Delaware Toxics Reduction Program Annual Report

2007

A report by
the Delaware River Basin Commission
in cooperation with
US Environmental Protection Agency Regions 2 and 3
Pennsylvania Department of Environmental Protection
New Jersey Department of Environmental Protection
Delaware Department of Natural Resources and Environmental Control

Delaware River Basin Commission
DELAWARE · NEW JERSEY
PENNSYLVANIA · NEW YORK
UNITED STATES OF AMERICA

The Delaware River Basin Commission

was created in 1961 when President Kennedy and the governors of Delaware, New Jersey, Pennsylvania, and New York signed concurrent compact legislation into law creating a regional body with the regulatory authority to oversee a unified approach to managing a river system without regard to political boundaries. The Delaware River is the longest undammed river east of the Mississippi, extending 330 miles from the confluence of its East and West branches at Hancock, New York, to the mouth of the Delaware Bay. The river is fed by 216 tributaries, including the Schuylkill and Lehigh Rivers in Pennsylvania. In all, the Delaware River Basin contains 13,539 square miles, draining parts of Pennsylvania (6,422 square miles); New Jersey (2,969 square miles); New York (2,362 square miles); and Delaware (1,004 square miles). Also included in the total is the 782 square-mile Delaware Bay.

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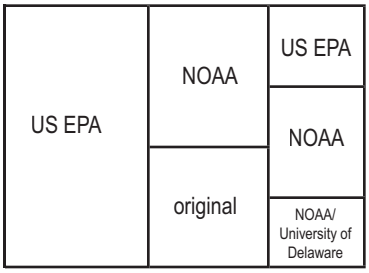

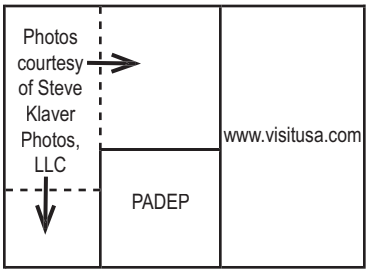

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1. EXECUTIVE SUMMARY

The Delaware River Toxics Reduction Program (DelTRiP) was created in 2004 as a joint effort between the Delaware River Basin Commission (DRBC or Commission), the United States Environmental Protection Agency (EPA), the Pennsylvania Department of Environmental Protection (PADEP), the New Jersey Department of Environmental Protection (NJDEP), and the Delaware Department of Natural Resources and Environmental Control (DNREC). The goal of the DelTRiP is to identify, prioritize, track, and report the status of sites within the Basin that significantly contribute or have the potential to significantly contribute toxic loadings to the Delaware River Basin.

This second annual report of the DelTRiP focuses on sites identified as containing polychlorinated biphenyls (PCBs). DelTRiP staff conducted file reviews to obtain historical information and current remediation status for sites submitted by the State and Federal agencies in the 2006 DelTRiP report.

There were 263 sites identified with PCBs in the 2006 report. Comprehensive research revealed that many of the sites submitted by the State and Federal agencies were either located out of the Delaware River basin, erroneously flagged as containing PCBs, or had reportedly completed remediation years prior. Additionally, 59 site files were unable to be located within their respective State agencies. (For further information, see pages 12-13 and table 6).

The DelTRiP was able to identify 53 sites with ongoing PCB remediation. The identified sites have not been prioritized for this report, however the prioritization scheme may be implemented in future volumes. Federal and State agencies are expected to initiate, revise, and continue actions taken at the prioritized sites to remediate the impacts from these sites. Therefore, the 2008 DelTRiP report will summarize results of remediation and impacts to the basin for 112 sites (53 individual sites with ongoing PCB remediation and 59 sites with currently unavailable files), in addition to any new sites presented subsequent to the publication of this report. The sites identified herein that are located out of the basin boundaries will not be referenced in future reports. The sites referenced in this 2007 DelTRiP report as having completed PCB remediation will be maintained in future reports as an inventory. If information is presented in the future that additional remediation is undertaken at any of these sites by the lead agency, the site will be reincorporated into the active DelTRiP registry.

Major Steps to DelTRiP Implementation

Step 1: DelTRiP will identify contaminated sites in each State within the Basin using USEPA and State listings, including but not limited to Superfund listings (NPL and CERCLIS) and State brownfield and hazardous waste sites. Other listings, such as those developed by fire departments or building inspectors, or through municipal wastewater treatment plant trackdown programs also may be used to identify sites.

Step 2: Sites identified from "other listings" will be referred to the appropriate Federal/State agencies for action.

Step 3: DRBC will incorporate identified sites into GIS.

Step 4: State and Federal agencies will quantify the PCB loads being released or that have the potential to be released from contaminated sites identified above.

Step 5: DelTRiP will develop criteria to rank each site to determine its significance and to decide if it is to be prioritized for tracking and reporting.

Step 6: DelTRiP will prioritize the contaminated sites that significantly contribute, or have the potential to significantly contribute to the PCB load to the Basin.

Step 7: DRBC will assemble status information for each prioritized site and track the remediation progress and other actions taken to reduce the releases to the Basin from the contaminated waste sites.

Step 8: DRBC will publish an annual report detailing measurable reductions reported by the lead agencies and the status of implementation activities at each prioritized contaminated site, highlighting key milestones and accomplishments.

2. Delaware Toxics Reduction Program 2007 Annual Report

Introduction

The Delaware River Toxics Reduction Program (DelTRiP) was created in 2004 as a joint effort between the Delaware River Basin Commission, the United States Environmental Protection Agency, the Pennsylvania Department of Environmental Protection, the New Jersey Department of Environmental Protection, and the Delaware Department of Natural Resources and Environmental Control. The New York State Department of Environmental Conservation (NYSDEC) has joined the DelTRiP Committee and next year's report will identify sites, if any, contributing within its jurisdiction. The goal of the DelTRiP is to identify, prioritize, track, and report the status of sites within the Basin that significantly contribute or have the potential to significantly contribute toxic loadings to the Delaware River Basin, and is funded by a grant from the EPA.

DelTRiP also supports an objective of the Delaware Estuary Program (DELEP) implementation of the Comprehensive Conservation and Management Plan (CCMP), which is to develop and implement a Total Maximum Daily Load (TMDL) for PCBs identified under Clean Water Act Section 303(d).

The DelTRiP is a multi-step program to identify and track hazardous waste sites within the Delaware River Basin and to identify a subset of these sites that significantly contribute to the impairments within the Basin. As noted at right, the first steps include the identification, location, and compilation of the sites within the Basin using information available in Federal and State systems. Following these steps, the DelTRiP will determine those sites that have the potential to have a significant impact on the waters of the Basin, especially with regard to impairment designation under Section 303(d) of the Clean Water Act. After prioritization, Federal and State agencies are expected to initiate, revise, and/or continue actions taken at the prioritized sites to remediate the impacts from these sites. The final step is to track and report on the status of the sites identified in the prior year's annual report, emphasizing measurable reductions in loadings to the Basin from the prioritized sites.

The DelTRiP currently focuses on sites identified with PCBs as a contaminant of concern. PCBs were chosen in order to support the DELEP objective to implement a TMDL for PCBs in the Delaware Estuary.

Major Steps to DelTRiP Implementation

Step 1: DelTRiP will identify contaminated sites in each State within the Basin using USEPA and State listings, including but not limited to Superfund listings (NPL and CERCLIS) and State brownfield and hazardous waste sites. Other listings, such as those developed by fire departments or building inspectors, or through municipal wastewater treatment plant trackdown programs also may be used to identify sites.

Step 2: Sites identified from "other listings" will be referred to the appropriate Federal/State agencies for action.

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Step 4: State and Federal agencies will quantify the PCB loads being released or that have the potential to be released from contaminated sites identified above.

Step 5: DelTRiP will develop criteria to rank each site to determine its significance and to decide if it is to be prioritized for tracking and reporting.

Step 6: DelTRiP will prioritize the contaminated sites that significantly contribute, or have the potential to significantly contribute to the PCB load to the Basin.

Step 7: DRBC will assemble status information for each prioritized site and track the remediation progress and other actions taken to reduce the releases to the Basin from the contaminated waste sites.

Step 8: DRBC will publish an annual report detailing measurable reductions reported by the lead agencies and the status of implementation activities at each prioritized contaminated site, highlighting key milestones and accomplishments.

Development of the Total Maximum Daily Load

The DELEP CCMP, approved in September 1996, identified the reduction of toxic substances to the Estuary as one of its important action plans. Since the CCMP approval, the States of New Jersey, Delaware, and Pennsylvania (States) have designated the Delaware River from Trenton to the mouth of the Delaware Bay (Delaware Estuary) as impaired due to PCBs in their biennial Section 303(d) submittals to the EPA. The impairment is due to unacceptable PCB levels in the fish. PCBs, which have been classified by the EPA as a probable human carcinogen, are present in the waters of the Delaware Estuary at concentrations 1,000 times higher than the water quality criteria. The Commission was designated in 2000 as the lead agency to develop the technical basis for the PCB Total Maximum Daily Loads (TMDL). EPA Regions 2 & 3 and the States worked cooperatively with the

Commission to develop PCB TMDLs for the tidal portion of the Delaware River, the implementation of which is essential for removing the fish consumption advisories in the Delaware Estuary.

As part of the TMDL investigation, the DRBC, EPA Regions 2 and 3 and the States estimated the PCB loads from contaminated sites under their respective jurisdictions. The EPA and States then developed ranking criteria to categorize a subset of sites likely to contribute a PCB load to the Delaware Estuary. Subsequently, they developed load estimates (using the Universal Soil Loss Equation) for that subset based on site PCB measurements. Only sites located between the tributary monitoring locations and mainstem Delaware were considered.

Implementation Advisory Committee

A staged approach to establishing the PCB TMDLs, first discussed in Spring 2002, is being used to meet legal and administrative requirements. The Stage I PCB TMDL was approved on December 15, 2003 by the EPA and the Stage II PCB TMDL work is currently scheduled for completion in December 2008. In October 2003, the Commission established an Implementation Advisory Committee (IAC) to assist in the development of early actions to reduce loadings of PCBs to the Estuary. IAC members include representatives from the States of New Jersey, Delaware and Pennsylvania, the EPA, industry, municipal governments, wastewater and water treatment authorities, and environmental groups. The IAC has been working to determine the actions that can be taken immediately to begin mitigating sources of PCBs. The IAC has drafted *A Report and Recommendations of the Delaware River Basin Commission's Total Maximum Daily Load Implementation Advisory Committee*. The draft report includes a Priority Action Plan to identify, prioritize, remediate and track progress in cleaning contaminated sites through the DelTRiP.

Pollutant Minimization Plan

Since the Stage I PCB TMDL approval, the Commission, working with the IAC, has taken the lead to further refine the PCB loading estimates toward the development of the Stage II PCB TMDL and to seek early reduction in PCB loadings to the Delaware River. One of these efforts includes the development of an administrative rule and guidance to require PCB pollutant minimization plans from various NPDES dischargers to the Estuary. On May 18, 2005, the Delaware River Basin Commission approved Resolution No. 2005-9 which amended the *Water Quality Regulations and Water Code* by adding Section 4.30.9, which establishes pollutant minimization plan (PMP) requirements for point and non-point discharges following the issuance of a TMDL or assimilative capacity determination. The PMP rule specifically requires designated dischargers, with confirmed PCB congeners present in their discharges in Zones 2-5 of the Delaware River, to develop and implement PCB reduction programs in accordance with Section 4.30.9 of the Commission's *Water Quality Regulations*. The PMP approach can also be used for contaminated sites. Current drafts of the IAC Priority Action Plan provide the potential to use the PMP approach at contaminated sites where the DRBC determines that it would be appropriate.

