

**PATUXENT WILDLIFE RESEARCH CENTER  
Laurel, Maryland**

**MD-267  
Prince George's County**

1936	PWRC was established.
1963-1986	Chemical Leachfield used for disposal of liquid wastes.
mid-1970	Slit Trench used for disposal of chemical wastes.
1950s-1970s	Old Dump used for disposal of construction debris, furniture and household waste.
1986	Disposal of chemical wastes into Leachfield discontinued.
1988	R & R International conducted investigation.
1989-1990	R & R conducted <i>Preliminary Assessment and Site Investigation</i> of the entire site.
1991	<i>Site Investigation Report and Addendum</i> prepared.
1992	<i>Expanded Site Investigation</i> conducted.
1993	Additional 8,100 acres were added to site.
1995	<i>Supplemental Expanded Site Investigation</i> report completed.
1997	USFWS notified MDE of its intention to close the sites under a non-CERCLA action.

**Site Location**

The Patuxent Wildlife Research Center (PWRC) is located in the Patuxent River Valley, just south of the Patuxent River near Laurel, Maryland. The site occupies approximately 12,800 acres midway between Washington, D.C. and Baltimore, Maryland. PWRC land consists of fields, woodlands, man-made ponds, marshes and swamps.

**Site History**

PWRC was established in 1936 under the Bureau of Biological Survey, now the U.S. Fish and Wildlife Service (USFWS) as America's first national wildlife experiment station. PWRC's mission has been to help protect and conserve the nation's wildlife resources through research on critical environmental problems and issues.

Three areas of concern were identified at the PWRC as a result of reported chemical disposal practices. The areas of concern consisted of the Chemical Leachfield, the Slit Trench, and the Old Dump. Between 1963 and February 1986 liquid wastes from Stickel Laboratory, which provided analytical support to the PWRC, were disposed of in a 50-foot by 100-foot Chemical Leachfield. The wastes were poured into laboratory sinks, conveyed through a sewer pipe to a concrete distribution box on the north-west side of the leachfield, and transferred from the distribution box to the leachfield through a series of seven distribution drain pipes. On-site disposal of chemical wastes into the leachfield was discontinued in February 1986.

The Slit Trench was reportedly a 4 feet by 20 feet rectangular excavation, 2 to 4 feet deep, about 55 feet southwest of the Old Dump. It was purportedly used for about 2 years in the mid 1970s for disposal of small volumes of chemical wastes (e.g., pesticide standards mixed in food oils).

The Old Dump was situated on 0.56 acres of land and reportedly was used between the 1950s and 1970s for disposal of construction debris, old furniture, and household waste. Interviews with former employees indicate it may have been used as a chemical disposal area, although one employee disputed the allegation that chemicals were buried at the Old Dump. He stated that in the 1950s and 1960s waste chemicals, batteries and drums were disposed of at the Old Agricultural Research Center Dump, rather than at PWRC.

Initially the site consisted of 4,700 acres. In 1993, an additional 8,100 acres were transferred from Fort George G. Meade under the Base Realignment and Closure legislation.

**Environmental Investigations**

Three significant phases of site investigation activity have taken place at the PWRC between 1986 and 1995. The investigations and evaluations were conducted as part of the site evaluation process defined by the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA).

In 1988, R & R International Inc. (R & R) conducted an investigation that generally focused on the Chemical Leachfield area. However, based on the results of the initial investigation, R & R conducted a *Preliminary Assessment* (PA) and a *Site Investigation* (SI) of the site, including the Old Dump and Slit

Trench, in 1989 and 1990, respectively. The purposes of the PA and SI were to determine if the site required additional investigation in accordance with CERCLA requirements and to determine if the site should be placed on the National Priorities List (NPL). The PA and SI concluded that sufficient evidence was available to proceed with ranking the site using the Hazard Ranking System (HRS) developed by the U.S. Environmental Protection Agency (EPA).

In regard to the Old Dump and Slit Trench, the PA and SI phase included the installation of monitoring wells, background wells and one well between the Old Dump and Slit Trench; the excavation of one test pit near the Slit Trench; and the collection of subsurface soil and groundwater samples. The results of the PA and SI were presented in the *Site Investigation Report* of February 1991, and a subsequent addendum in April 1991. Groundwater quality data indicated that elevated concentrations of aluminum, iron, lead, manganese, nickel and vanadium existed in monitoring well MW-5. Metal constituents were observed in monitoring well MW-2 but none exceeded background levels.

An *Expanded Site Investigation* (ESI) was conducted in 1992. The ESI included the collection of one surficial background sample, four surficial soil samples from depths of 0 to 1 foot at the Old Dump, and one surficial composite sample at the Slit Trench. The composite sample was collected near the reported estimated middle of the Slit Trench. The sample contained metals at concentrations slightly above background, plus endrin and Aroclor-1254. No groundwater samples were collected during this investigation.

The ESI also included the collection of four surficial soil samples from depths of 0 to 1 foot at the Old Dump and a geophysical survey of the area. This information was collected to determine the character of surficial soils and approximate limit of waste. The area of waste for the Old Dump was estimated to be about 0.75 acres. The soil samples contained metals generally around background levels, with one sample slightly exceeding background levels for cadmium, chromium and lead and another sample located in an area for drum storage exhibiting the highest concentration for lead and some semi-volatile organic compounds (benzo(a)pyrene, fluoranthene, phenathrene, and pyrene).

Following completion of the HRS, EPA identified several data deficiencies, which required the completion of a *Supplemental Expanded Site Investigation* report (SESI). The report was completed in August 1995. Based on a review of the laboratory analysis and subsurface observations made at the site, the SESI determined that the reports of dumping in the Slit Trench and reports of disposal of hazardous materials in the Old Dump could not be substantiated. Furthermore, it concluded that there were no significant migration pathways to the site groundwater, with the exception of surface water percolation. The report concluded that the Slit Trench and Old Dump were not a threat to human health or to the environment due to the low concentrations of contamination and the distance from the site to surrounding potable water wells and recreational surface waters. It was also concluded that the combined HRS score for the site, including the Chemical Leachfield was well below the score that would warrant the site being placed on the NPL. Therefore, site remediation and closure would be performed in accordance with Maryland solid waste regulations.

A small sampling program was conducted in March 1995 to characterize the sediment/sludge in the headbox associated with the Chemical Leachfield and a sample was collected for chemical analysis. The waste sludge was found to be Resource Conservation and Recovery Act hazardous waste due to the concentration of lead.

In June 1997, the USFWS notified the Maryland Department of the Environment (MDE) of its intention to close the Old Dump, the Slit Trench and the Chemical Leachfield sites under a non-CERCLA action since EPA had not placed the PWRC on the NPL.

### **Current Status**

This site is on the State Master List that identifies potential hazardous waste sites in Maryland. The Master List includes sites currently identified by EPA's Comprehensive Environmental Response Compensation and Liability Information System. EPA has given the site a designation of No Further Remedial Action Planned (NFRAP). The designation of NFRAP by EPA does not mean that MDE has reached the same conclusion concerning further investigation at the site. The information contained in the fact sheet presents a summary of past investigations and site conditions currently known to MDE.

**Facility Contact**

Arthur O'Connell, Chief      Site and Brownfields Assessments/State Superfund      410-537-3493  
Division  
Maryland Department of the Environment