) meeting (see insert for details).

Sources of Radiation Found in Everyday Life

There are a number of sources of radiation both natural and manmade.

An example of a natural source is Potassium 40, which the average person receives about 39 mrem / year from bananas or salt. Radon is another natural source that can be found in granite. Many of the old buildings and homes throughout the U.S. have high levels of Radon.

REM:
The level of exposure. The formula used is Radiation Absorbed Dose times a quality factor (based on type of radiation - Alpha, Beta, Gamma). Exposure is usually measured in millirems (mrems).

Manmade sources of radiation include: medical uses such as X-ray machines or nuclear medicine; or consumer products such as TV's, cell phones, smoke detectors, and cigarettes. A typical person in the U.S. receives 360 mrem / year of radiation from a variety of sources including radon, food, terrestrial, cosmic, consumer products, medical (assumption is one X-ray per year), and from other sources including nuclear power. (see pie chart for percentages)

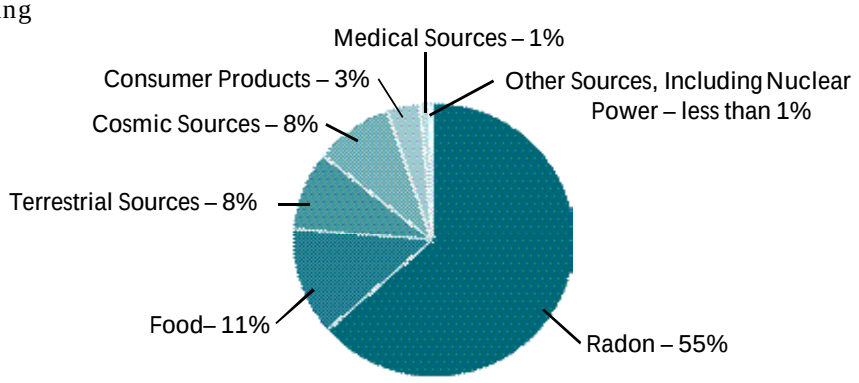
The dose limits for occupational exposure based on federal guidance is 5,000 mrems / year. The Corps' practices are much more conservative with an effort to keep exposure levels lower than 100 mrems / year.

Corps Launches New Project Web Site

The U.S. Army Corps of Engineers has launched a project Web site for the DuPont Chambers Works FUSRAP project (www.nap.usace.army.mil / fusrap). The site is updated continually with new project information. This website contains information about the following:

- FUSRAP program
- Project history
- Public meetings
- Restoration Advisory Board (RAB) Meetings & Members
- News releases and news articles
- Project newsletters
- Project reports
- FUSRAP links
- Project contact information.

Radiation Sources



Corps Seeks Public Input

Restoration Advisory Board is Formed

Do you want to get involved and learn more about the Corps' activites 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, April 9, 2002 from 7 p.m. to 9 p.m. at the Hampton Inn in Pennsville, NJ. If you are interested in receiving RAB meeting information, join our mailing list by returning the reply card below.

RAB members

Restoration Advisory Board

Janet Agnew
Community

Robert Bender
Community

George Bock
USACE, Govt. Co-Chair

Glenn W. Braswell
Salem County Rep.

John Clemente, Jr.
Community

Catherine Dare
Community

H. Glen Donelson
Pennsville School Dist.

Frank Faranca
NJ DEP

Francis Faunt
Community Co-Chair

Armando Fernandez
Community

Douglass Fogg
Community

Jim Gant
Community

Ron Giordano
Community

Mayor Robert E. Jack
Pennsville Township

James Kates
Carneys Point Rep

Charles Kohler
Community

Mayor Paul Morris
Borough of Penns Grove

Andrew Park
EPA, Region II

Steve Rogers
DuPont Chambers Works

Gary Rohn
USACE, Govt. Co-Chair

Reply Card

U.S. Army Corps of Engineers, Philadelphia District

DuPont Chambers Works FUSRAP Project

☐ I'd like to continue receiving *The Bulletin Newsletter.*

☐ 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:*

Name _____

Street Address _____

City _____ State _____ Zip Code _____

Affiliation _____ Phone _____

Operable Unit 1

F Corral – an area about 150 ft. x 175 ft. under a paved parking lot that was built over the site of a demolished building. Initial testing indicates that uranium is present in the area.

Building 845 – a four-story 50,000 sq. ft. building that was demolished and disposed of in 1999. Subsurface uranium contamination exists in an area approximately 130 ft. by 150 ft. under the former building and in a 330 ft. wooden drainage trough leading to the Central Drainage Ditch.

Confirmatory investigations are required in both areas. Currently, the Corps is developing a work plan for soil and groundwater sampling at Operable Unit 1 (OU1). The purpose of the sampling effort is to identify any areas that may contain residual radioactive material.

The work plan will outline the methods and timeline for the field work. It should be completed this fall, with final regulatory approval expected by the end of 2001. Field work is scheduled to begin in early 2002.

Operable Unit 2

Building J-26 – built on the former building J-16 site. The DOE assessment concluded that the site appears to have sufficiently low levels of radioactive contamination and may be releasable for unrestricted use.

East Burial Area – a disposal area approximately 350' x 85'. Uranium from MED project and carbon-14 not related to the MED project are present. Other unknown mixed wastes may also be present.

Confirmatory investigations are required in both areas. Field work should begin by late spring 2002.

Operable Unit 3

Central Drainage Ditch – a drainage area located between the F Corral and Building 845. DuPont completed a cleanup of this site in the spring of 1997. Radioactive contamination appeared to be low enough for the site to be released for unrestricted use. DOE's Oak Ridge National Laboratory conducted an independent study to verify the findings in December 1998. DOE's report from this study concluded that the area met DOE's cleanup objectives.

Historical Lagoon A – presently known as the basin complex and is the site of a former wastewater sludge lagoon. It is an old dumping pond, not to be confused with the current Lagoon A, that also appears to have sufficiently low levels of radioactive contamination.

Confirmation sampling is required. Field work should begin in the area by summer 2002.

No Immediate Risk in Area

The major contaminant previously found in both soil and water samples is uranium. However, the contamination is at very low levels and does not present any immediate threat to human health or the environment.

The DuPont Chambers Works FUSRAP Site Bulletin

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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 activites at the site. The Corps will be doing one final federal review of the site using today's safety standards and technology.

For More Information

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Closed on weekends

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