In addition to establishing the PMP requirements, the Commission also announced its cumulative goal of reducing PCBs discharged to the Estuary by 50% from all sources within the next 5 years. The 50% goal is not a requirement for individual discharger plans, but is viewed by the Commission as a target that will emphasize the need to make substantial reductions in the PCB sources to the Estuary. Resolution 2005-9 also directs the Executive Director to establish, in consultation with the IAC, a peer review advisory committee to evaluate PMPs submitted in accordance with the Regulations. PMP progress reports will be reviewed by the Commission, the States, and the peer review advisory committee on an annual basis to evaluate the progress of each discharger toward achieving the maximum practicable reduction.

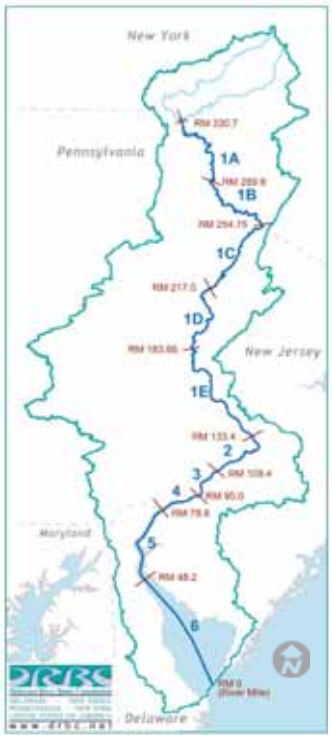


Fig. 1 DRBC Interstate River Zones

The PMP regulation provides the discharger with the flexibility to custom design an approach that best meets their specific conditions. PMPs will be required by the Commission until the States incorporate similar requirements into each State-issued NPDES permit at the time of its renewal. This approach sets up the regulatory framework for the performance of the PMP, while providing the site specific flexibility to those with local knowledge of the systems. Using the monitoring data and the application of the best available science and track down and reduction techniques, dischargers will then determine the source of the PCBs and the individualized actions to reduce their introduction to the estuary. Annual reports are required to be filed with the States and the Commission on their track down and reduction progress. PMPs could be used in those cases where all other regulatory programs

(Superfund, RCRA, TSCA etc.) have not successfully resolved PCB loading contributions. The Commission will annually evaluate the general program progress toward achieving its goal of 50% overall reduction of PCBs to the Estuary, which includes the PMPs and other actions taken for measurable reductions from sites. As of the date of this publication, the Commission has received 41 PMPs from dischargers. The first annual report describing PMP activity is expected in March 2007. The Commission is also planning a conference for early 2007 to further discuss activities related to, and the progress of, the Pollutant Minimization Plan program.

Summary of Progress Since 2006 Report

File Search Results

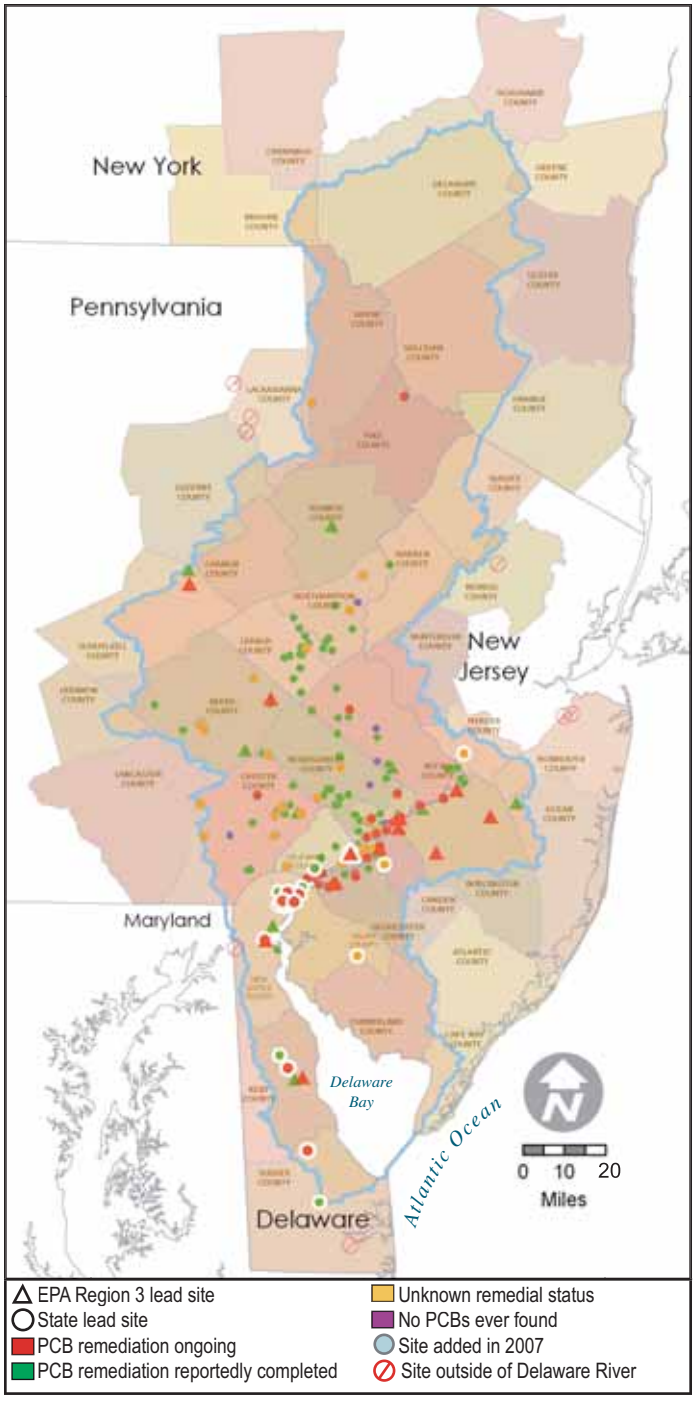
The first annual report of the DelTRiP, released in January 2006, encompassed 263 potentially PCB-contaminated sites (Table 1). The sites were submitted by the respective lead agencies, and were culled from approximately 1,000 hazardous site submissions. For the 2006 report, DNREC submitted approximately 570 potential sites to the DelTRiP, of which eight were identified as having the presence of PCBs on-site. The PADEP presented approximately 266 records of hazardous sites, with 217 sites containing PCBs. The NJDEP submitted 156 records, of which ten distinct sites were identified with PCBs. Data from the EPA identified approximately 28 sites with PCBs throughout the Basin. The PADEP had identified a significantly greater number of sites containing PCBs than the other States and EPA Regions, as the PADEP listings included transformer locations.

Table 1. 2006 DelTRiP Report Submission Summary

AGENCY	SITES IDENTIFIED WITH PCBs SUBMITTED FOR 2006 REPORT (from ~1,000 total hazardous waste site submissions)
DNREC	8
NJDEP	10
PADEP	217
EPA	28
TOTAL	*263*

Specific file searches conducted subsequent to publication of the 2006 report revealed that 19 of the entries submitted by the PADEP were duplicated. 17 of the duplicate entries referenced Pennsylvania Power and Light (PPL) sites. Hence, of the 70 entries for PPL in the 2006 report, only 53 unique PPL sites existed. These sites included utility poles, substations, and defunct or abandoned power generation stations. This 2007 DelTRiP report aggregates the fifty PPL sites into one comprehensive site, both for ease of accounting and to reflect an agreement enacted between the PADEP and PPL as of December 31, 2005 which addressed 144 remaining statewide PPL sites under one remediation order.

Fig. 2. All DelTRiP Sites



Therefore, only 244 unique sites were cited in the 2006 report. However, a significant portion of the 244 sites lacked even the most basic information. Many sites simply contained a site name, without any location information or

were submitted by multiple agencies. Others included site histories that had not been updated for several years.

In order to obtain site information and remediation status, additional site research was necessary. DRBC staff traveled to the EPA Region 2 office, PADEP Northeast and Southeast Sections offices, the NJDEP office, and the DNREC Site Investigation and Remediation Branch office to conduct file reviews. The EPA Region 3 submitted site status updates unaided by DRBC staff.

Table 2. 2006 DelTRiP Report's Sites' File Reviews

Total Entries Submitted	***263***
Sites Located Out of the Basin	9
Sites Erroneously Flagged for PCBs (i.e. PCBs not found)	8
Entries w/ Reportedly Completed PCB Remediation	133
Site Files Unavailable for Review	57
Sites with Ongoing PCB Remediation	37
Duplicate Site Entries	19

The reviews revealed that a significant number of sites that were identified as active in the 2006 report had reportedly completed remediation in years prior. The sites were each remediated to the completion standards of their lead agency; each State and agency has differing remediation standards. Additionally, several sites in the 2006 report were erroneously identified as containing PCBs. The site reviews also yielded multiple files that were unable to be identified and located by their respective agencies. Hence, these sites are unable to be categorized as having ongoing remediation, completed remediation, or otherwise. DelTRiP will continue to work with the member agencies to locate and quantify and describe these sites. Figure 2 and Table 2 illustrate the categorization of the 263 entries in the 2006 report.

2007 DelTRiP Report

Site histories for those sites included in the 2006 report that were found to have completed PCB remediation are included in this report as well. However, as remediation at these sites has discontinued, these site histories will not be cited in subsequent reports, but will remain as an inventory. Likewise, sites identified herein that are located out of the Delaware River basin will also cease to be referenced in future DelTRiP reports. 37 sites (Table 3) submitted for the 2006 report with ongoing PCB remediation are detailed in this volume of the DelTRiP report. An additional 16 sites newly submitted for the 2007 report also have ongoing PCB remediation (Table 4), yielding a total of 53 sites within the Delaware River basin with ongoing PCB remediation (Table 5). Herein, ongoing remediation is considered to include any step of the agency's process for addressing a hazardous waste site; for example, the process may include preliminary studies, contaminant testing, and legal and administrative negotiations, in addition to physical removal or decontamination. It is important to note that a significant quantity of sites were unavailable for review and may also have ongoing PCB remediation.

State of Delaware

23 sites identified with ongoing PCB remediation are located in the State of Delaware (Figure 3, Table 5). The DNREC is the lead agency for 21; EPA Region 3 is the lead agency for one; and the DNREC and EPA Region 3 share the lead for one site (Standard Chlorine/Metacham, which was submitted by each agency). Since the publication of the 2006 DelTRiP report, ten sites in the State have been identified as reportedly having completed PCB remediation. In addition, the DNREC identified an additional 24 sites that did not appear in the prior edition. The City of Wilmington area holds a dense concentration of active sites.

State of New Jersey

The State of New Jersey has at least 12 sites within the Delaware River basin with ongoing PCB remediation. The NJDEP leads remediations at four and the EPA Region 2, eight (Table 5, Figure 6). A significant concentration of sites adjoins the Delaware River, a historically popular area for manufacturing and other industrial operations. Subsequent to the publication of the 2006 DelTRiP report, two additional sites were presented for inclusion by the DelTRiP. Furthermore, six sites within the Delaware River basin were identified as reportedly having completed PCB remediation (with two under NJDEP lead and four under EPA Region 2 lead). Three NJDEP files were unavailable for review and could not be categorized.

Commonwealth of Pennsylvania

At least 18 sites with ongoing PCB remediation are located in the Commonwealth of Pennsylvania, of which the PADEP is the lead agency for 13 sites, the EPA Region 3 is the lead agency for three sites, and together the PADEP and the EPA Region 3 share the lead for two sites (Table 5, Figure 9). Shortly before the first draft of this report went to press, the PADEP submitted brief site summaries for 38 sites whose files were unable to be located during the scheduled file reviews. However, 56 sites and their associated files and/or remediation status remain unavailable and require further investigation. Consequently, these projects could not be categorized for this report.

Following the publication of the 2006 DelTRiP report, the EPA Region 3 identified an additional site to be included in the DelTRiP. Moreover, of the 217 PADEP

submissions in the 2006 report, file reviews and PADEP updates revealed that 111 sites had already completed PCB remediation. Likewise, eight EPA Region 3 lead sites had also been reportedly remediated for PCBs. Additionally, eight PADEP lead sites in the 2006 report were erroneously identified as having contained PCBs.

Prioritization of DelTRiP Sites

Prior to the identification of the 53 sites, a prioritization scheme was developed with which to rank the sites. However, the sites were not prioritized for this report. Quantification of the amount of PCBs remaining at these sites is, for one, difficult to ascertain. Additionally, the relatively small number of active sites does not warrant a prioritization. Future annual reports of the DelTRiP may implement the prioritization scheme, especially as new sites are added and the status of sites that were unavailable for review are clarified. It should be noted that anecdotal evidence suggests that a significant portion of the unavailable site files, particularly in Pennsylvania, have reportedly been remediated for PCBs.

Conclusion

This second annual report of the DelTRiP documents significant progress in identifying and locating hazardous waste sites that contribute or have the potential to contribute PCBs to the Delaware River basin. However, the remediation status of 59 sites remains unknown. The DelTRiP will continue to work with the agencies to obtain site history and remediation information for these facilities. Each of the 53 sites identified as having ongoing PCB remediation will also continue to be tracked for progress. Site information will be aggregated and the remediation progress of each site will be tracked and summarized in the next annual report detailing the status of implementation activities at each site, highlighting milestones and accomplishments, including measurable reductions in loadings.

As new site locations are identified they will be incorporated into GIS. The State and Federal agencies will continue to provide access to information, if available, to quantify the PCB loads released or having the potential to be released from the contaminated sites.

Potentially, the DelTRiP may implement a prioritization criteria for sites with ongoing PCB remediation in future annual reports (as indicated in steps seven and eight of the *Major Steps to DelTRiP Implementation*, outlined herein). DelTRiP will continue to indicate progress in future annual reports. The DelTRiP may also revisit those sites reported by the lead agencies as having completed remediation to assess impact to the basin. Furthermore, the DelTRiP will continue to work with the State and Federal agencies to refine and clarify the data, as well as to obtain site listings for other contaminants of interest.

Fig. 3. Number of Ongoing PCB Remediations per HUC 11 Watershed

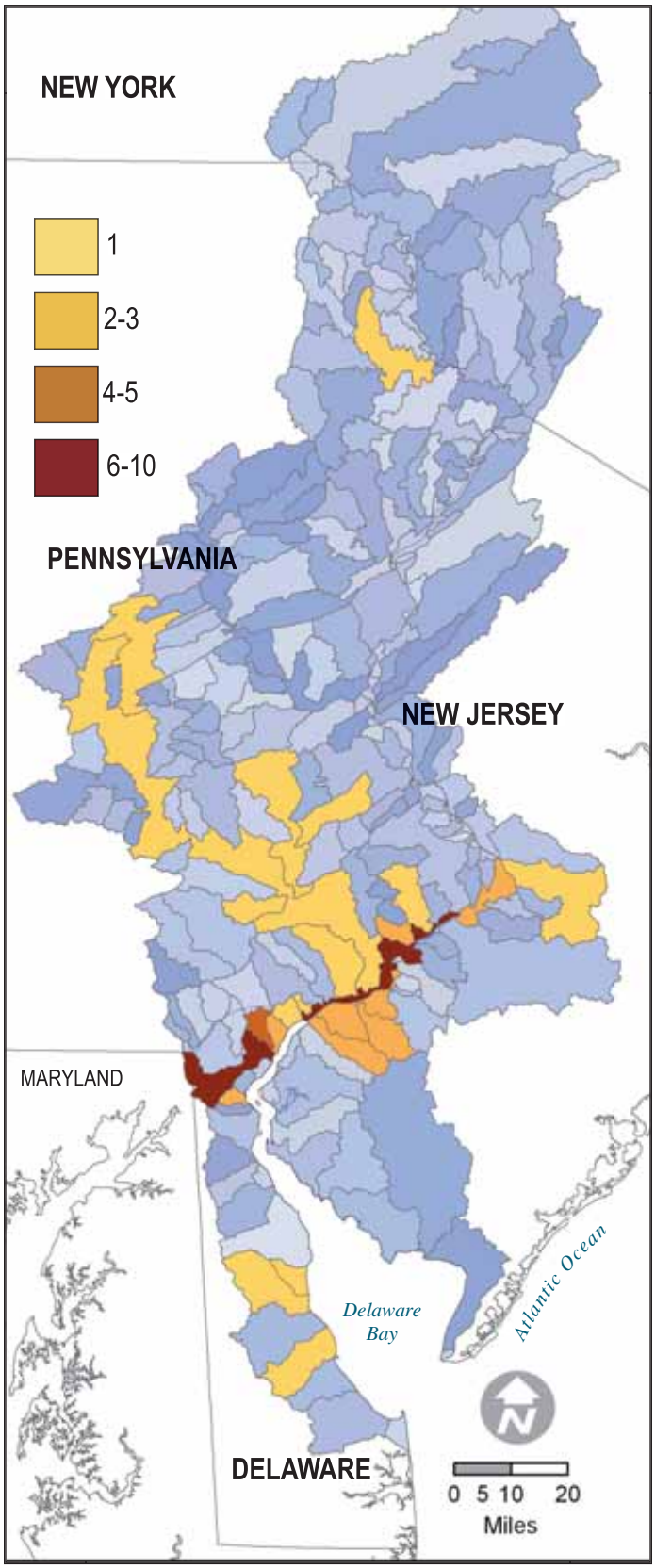


Table 3. 2006 DelTRiP Report

AGENCY	ENTRIES SUBMITTED FOR 2006 REPORT	2006 SITES OUT OF BASIN	PCBs NOT FOUND	2006 SITE ENTRIES WITH REPORTEDLY COMPLETE PCB REMEDIATION	2006 SITE FILES UNAVAILABLE OR SITE STATUS UNKNOWN	DUPLICATE ENTRIES DELETED	2006 SITES WITH ONGOING PCB REMEDIATION
DNREC	8	0	0	2	0	0	6
NJDEP	10	0	0	2	1	0	7
PADEP[a]	217[a]	3	8	117	56	19	14
EPA 2	12	3	0	4	0	0	5
EPA 3	16	3	0	8	0	0	5
TOTAL	***263***	***9***	***8***	***133***	***57***	***19***	***37***

[a] While Pennsylvania submitted 217 site listings, 19 were duplicated, i.e. multiple submissions referring to the same site. These duplicate entries have been corrected for in this report; all have been reportedly remediated for PCBs and are noted as duplicate entries in table 6.

Table 4. Sites New to the 2007 DelTRiP Report

AGENCY	NEW PCB SITES SUBMITTED FOR 2007 REPORT	2006 SITES REDESIGNATED FOR 2007 REPORT	NEW 2007 SITES OUT OF BASIN	NEW 2007 SITES WITH REPORTEDLY COMPLETE PCB REMEDIATION	NEW 2007 SITE FILES UNAVAILABLE OR SITE STATUS UNKNOWN	NEW 2007 SITES WITH ONGOING PCB REMEDIATION
DNREC[b]	24	0	1	8	0	15
EPA 3/DNREC[b]	-	+1	0	0	0	0
NJDEP	2	-3	0	0	2	0
PADEP[c]	2	-2	0	2	0	0
EPA 3/PADEP[c]	-	+2	0	0	0	0
EPA 2	0	+3	0	0	0	0
EPA 3	1	0	0	0	0	1
TOTAL	***29***		***1***	***10***	***2***	***16***

HORIZONTAL SUM DOES NOT INCLUDE 2006 SITES REDESIGNATED FOR THE 2007 REPORT. THIS REFLECTS A CHANGE IN LEAD AGENCY.

[b] DNREC submitted one site in 2007 that EPA Region 3 had already submitted the year before. The site is currently under joint EPA Region 3/DNREC lead (Standard Chlorine/Metachem).
[c] PADEP and EPA Region 3 each submited Metal Bank as a PCB site in 2006. This NPL site is also under PADEP oversight and is a dual lead site.

Table 5. Total of Sites with Ongoing PCB Remediation in 2006 and 2007 DelTRiP Reports

AGENCY	SITES WITH ONGOING PCB REMEDIATION			SITE FILES UNAVAILABLE OR SITE STATUS UNKNOWN	
	ADJUSTED 2006 SITES	SUBMITTED IN 2007	*TOTAL*	SUBMITTED IN 2006	SUBMITTED IN 2007
DNREC	6	15	***21***	0	0
EPA Region 3/DNREC	0	1	***1***	0	0
PADEP	13	0	***13***	56	0
EPA Region 3/PADEP	2	0	***2***	0	0
NJDEP	7	0	***4***[d]	1	2
EPA 2	5	0	***8***[d]	0	0
EPA 3	3	1	***4***	0	0
TOTAL	***53***			***59***	

The 2008 DelTRiP report will track, at minimum, these 112 sites.

[d] Three sites have changed lead authority from NJDEP to EPA Region 2. Martin Aaron, Inc., Matteo Iron and Metal, and Safety Kleen, Bridgeport.

SUMMARY OF ALL SITES/ENTRIES IN THE 2006 DELTRIP REPORT

The following is a summary of the sites/entries in the 2006 by agency DelTRiP report. 263 sites emerged out of nearly a thousand submitted sites. The sites that were retained, are those where some history of PCBs had been identified by the member agencies.

Agency	Number of sites/entries submitted
DNREC	8
NJDEP	10
PADEP	217
EPA Region 2	12
EPA Region 3	16
Total =	***263***

STATUS OF ALL SITES IN THE 2006 DELTRIP REPORT

The following is a tabulation of all of the sites in the 2006 DelTRiP report within the Delaware River basin with a tabulation of the number of remediations each agency has led or is currently leading. The number of sites that each agency submitted that fall outside of the Delaware River basin are noted as well. These sites outside the basin will not be tracked in the future by DelTRiP. (Please see Table 6.)

	Quantity of sites and description	
DELAWARE		
DNREC	6	ongoing remediations
	2	reportedly complete PCB remediations
EPA Region 3	2	ongoing remediations
	2	reportedly complete PCB remediations
	1	outside of Delaware River basin
NEW JERSEY		
NJDEP	7	ongoing remediations
	2	reportedly complete PCB remediations
	1	with unavailable files
EPA Region 2	5	ongoing remediations
	4	reportedly complete PCB remediations
	3	outside of Delaware River basin
PENNSYLVANIA		
PADEP	14	ongoing remediations
	117	reportedly complete PCB remediations
	8	no history of PCBs
	56	with unavailable files
	3	outside of Delaware River basin
	19	Duplicate entries
EPA Region 3	3	ongoing remediations
	6	reportedly complete PCBt remediations
	3	outside of Delaware River basin

STATUS OF ALL SITES IN THE 2007 DELTRIP REPORT

The following is a tabulation of all of the sites in the 2007 DelTRiP report within the Delaware River basin with a tabulation of the number of remediations each agency has led or is currently leading. The number of sites that each agency submitted that fall outside of the Delaware River basin are noted as well. These sites will not be tracked in the future by DelTRiP. (Please see Table 6.) ***Sites new to the 2007 DelTRiP report are italicized and highlighted in red. (29 in total)***

		QUANTITY OF SITES AND DESCRIPTION
DELAWARE		
DNREC	6	ongoing remediations
	15	***ongoing remediations***
	2	reportedly complete PCB remediations
	8	***reportedly complete PCB remediations***
	1	***outside of Delaware River basin***
EPA REGION 3	1	ongoing remediation
	2	reportedly complete PCB remediations
	1	outside of Delaware River basin
EPA REGION3/DNREC	1	ongoing remediation
NEW JERSEY		
NJDEP	4*	ongoing remediations
	2	reportedly complete PCB remediations
	1	with unavailable files
	2	***with unavailable files***
EPA REGION 2	8*	ongoing remediations
	4	reportedly complete PCB remediations
	3	outside of Delaware River basin

*Note: three NJDEP-submitted sites in the 2006 report are now under EPA lead.

PENNSYLVANIA		
PADEP	13	ongoing remediations
	117	reportedly complete PCB remediations
	2	***reportedly complete PCB remediation***
	8	no history of PCBs
	56	with unavailable files
	3	outside of Delaware River basin
EPA REGION 3	3	ongoing remediations
	1	***ongoing remediation***
	6	reportedly complete PCB remediations
	2	outside of Delaware River basin
EPA REGION/PADEP	2	ongoing remediations

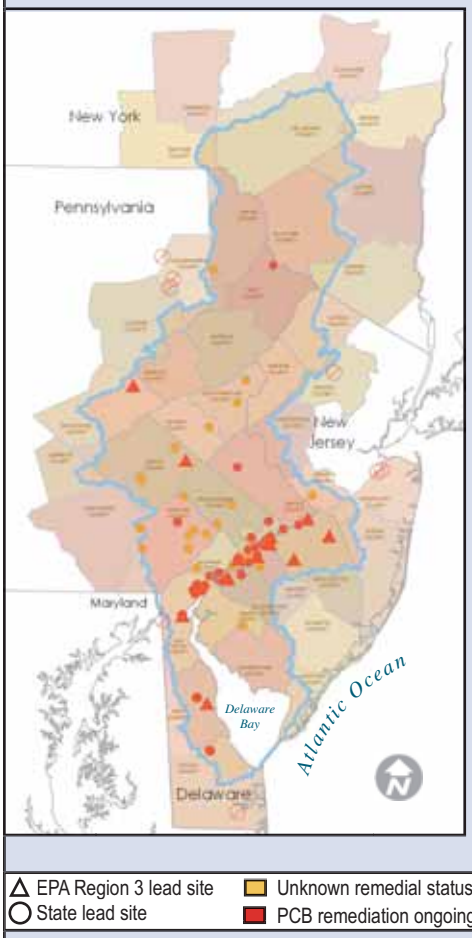
SUMMARY OF ALL SITES IN THE 2007 DELTRIP REPORT

The following is a summation of the sites noted in this report. Sites with reportedly completed PCB remediation will be inventoried in future reports. However, the DelTRiP may revisit those sites that are considered remediated by their lead agency to assess impact to the Delaware river basin. Hence, the 2008 DelTRiP report will track the progress of 112 sites (53 ongoing and 59 unknown) in addition to new sites submitted after the publication of this report.

TOTAL NUMBER OF SITES PER CATEGORY IN 2007 REPORT

9	Sites outside of the Delaware River basin
8	Sites where PCBs were not found
143	Sites with reportedly completed remediation for PCBs
59	Site files unavailable
53	Sites with ongoing remediation

PREVIEW of 2008 DelTRiP Report

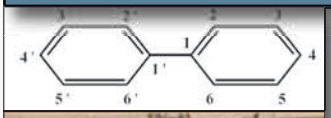


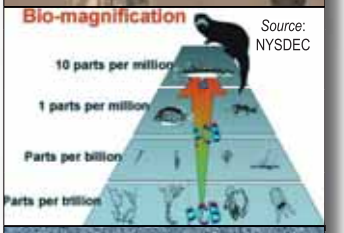
The 2008 DelTRiP report will track, at minimum, these 112 sites.

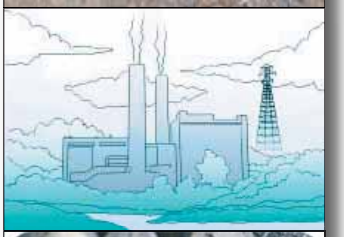
53 sites with ongoing PCB remediation

59 sites with unknown remedial status

PCBs: What are they?







Polychlorinated biphenyls (PCBs) are a class of man-made compounds that were manufactured and used extensively in electrical equipment such as transformers and capacitors, paints, printing inks, paper, pesticides, hydraulic fluids, lubricants, synthetic rubber, plasticizers, floor tile, brake linings, adhesives, carbon copy paper, fluorescent lights ballasts, and asphalt, to name a few. PCBs are mixtures of up to 209 individual chlorinated compounds (known as congeners). As the percentage of chlorine increases, the PCB congener becomes thicker and heavier. There are no known natural sources of PCBs and they are either oily liquids or solids that are colorless to light yellow. Some PCBs can exist as a vapor or in air; PCBs have no known smell or taste. They are insoluble in water and have high tolerances for heat (their boiling point is 275° - 375° Centigrade) and they have no flash point.

Concern over the toxicity and persistence (chemical stability) in the environment of PCBs led Congress in 1976 to enact Section 6(e) of the Toxic Substances Control Act (TSCA), that included among other provisions, prohibitions on the manufacture, processing, and commercial distribution of PCBs in the United States. More than 1.5 billion pounds of PCBs were manufactured in the United States prior to the passage of TSCA. PCBs were manufactured and sold under a variety of trade names. For a more complete list of trade names, see the EPA PCB ID web site at www.epa.gov/toxteam/pcbid.

Sources of Exposure

PCB residues have been observed in plant and animal tissues in all parts of the world. PCB residues have also been found in human adipose tissue and breast milk. Because PCBs are not naturally occurring substances, their dissemination is the result of human activity and releases to the environment.

Routes of Entry

According to the USEPA, likely routes of entry for the general population are ingestion by food and water. PCBs accumulate in the food chain and contaminated fish tissue is a persistent source of PCBs in the human diet. Inhalation and skin contact are likely to be significant routes of entry in occupational exposure.

Health Effects

PCBs have been demonstrated to cause cancer in animals and serious non-cancer health effects in animals, including effects on the immune system, reproductive system, nervous system, and endocrine system. Limited studies in humans provide supportive evidence for potential carcinogenic and non-carcinogenic effects of PCBs. The different health effects of PCBs may be interrelated, as alterations in one system may have significant implications for the other systems of the body.

For more information

Agency for Toxic Substances and Disease Registry's ToxFAQs™ for PCBs is an excellent source for more information and be found at www.atsdr.cdc.gov/tfacts17.html. USEPA also hosts the PCB page at www.epa.gov/pcb. Both of these sites were also used as sources for this publication.

What is a TMDL?

A **total maximum daily load** (TMDL) is the maximum amount of a specific pollutant that can be assimilated by a stream without causing impairment or violating water quality standards. The allowable amount takes into account all sources of that pollutant in a watershed, including point sources and non-point sources and requires a portion to be set aside as a margin of safety.

Point sources include discharges from sewage treatment plants and industrial facilities, for example. Non-point sources include all other sources of the pollutant, including overland runoff and deposition from the air.

The water quality standards are based on the Clean Water Act's minimum goals that all waters be "fishable" and "swimmable". To this end, the act requires States to assign a designated use (such as recreation, fishing, industrial etc.) and corresponding water quality standards for each water body within its jurisdiction.

A TMDL is only for one pollutant. If a stream is impaired by three pollutants, three TMDLs must be developed for that stream.

Though all streams and watersheds must be handled on a case-by-case basis, **there are several basic steps or processes that apply to developing a TMDL**. 1.) Data collection (pollutant load, sources, etc.) for impaired water bodies listed on a State's Clean Water Act § 303(d) list; 2.) data analysis; 3.) TMDL development for impaired water bodies; 4.) Public review and comments; and 5.) EPA approval of the TMDL.

TMDLs do not, however, specify *how* pollutant loads are to be reduced within a stream or watershed. The TMDL method only determines the total amount of a specific pollutant that a watershed or stream can assimilate without causing impairment or violate water quality standards. TMDLs do not specify by what means a particular pollutant load are to be reduced. Rather, TMDLs allocate the maximum contribution a source category (urban stormwater, agriculture, industrial, for example) can contribute to the total load. The actual point and non-point source allocations or reductions are implemented by the States through existing regulations and programs.

Key Points:

1. Water quality standards are based on the Clean Water Act's minimum goals that all waters be "fishable" and "swimmable".

2. TMDLs specify a pollutant budget that must be achieved in order to meet State water quality standards.

3. TMDLs do not prescribe a method to reduce a given pollutant's concentration.

4. A TMDL is only for one pollutant. Multiple pollutants in a waterbody requre multiple TMDLs.

For further information, please see the Toxics and PCB information page at www.drbc.net as well as the USEPA's Mid-Atlantic Water Division TMDL page at www.epa.gov/reg3wapd/tmdl/pa_tmdl?delaware%20river/index.htm.

Table 6. All DelTRiP Sites in 2006 and 2007 Reports

SITE NAME	STATE	LEAD AGENCY	PCB REMEDIATION COMPLETE	FIRST REPORTED BY DelTRiP
12th Street Drum Site	Delaware	DNREC	NO	2007
American Scrap and Waste	Delaware	DNREC	NO	2007
Amtrak Refuelling Yard	Delaware	DNREC	NO	2007
Bancroft Mills	Delaware	DNREC	YES	2007
Budd Metal	Delaware	DNREC	NO	2007
Capitol Scrap Yard	Delaware	DNREC	NO	2007
CitiSteel Area A	Delaware	DNREC	NO	2006
Conectiv Hay Road	Delaware	DNREC	YES	2007
Delaware Compressed Steel (503 S. Market Street)	Delaware	DNREC	NO	2007
Delaware Sand & Gravel Landfill	Delaware	EPA 3	YES	2006
Diamond State Foundry/Pullman Car Works	Delaware	DNREC	NO	2006
Diamond State Salvage	Delaware	DNREC	NO	2006
Dover Air Force Base	Delaware	EPA 3	NO	2006
Estate of Lester Nolan	Delaware	DNREC	YES	2006
Fitzgerald's Auto Salvage	Delaware	DNREC	NO	2007
Former Dagsboro Substation	Delaware	DNREC	OUTSIDE OF DR BASIN	2007
Fox Point	Delaware	DNREC	NO	2007
Georgetown Substation (former)	Delaware	DNREC	NO	2006
Governor Bacon Health Center	Delaware	DNREC	YES	2006
Harper Thiel	Delaware	DNREC	NO	2007
Harvey Knott & Drum	Delaware	EPA 3	OUTSIDE OF DR BASIN	2006
Hay Road Sludge drying site	Delaware	DNREC	NO	2007
Holly Oak substation (DELMARVA)	Delaware	DNREC	YES	2007
J.G. Townsend Frozen Foods	Delaware	DNREC	YES	2006
Justison's Landing	Delaware	DNREC	NO	2007
Krieger-Finger Property	Delaware	DNREC	NO	2007
Meco Drive Site	Delaware	DNREC	NO	2007
NVF Wilmington (Maryland Ave.)	Delaware	DNREC	YES	2007
Penn Del Salvage	Delaware	DNREC	NO	2006
Purina Tower (B)	Delaware	DNREC	NO	2006
Reichold chemical	Delaware	DNREC	YES	2007
South Wilmington Salvage yards (A-1 Auto, American Tank Cleaning Co., Don Wilson's Auto Parts, Merkin Auto Spring Co. Inc., Two Guys Auto Parts, Shuster's Auto Salvage, Casper's Auto Parts, and Junior's Auto Parts)	Delaware	DNREC	NO	2007
Standard Chlorine/Metachem	Delaware	DNREC	NO	2007
Standard Chlorine/Metachem of Delaware	Delaware	EPA 3	NO	2006
Wildcat Landfill	Delaware	EPA 3	YES	2006
Wilmington Coal Gas (Northern Section)	Delaware	DNREC	NO	2007
Wilmington Coal Gas (Southern Section)	Delaware	DNREC	YES	2007
Bridgeport Rental and Oil Services	New Jersey	EPA 2	NO	2006
Burnt Fly Bog	New Jersey	EPA 2	OUTSIDE OF DR BASIN	2006
Chemical Leaman Tank Lines Inc.	New Jersey	EPA 2	NO	2006
Cosden Chemical Coatings Corporation	New Jersey	EPA 2	YES	2006
Dayco Corp./L.E. Carpenter Co.	New Jersey	EPA 2	OUTSIDE OF DR BASIN	2006
Ellis Property	New Jersey	EPA 2	YES	2006
Fazio Sanitary Landfill	New Jersey	NJDEP	UNKNOWN	2007
Former Lail Property/Exxon Mobil	New Jersey	NJDEP	NO	2006
Former Manchester Machines Site/Dana Transport	New Jersey	NJDEP	NO	2006
Fort Dix Landfill	New Jersey	EPA 2	NO	2006
General Engines Company, Inc.	New Jersey	NJDEP	YES	2006
Hercules at Burlington	New Jersey	NJDEP	NO	2006
Hercules at Gibbstown	New Jersey	NJDEP	YES	2006

SITE NAME	STATE	LEAD AGENCY	PCB REMEDIATION COMPLETE	FIRST REPORTED BY DelTRiP
Imperial Oil Co., Inc./Champion Chemicals	New Jersey	EPA 2	OUTSIDE OF DR BASIN	2006
Martin Aaron, Inc.[2]	New Jersey	EPA 2	NO	2006
Matteo Iron & Metal[2]	New Jersey	EPA 2	NO	2006
Pijak farm	New Jersey	EPA 2	YES	2006
Roebling Steel Co. (JARSCO)	New Jersey	EPA 2	NO	2006
Safety Kleen, Bridgeport[2]	New Jersey	EPA 2	NO	2006
Solutia, Inc.	New Jersey	NJDEP	NO	2006
Swope Oil & Chemical Company	New Jersey	EPA 2	YES	2006
Trenton Fiber and Drum Co.	New Jersey	NJDEP	UNKNOWN	2007
Welsbach and General Gas Mantle	New Jersey	EPA 2	NO	2006
Woodstown Pilesgrove Sanitary Landfill	New Jersey	NJDEP	UNKNOWN	2006
18th & Callowhill St Site	Pennsylvania	PADEP SE	YES	2006
3200 E Tioga St Prop	Pennsylvania	PADEP SE	NO	2006
3742 Main St Site	Pennsylvania	PADEP SE	YES	2006
7401 State Rd Site	Pennsylvania	PADEP SE	NO	2006
Abandoned Fac	Pennsylvania	PADEP SE	UNKNOWN	2006
Abrams Metals	Pennsylvania	PADEP SE	YES	2006
Action Mfg	Pennsylvania	PADEP SE	UNKNOWN	2006
Alfa Laval	Pennsylvania	PADEP SE	YES	2006
Allentown Tower Prop[1]	Pennsylvania	PADEP NE	YES	2006
Alto Sign	Pennsylvania	PADEP SE	YES	2006
Andela Site	Pennsylvania	PADEP SE	YES	2006
Arkema Chem Research & Dev Lab Mag	Pennsylvania	PADEP SE	UNKNOWN	2006
Autocar Trucks Div Nfrap Site	Pennsylvania	PADEP SC	UNKNOWN	2006
Bensalem Redev	Pennsylvania	PADEP SE/ EPA 3	NO	2006
Blue Ridge Winkler Site	Pennsylvania	PADEP SE	UNKNOWN	2006
Bottle House Property	Pennsylvania	PADEP NE	NO PCB EVER	2006
Buttonwood Gateway Complex	Pennsylvania	PADEP SC	UNKNOWN	2006
Butz Landfill	Pennsylvania	EPA 3	YES	2006
Caloric	Pennsylvania	PADEP SC	UNKNOWN	2006
Cedar Hollow Quarry	Pennsylvania	PADEP SE	YES	2006
Chelsea Historic Prop	Pennsylvania	PADEP SE	YES	2006
Chemclene	Pennsylvania	PADEP SE	UNKNOWN	2006
Chemrex Banner Inds Div	Pennsylvania	PADEP SE	UNKNOWN	2006
Chester Waterfront Redev Proj Site	Pennsylvania	PADEP SE	UNKNOWN	2006
Cira Ctl Site	Pennsylvania	PADEP SE	NO	2006
City of Philadelphia Water Dept.	Pennsylvania	PADEP SE	UNKNOWN	2006
Cognis Corp	Pennsylvania	PADEP SE	YES	2007
Columbia Gas Eagle Compressor Sta	Pennsylvania	PADEP SE	UNKNOWN	2006
Columbia Gas Oxford Opr Ctr	Pennsylvania	PADEP SE	UNKNOWN	2006
Columbia Gas Trans Downingtown Cs	Pennsylvania	PADEP SE	NO	2006
Columbia gas transmission corp.	Pennsylvania	PADEP SE	NO	2006
Conoco Phillips Trainer Ref	Pennsylvania	PADEP SE	UNKNOWN	2006
Conrail Morrisville Train Maint Yard	Pennsylvania	PADEP SE	UNKNOWN	2006
Crossley Farm	Pennsylvania	EPA 3	NO	2006
Crown Industries	Pennsylvania	PADEP NE	YES	2006
Crown Recycling & Recovery, Inc.	Pennsylvania	PADEP NE	NO	2006
Csx Intermodal Snyder Ave Yard Fac	Pennsylvania	PADEP SE	UNKNOWN	2006
Dana Truck & Car Frame Mfg Plt Reading	Pennsylvania	PADEP SC	UNKNOWN	2006
Darby Creek Jt Auth Stp	Pennsylvania	PADEP SE	YES	2006
Defense Personnel Supp Ctr Public Admin	Pennsylvania	PADEP SE	UNKNOWN	2006
Defense SuPPLy Ctr Phila	Pennsylvania	PADEP SE	UNKNOWN	2006
Dick Bros	Pennsylvania	PADEP SC	UNKNOWN	2006
Dodge Steel Castings	Pennsylvania	PADEP SE	NO PCB EVER	2006
Dorney Road	Pennsylvania	EPA 3	YES	2006

SITE NAME	STATE	LEAD AGENCY	PCB REMEDIATION COMPLETE	FIRST REPORTED BY DelTRiP
Douglassville Disposal	Pennsylvania	EPA 3	YES	2006
Drug Emporium Plz	Pennsylvania	PADEP SE	NO PCB EVER	2006
E Orthodox St	Pennsylvania	PADEP SE	UNKNOWN	2006
Eastern Diversified Metals	Pennsylvania	EPA 3	NO	2006
Eastern Elec Apparatus Rep	Pennsylvania	PADEP NE	OUTSIDE OF DR BASIN	2006
Eastern Elec Prop	Pennsylvania	PADEP SE	YES	2006
Eastern Rotorcraft	Pennsylvania	PADEP SE	NO PCB EVER	2006
Former Schmidts Brewery	Pennsylvania	PADEP SE	NO	2006
Fp Woll & Fac	Pennsylvania	PADEP SE	YES	2006
Frankford Arsenal	Pennsylvania	PADEP SE	NO	2006
Freehand Hj Subdiv	Pennsylvania	PADEP SE	UNKNOWN	2006
Ge Breaker Plt	Pennsylvania	PADEP SE	UNKNOWN	2006
Glasgow Prop	Pennsylvania	PADEP SE	NO PCB EVER	2006
Houston Auto Parts	Pennsylvania	PADEP SE	YES	2006
Hull	Pennsylvania	PADEP SE	YES	2006
Ind park - air force plant 45	Pennsylvania	PADEP SE	YES	2007
Ind Park Development corp.	Pennsylvania	PADEP SE	YES	2006
Jacob Kline Cooperage	Pennsylvania	PADEP NE	YES	2006
Kaiser Refractories	Pennsylvania	PADEP SE	UNKNOWN	2006
Kennett Sq Junkyard[1]	Pennsylvania	PADEP SE	YES	2006
Kvaerner Phila Shipyard	Pennsylvania	PADEP SE	YES	2006
Laurel Ctr Ii	Pennsylvania	PADEP SC	UNKNOWN	2006
Lehigh Electric & Engineering	Pennsylvania	PADEP NE	UNKNOWN	2006
Lehigh Electric & Engineering Co.	Pennsylvania	EPA 3	OUTSIDE OF DR BASIN	2006
Lehigh Landing Proj	Pennsylvania	PADEP NE	UNKNOWN	2006
Lenape Mfg	Pennsylvania	PADEP SE	NO	2006
Little Rio Grande Creek	Pennsylvania	PADEP SE	UNKNOWN	2006
Lower Darby Creek Area	Pennsylvania	EPA 3	NO	2007
McAdoo Associates	Pennsylvania	EPA 3	YES	2006
Merit Metal Prod	Pennsylvania	PADEP SE	NO PCB EVER	2006
Metal Bank	Pennsylvania	EPA 3	NO	2006
Metal Bank State Rd	Pennsylvania	PADEP SE	NO	2006
Metro Container	Pennsylvania	PADEP SE	NO	2006
Milito Prop	Pennsylvania	PADEP SE	YES	2006
Morris Pappas & Morris	Pennsylvania	PADEP SE	UNKNOWN	2006
Mrs Pauls Kitchen Fac (former)	Pennsylvania	PADEP SE	YES	2006
Mulberry St Site	Pennsylvania	PADEP SE	UNKNOWN	2006
Natl Vulcanized Fiber	Pennsylvania	PADEP SE	YES	2006
Naval Air Development Center waste areas	Pennsylvania	EPA 3	YES	2006
Nazareth Quarry	Pennsylvania	PADEP SE	UNKNOWN	2006
Nj Transit Morrisville Railyard	Pennsylvania	PADEP SE	YES	2006
One & Olney Sq Shopping Ctr	Pennsylvania	PADEP SE	YES	2006
One Montgomery Plaza	Pennsylvania	PADEP SE	YES	2006
Oregon Maint Shop	Pennsylvania	PADEP SE	YES	2006
Palmer Town Center	Pennsylvania	PADEP SE	YES	2006
Paoli Rail Yard	Pennsylvania	EPA 3	YES	2006
Park West Town Ctr	Pennsylvania	PADEP SE	YES	2006
Peco Energy West Chester Svc Bldg Old	Pennsylvania	PADEP SE	UNKNOWN	2006
Peco Hanover Substation	Pennsylvania	PADEP SE	YES	2006
Peco West Chester Svc Fac	Pennsylvania	PADEP SE	YES	2006
Pemberton Site	Pennsylvania	PADEP SE	YES	2006
Penn Beer Dist Site	Pennsylvania	PADEP SE	YES	2006
PennDOT I-95 Aramingo	Pennsylvania	PADEP SE	YES	2006
PennDOT Paper Prod Site	Pennsylvania	PADEP SE	YES	2006
Pennsburg Ses	Pennsylvania	PADEP SE	UNKNOWN	2006

SITE NAME	STATE	LEAD AGENCY	PCB REMEDIATION COMPLETE	FIRST REPORTED BY DelTRiP
Pep Boys Paoli	Pennsylvania	PADEP SE	UNKNOWN	2006
Phila Eagles Stadium & Parking Areas	Pennsylvania	PADEP SE	YES	2006
Phila Elec Southwark Svc Bldg Util	Pennsylvania	PADEP SE	UNKNOWN	2006
Phila Phillies Ball Park & Parking Areas	Pennsylvania	PADEP SE	YES	2006
Philadelphia Water Department Southwest Sewage Treatment Plant	Pennsylvania	PADEP SE	UNKNOWN	2006
Phoenix Pipe & Tube Lp[3]	Pennsylvania	PADEP SE	YES	2006
Phoenix Steel[3]	Pennsylvania	PADEP SE	YES	2006
PPL	Pennsylvania	PADEP	YES	2006
PPL	Pennsylvania	PADEP	YES	2006
PPL	Pennsylvania	PADEP	YES	2006
PPL	Pennsylvania	PADEP	YES	2006
PPL	Pennsylvania	PADEP	YES	2006
PPL Avoca	Pennsylvania	PADEP NE	YES	2006
PPL Beekman Substation	Pennsylvania	PADEP NE	YES	2006
PPL Brockton Substation	Pennsylvania	PADEP NE	YES	2006
PPL Buttonwood Substation	Pennsylvania	PADEP NE	YES	2006
PPL Canal Substa Decommissioned	Pennsylvania	PADEP NE	YES	2006
PPL Cetronia Substa[1]	Pennsylvania	PADEP NE	YES	2006
PPL Clarks Summit Substation	Pennsylvania	PADEP NE	YES	2006
PPL Didier Decommissioned Substa[1]	Pennsylvania	PADEP NE	YES	2006
PPL Electric Utilities	Pennsylvania	PADEP SE	YES	2006
PPL former Oneida Substation	Pennsylvania	PADEP NE	YES	2006
PPL former Stanton Steam Electric Station	Pennsylvania	PADEP NE	YES	2006
PPL Gilbert Substation	Pennsylvania	PADEP NE	YES	2006
PPL Greenleaf Substa[1]	Pennsylvania	PADEP NE	YES	2006
PPL Harwood 69 Kv Substation	Pennsylvania	PADEP NE	YES	2006
PPL Harwood Steam Electric Station	Pennsylvania	PADEP NE	YES	2006
PPL Hauto	Pennsylvania	PADEP NE	YES	2006
PPL Honesdale Gas Plant	Pennsylvania	PADEP NE	YES	2006
PPL Horton Substation	Pennsylvania	PADEP NE	YES	2006
PPL Jasper Substa[1]	Pennsylvania	PADEP	YES	2006
PPL Jenkins Substa	Pennsylvania	PADEP NE	YES	2006
PPL Jermyn Substation	Pennsylvania	PADEP NE	YES	2006
PPL Madison Avenue Substation[1]	Pennsylvania	PADEP NE	YES	2006
PPL Meadow Substa[1]	Pennsylvania	PADEP NE	YES	2006
PPL Nazareth Switching Yard[1]	Pennsylvania	PADEP NE	YES	2006
PPL North Stroudsburg Substation	Pennsylvania	PADEP NE	YES	2006
PPL Northern Div SVC CTR	Pennsylvania	PADEP NE	YES	2006
PPL Old Forge Substation	Pennsylvania	PADEP NE	YES	2006
PPL Palmerton Substation	Pennsylvania	PADEP NE	YES	2006
PPL Peckville Active Substation	Pennsylvania	PADEP NE	YES	2006
PPL Pembroke Substa Decommissioned[1]	Pennsylvania	PADEP NE	YES	2006
PPL Pittston Decomissioned Substation	Pennsylvania	PADEP NE	YES	2006
PPL Providence Active Substation	Pennsylvania	PADEP NE	YES	2006
PPL Quarry Substation[1]	Pennsylvania	PADEP SE	YES	2006
PPL S 1st St. Substation[1]	Pennsylvania	PADEP NE	YES	2006
PPL S 4th St. Substation[1]	Pennsylvania	PADEP NE	YES	2006
PPL S 6th St. Substation[1]	Pennsylvania	PADEP NE	YES	2006
PPL Shawnee Decommissioned Substation	Pennsylvania	PADEP NE	YES	2006
PPL Siegfried Substation[1]	Pennsylvania	PADEP NE	YES	2006
PPL South Catasauqua Substation[1]	Pennsylvania	PADEP NE	YES	2006
PPL South Side Substation	Pennsylvania	PADEP NE	YES	2006
PPL Spring Substation	Pennsylvania	PADEP SC	YES	2006

SITE NAME	STATE	LEAD AGENCY	PCB REMEDIATION COMPLETE	FIRST REPORTED BY DelTRiP
PPL Stanton Substation	Pennsylvania	PADEP NE	YES	2006
PPL Sullivan Trail Substation	Pennsylvania	PADEP NE	YES	2006
PPL Tamaqua MGP[1]	Pennsylvania	PADEP NE	YES	2006
PPL Tatamy Substation	Pennsylvania	PADEP NE	YES	2006
PPL Weissport Substation	Pennsylvania	PADEP NE	YES	2006
PPL Wescoville Substation[1]	Pennsylvania	PADEP	YES	2006
PPL West Pittston Decomissioned Substa	Pennsylvania	PADEP NE	YES	2006
Progress Lighting	Pennsylvania	PADEP SE	YES	2006
Publicker Industries, Inc.	Pennsylvania	EPA 3	YES	2006
Reading Iron Met. ed parcel (former)	Pennsylvania	PADEP SC	UNKNOWN	2006
Reading Iron Oley St. storeyard (former)	Pennsylvania	PADEP SC	UNKNOWN	2006
Reading Iron, PA Lines LLC Railspur (former)	Pennsylvania	PADEP SC	UNKNOWN	2006
Recycle Metals	Pennsylvania	PADEP SE	YES	2006
Reserves at Gwynedd	Pennsylvania	PADEP SE	UNKNOWN	2006
Richmond Waterfront Indutrial Park, LLC Rohm & Haas	Pennsylvania	PADEP SE	UNKNOWN	2006
Riverbend site	Pennsylvania	PADEP SE	YES	2006
Rohm & Haas Philadelphia plant	Pennsylvania	PADEP SE	UNKNOWN	2006
Rosenbergers Dairies	Pennsylvania	PADEP SE	YES	2006
Sackville Mills property	Pennsylvania	PADEP SE	YES	2006
Safety Kleen	Pennsylvania	PADEP SE	NO PCB EVER	2006
Santey Junkyard	Pennsylvania	PADEP NE	OUTSIDE OF DR BASIN	2006
Selas of America	Pennsylvania	PADEP SE	NO PCB EVER	2006
Sellersville Landfill	Pennsylvania	PADEP SE	YES	2006
SEPTA Paoli car shop/Paoli Railyard (EPA 3)	Pennsylvania	PADEP SE	YES	2006
SEPTA Roberts Ave Railyard Nfrap Site	Pennsylvania	PADEP SE	UNKNOWN	2006
SEPTA Wayne Junction	Pennsylvania	PADEP SE	NO	2006
Serena	Pennsylvania	PADEP SE	YES	2006
Shez Ray	Pennsylvania	PADEP SE	YES	2006
Slatebelt Ind Ctr	Pennsylvania	PADEP SE	UNKNOWN	2006
Slish Road	Pennsylvania	PADEP NE	YES	2006
Sovereign Oil Site	Pennsylvania	PADEP SE	UNKNOWN	2006
Sparango Const	Pennsylvania	PADEP SE	YES	2006
Spring Mill Development	Pennsylvania	PADEP SE	UNKNOWN	2006
Springfield Auto Outlet	Pennsylvania	PADEP SE	YES	2006
Sunoco Girard Point Ref	Pennsylvania	PADEP SE	UNKNOWN	2006
Sunoco Partners Mkt & Term Lp Darby Creek	Pennsylvania	PADEP SE	UNKNOWN	2006
Tacony Whse Fac (US Army)	Pennsylvania	PADEP SE	YES	2006
Taylor Borough Dump	Pennsylvania	EPA 3	OUTSIDE OF DR BASIN	2006
Texas Eastern Pipeline Bechtelsville Sta	Pennsylvania	PADEP SC	UNKNOWN	2006
Texas Eastern Pipeline Bernville Sta	Pennsylvania	PADEP SC	UNKNOWN	2006
Texas Eastern Trans Eagle Comp Sta	Pennsylvania	PADEP SE	YES	2006
Thelma H Mcgrail Trust	Pennsylvania	PADEP SE	UNKNOWN	2006
Thyssen Krupp Budd Co Die Storage Yard Si	Pennsylvania	PADEP SE	UNKNOWN	2006
Thyssenkrupp Budd	Pennsylvania	PADEP SE	UNKNOWN	2006
Tinicum Ind Prk	Pennsylvania	PADEP SE	UNKNOWN	2006
Tower Bridge Number 5	Pennsylvania	PADEP SE	YES	2006
Tower Bridge Number 6	Pennsylvania	PADEP SE	YES	2006
Trans Buck	Pennsylvania	PADEP SE	UNKNOWN	2006
Transcontinental Gas Pipeline Comp Sta 20	Pennsylvania	PADEP SE	YES	2006
Union Hill Rd Ste	Pennsylvania	PADEP SE	YES	2006
US Naval Base Public Admin	Pennsylvania	PADEP SE	NO	2006
US Plywood Fac	Pennsylvania	PADEP SE	UNKNOWN	2006
US Steel (USX) Fairless Hills Facility[3]	Pennsylvania	PADEP SE	YES	2006
US Steel Fairless Works/Old Ctrl Maintenance shop[3]	Pennsylvania	PADEP SE	YES	2006

SITE NAME	STATE	LEAD AGENCY	PCB REMEDIATION COMPLETE	FIRST REPORTED BY DelTRiP
Valhal	Pennsylvania	PADEP SE	UNKNOWN	2006
West Chester Office Plaza	Pennsylvania	PADEP SE	YES	2006
Westtown Sch Kenneth Square Prop	Pennsylvania	PADEP SE	UNKNOWN	2006
Wharf At Rivertown	Pennsylvania	PADEP SE	NO	2006
White Pines Partners Gc	Pennsylvania	PADEP SE	NO	2006
William H Cooper & Sons	Pennsylvania	PADEP SE	YES	2006
Witco Chemical	Pennsylvania	PADEP SE	YES	2006
Wood Lane Parcel	Pennsylvania	PADEP SE	YES	2006

[1] Site that was submitted twice in the 2006 DelTRiP report by These redundancies have been eliminated since they affect the overall number of sites for which each agency is responsible.

[2] This site's lead agency has been changed to reflect updated information. The lead agency responsible for a site's clean up may change for many reasons, but may include fiscal or other resource limitations, severity of contamination, for example.

[3] This site was submitted more than once, but under different names. The site's name has been corrected and the multiple entries have been consolidated into one summary.

3.1 DELAWARE REMEDIATION STANDARDS

In 1999 "Remediation Standards Guidance Under the Delaware Hazardous Substance Cleanup Act" was revised (available at http://www.dnrec.state.de.us/dnrec2000/divisions/ awm/sirb/DOCS/PDFS/Misc/RemStnd.pdf). The tables which follow this summary present the Uniform Risk Based Standards for PCBs, various Aroclors. Background and Site-Specific Standards may (and usually do) change substantially between locations due to variations in local natural features and anthropogenic effects. Thus, each site must be treated on a case-by-case basis. As stated in the revised act:

> Contaminated sites vary greatly in complexity with regard to site conditions and in the risk these sites pose to human health and the environment. Evaluation of these risks and determination of the most appropriate remediation approaches to address or manage these risks will include the establishment of acceptable remediation standards. To provide flexibility in the Delaware cleanup program, three remediation standard options has been developed. Each remediation standard option is intended to ensure protection of human health and the environment, but will differ in the level of administrative oversight and technical sophistication required for implementation. In addition, the Department has also established different levels of liability release for each remedial standard option (a detailed discussion of the level of liability release for each standard option is included in each respective section). This will enable responsible parties to tailor assessment and remediation activities to specific site and community needs in a more flexible and cost-effective manner. The three applicable remediation standard options are:
>
> **Background Standard (BGS)** - This standard approach is useful at sites where future site development restrictions are undesirable or where the contamination area is small. The goal in this approach is to demonstrate that the site has been remediated to levels which are equivalent to levels that would be expected at a site where no release of hazardous substances has occurred. Attainment of the default background standard will provide for a complete release of liability (such as through a Covenant Not to Sue agreement). A complete release of liability will also be considered on a case-by-case basis for cleanup to site-specific background standards, based on the levels of background contaminants.
>
> **Uniform-Risk Based Standard (URS)** - This standard approach is useful for sites where it is not possible or cost-effective to achieve background standards because of the volume of the contamination or a site-specific risk assessment was not performed (i.e., a simplified evaluation of site-specific risks is more appropriate and cost effective than a baseline risk assessment). Attainment of the uniform risk standard will provide a limited level of liability release. This may include complete release of liability on a case-by-case basis for cleanups attaining the unrestricted use URS Also, the Department will not require any deed notice or restriction for cleanups attaining the unrestricted use URS.
>
> **Site-Specific Standard (SSS)** - This standard approach is appropriate in lieu of the Background or Uniform-Risk Based options. Specifically, this approach is appropriate for sites that do not meet the assumptions used to derive or conditions applicable to the URS, or sites that contain substances in any media which are not listed in this document. It is also applicable to sites with multiple contaminated media beyond soil or ground water (i.e. sediment, surface water, air, biota, etc.). Based on the actual magnitude of the SSS, attainment of the site-specific standard could provide a variable level of liability release ranging from deed restrictions and/or notice and future land-use limitations to no restrictions on the deed or land-use restrictions.

The remediation standard option to be used at a site is selected by the party initiating the remediation, subject to DNREC approval. It is important to note that these options are not tiered; a party is not obligated to use one standard prior to use of another. The options may be used alone or in combination unless otherwise required by DNREC. For example, a site may use a combination of the three standards in different areas of a site and for different chemicals of concern within the same or different areas. However, only one standard shall be applied to a media unless otherwise directed by the Department. The basic goal is to establish a continuum of options for establishing the most cost-effective objectives for protecting human health and environment.

Regardless of the remediation standard approach selected, certain environmental conditions, including the presence of non-aqueous phase (separate or free) product, hazardous waste (as defined by applicable hazardous waste regulations), and soil hot spots (defined as localized soil areas that would be characterized as hazardous waste if removed from the site, and/or soil areas containing concentrations of contaminants which pose a risk of greater than $1 \times 10e^{-4}$ for carcinogenic compounds or a hazard index of 10) will always warrant further evaluation, and action, if appropriate, including removal, to protect human health and the environment.

These values represent a risk value lower than $1x10^{-6}$, that is, the concentration must not cause more than 1 in 1,000,000 people to suffer from either cancer or non-cancer effects. Similar limits are in place for aquatic life and are represented below:

Table 7. Water Quality Criteria for the Protection of Human Health
(Source: *State of Delaware Surface Water Quality Standards*, as amended July 11, 2004)

Chemical	Systemic Toxicants	Human Carcinogens	
	Fish and Water Ingestion	Fish Ingestion	Fish and Water Ingestion
Total PCBs (µg/L)	0.5 (MCL)	0.000064	0.000064

Table 8. Water Quality Criteria for the Protection of Aquatic Life
(Source: *State of Delaware Surface Water Quality Standards*, as amended July 11, 2004)

	Fresh Water Chronic Criteria	Marine Chronic Criteria
Total PCBs (µg/L)	0.014	0.03

In addition, Delaware is the only State in the basin which recognizes the toxicity of other PCBs that have physical and chemical properties similar to dioxins (2,3,7,8-TCDD). DNREC regulates the following dioxin-like congeners , based on World Health Organization toxicity data:

Non-ortho PCBs	Mono-ortho PCBs	
PCB 77	PCB 105	PCB 156
PCB 81	PCB 114	PCB 157
PCB 126	PCB 118	PCB 167
PCB 169	PCB 123	PCB 189

URS standards for PCB remediation in soil and groundwater are shown on the following page.

Table 9. Delaware Uniform Risk Based Standards (URS) for PCBs

(Source: *Remediation Standards Guidance Under the Delaware Hazardous Substance Cleanup Act,* 1999)

URS for the Protection of Human Health				Critical Water Resource Area								Non-Critical Water Resource Area							
				Unrestricted Use				Restricted Use				Unrestricted Use				Restricted Use			
		Groundwater		Surface Soil		Subsurface Soil		Surface Soil		Subsurface Soil		Surface Soil		Subsurface Soil		Surface Soil		Subsurface Soil	
Contaminant	CASRN	(µg/L)	Basis	mg/kg	Basis	mg/kg	Basis	mg/kg	Basis	mg/kg	Basis	mg/kg	Basis	mg/kg	Basis	mg/kg	Basis	mg/kg	Basis
PCBs	1336363	0.5/0.03	MCL	1	EPA	1	EPA	1	EPA	1	EPA	1	EPA	1	EPA	1	EPA	1	EPA
Aroclor 1016	12674112	0.10	RBC	5	RBC	5	RBC	18	CALB	18	CALB	5	RBC	5	RBC	82	RBC	82	RBC
Aroclor 1221	11104282	0.03	PQL	0.3	PQL	0.3	PQL	0.5	CALB	0.5	CALB	0.3	PQL	0.3	PQL	3	RBC	3	RBC
Aroclor 1232	11141165	0.03	PQL	0.3	PQL	0.3	PQL	0.5	CALB	0.5	CALB	0.3	PQL	0.3	PQL	3	RBC	3	RBC
Aroclor 1242	53469219	0.03	PQL	0.3	PQL	0.3	PQL	3	RBC	3	RBC	0.3	PQL	0.3	PQL	3	RBC	3	RBC
Aroclor 1248	12672296	0.03	PQL	0.3	PQL	0.3	PQL	3	RBC	3	RBC	0.3	PQL	0.3	PQL	3	RBC	3	RBC

PQL – Practical Quantitation Level – value presented is RBC or RBM, which may be at, or below, the most applicable PQL. PQL may be used for demonstrating attainment.
RBC – EPA Risk-Based Concentration Table Value, April 1999 (RBC values equal to risk of $10e^{-6}$)
CALB – Value derived from Soil to Groundwater Equation as follows:

Critical Water Resource Area Soil URS = Groundwater URS * [(Koc * foc) + (PW/Yb)] * DF

Where: Koc = organic carbon partition coefficient for a regulated substance (1/kg)

Foc = fraction of organic carbon in the soil (default value = 0.0025)

PW = water filled porosity of soil (default value = 0.2)

Yb = dry bulk density of soil (default value = 1.8 kg/L)

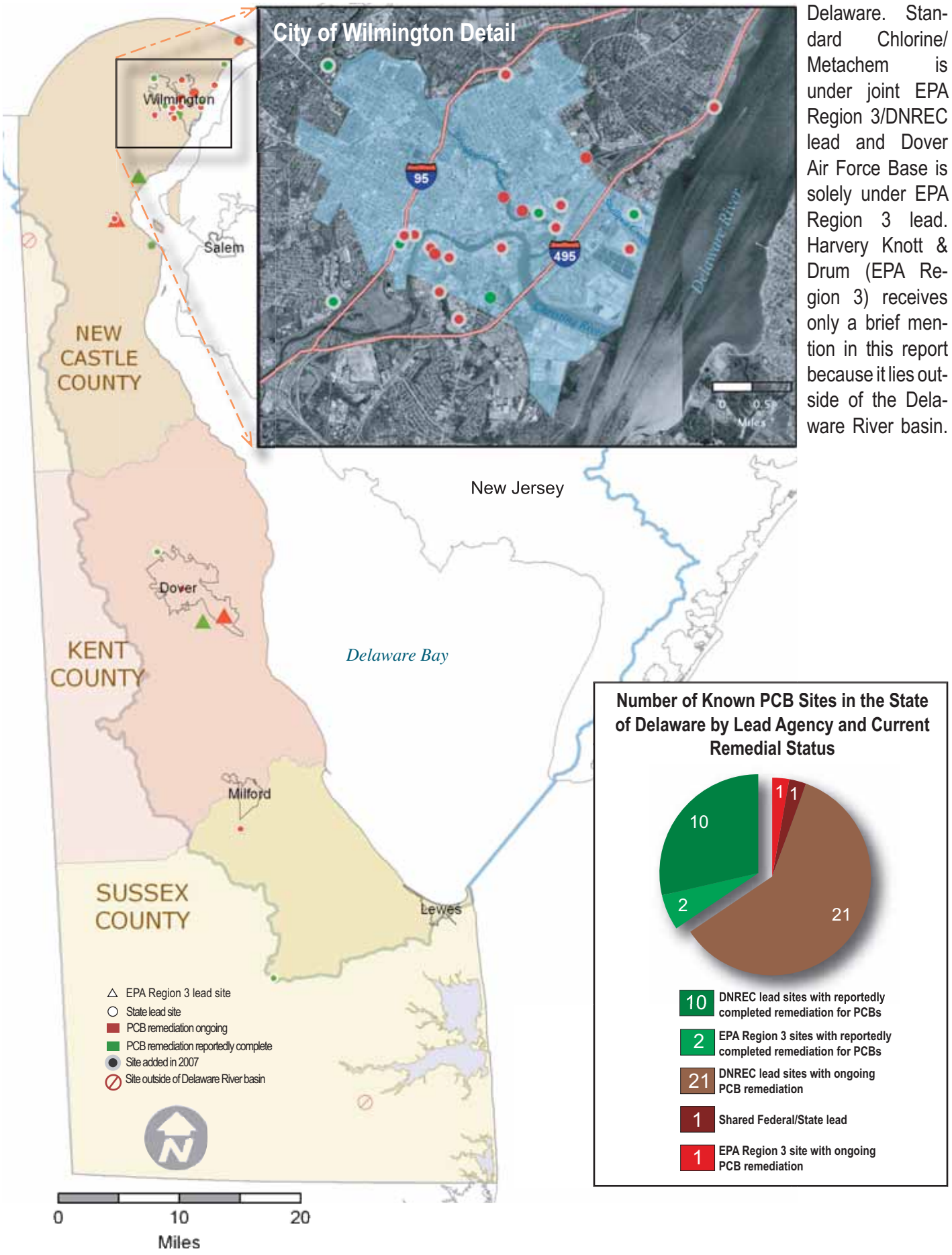
DF = dilution factor (default value = 100)

Table 10. URS Remediation Standards for Protection of the Environment

(Source: *Remediation Standards Guidance Under the Delaware Hazardous Substance Cleanup Act,* 1999)

Substance	Surface Water (µg/L)	Sediment (mg/kg)	Surface Soil (mg/kg)
PCBs	0.002	0.002	40
Aroclor 1016	0.2	0.5	No data available
Aroclor 1221	0.3	0.1	No data available
Aroclor 1232	0.6	0.6	No data available
Aroclor 1242	0.05	29	No data available
Aroclor 1248	0.002	1	No data available
Aroclor 1254	0.002	72	No data available
Aroclor 1260	94	63	No data available

Fig. 5. Status of Known PCB sites in the State of Delaware



Delaware. Standard Chlorine/ Metachem is under joint EPA Region 3/DNREC lead and Dover Air Force Base is solely under EPA Region 3 lead. Harvery Knott & Drum (EPA Region 3) receives only a brief mention in this report because it lies outside of the Delaware River basin.

3.2 SITES WITH ONGOING PCB REMEDIATION IN DELAWARE

DNREC

Site Name: 12th Street Drum Site
Agency Site ID: DE-0294
Site Location: 1330 East 12th Street, Wilmington, DE
Site County: New Castle
Site Coordinates: **Latitude:** 39.7372890
Longitude: -75.5258640
Last history update by agency: November 2005
Site Category: Unauthorized landfill
Site Watershed: Brandywine Creek
Discharge Point(s): Brandywine Creek, Shellpot Creek
Name of Nearest Water Body: Brandywine Creek, Shellpot Creek
Distance to Nearest Water Body: Adjacent
Adjacent to Delaware River? No
PCBs in groundwater? No
PCB Remediation Complete? Unknown, but drum removal has been completed
If so, when did it end? N/A

Site submitted in 2007

Prior to 1950 and up until some time between 1968 and 1977, the 12th Street dump/drum site was used as a waste disposal area by a variety of parties. The site consists of several parcels owned by the Wilmington Economic Development Corporation (WEDCO), the State of Delaware Department of Transportation, the Delaware State Department of Corrections, Norfolk Southern Railway, and one private citizen. In 1999, 10-12 buried drums were located during a remedial investigation for Diamond State Foundry/Pullman Car Works (DE-1144, also in this report). In 1999, EPA Region 3 paid for a bank stabilization and impervious cap to prevent further contribution of contaminants into the adjacent Brandywine Creek immediately to the south. In addition, the roughly 11 acre site is believed to have contributed PCB contamination to neighboring Shellpot Creek. No definitive information could be found regarding past or present PCB concentrations either onsite or in any of the adjacent water bodies. Lead was and continues to be the primary COC, present at very high levels. Current activities (as of Nov., 2005) involved further negotiations between various potentially responsible parties, DNREC, and USEPA as to the future development potential of the site.

DNREC

Site Names:	South Wilmington Salvage Yards (A-1 Auto Parts, Don Wilson's Auto Parts, Merkin Auto Spring Co. Inc., Two Guys Auto Parts, Shuster's Auto Salvage, Casper's Auto Parts, American Tank, Cleaning Co., and Junior's Auto Parts)	
Agency Site IDs:	DE-1172, DE-1174, DE-1175, DE-1176, DE-1177, DE-1178, DE-1180, DE-1184, DE-1185	
Site Locations:	Wilmington, DE	
Site County:	New Castle	
Site Coordinates:	**Latitude:**	39.725418 (A-1 Auto Parts)
	Longitude:	-75.533644 (A-1 Auto Parts)
Last history update by agency:		May 2006
Site Category:		Salvage Yards
Site Watershed:		Christina River
Discharge Point(s):		none
Name of Nearest Water Body:		Christina River
Distance to Nearest Water Body:		varies
Adjacent to Delaware River?		No
PCBs in groundwater?		No
PCB Remediation Complete?		No
If so, when did it end?		N/A

Site submitted in 2007

There are eight salvage yards included in the South Wilmington study area. The figure on the right shows their respective locations, along with A.M. Domino Jr. Salvage Yard, who elected not to be included in this grouping, and thus is not part of the collective remediation. The investigation was initiated to evaluate the potential or actual impacts of the operations of the salvage yards on the neighboring environment and on public health. PCBs were found in soil samples on five of the sites (A-1 Auto: 520 µg/kg, Merkin: 150 µg/kg, 2 Guys: 270 µg/kg, American Tank: 1,000 µg/kg max., and Shuster's: 140 µg/kg max.). Due to groundwater characteristics of the area, testing was limited and further, PCBs were not among the targeted analytes. Seven sediment samples were taken, but did not reveal the presence of PCBs. Also, surface water samples were only taken adjacent to American Tank in the Christina River, which did not show the presence of PCBs over already established background levels. Given the lack of prevalence of PCBs and also their low concentrations (they are all below restricted standards), it is unlikely that PCBs will be aggressively addressed.

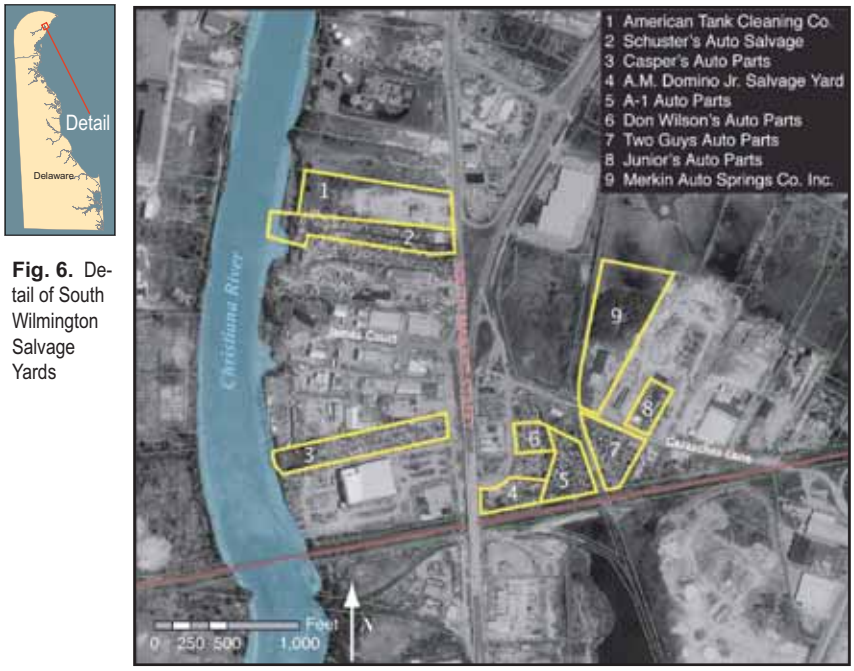


Fig. 6. Detail of South Wilmington Salvage Yards

DNREC

Site Name:	American Scrap and Waste Company	
Agency Site ID:	DE-1265	
Site Location:	Wilmington, DE	
Site County:	New Castle	
Site Coordinates:	**Latitude:**	39.733587
	Longitude:	-75.538896
Last history update by agency:		May 2006
Site Category:		Salvage Yard
Site Watershed:		Christina River
Discharge Point(s):		none
Name of Nearest Water Body:		Christina River
Distance to Nearest Water Body:		adjacent
Adjacent to Delaware River?		No
PCBs in groundwater?		Not determined
PCB Remediation Complete?		No
If so, when did it end?		N/A

Site submitted in 2007

Very little information was available for this site. American Scrap and Waste Co. occupies the 200 acres site that has had continual use since the early 1800s. Currently part of the "Vision for the Rivers", a governor appointed commission that seeks to cleanup and redevelop the historically industrial corridor adjacent to the Christina River, high levels of PCBs were reportedly onsite as of 2006, though no specific concentrations or specific Aroclors were available. PCBs were also discovered in downstream sediments, and these are thought to have originated from this site. However, no specific reports regarding investigations or other subsequent actions were available as of the writing of this report.

DNREC

Site submitted in 2007

Site Name:	Amtrak Refueling Yard	
Agency Site ID:	DE-0266	
Site Location:	Wilmington, Delaware	
Site County:	New Castle County	
Site Coordinates:	**Latitude:**	39.741667
	Longitude:	-75.524718
Last history update by agency:		May 2006
Site Category:		Industrial
Site Watershed:		Brandywine Creek
Discharge Point(s):		Unnamed Tributary to Brandywine Creek
Name of Nearest Water Body:		Brandywine Creek
Distance to Nearest Water Body:		Nearby
Adjacent to Delaware River?		No
PCBs in groundwater?		Unknown
Remediation Complete?		No
If so, when did it end?		N/A

The Amtrak Refueling Yard occupies 20 acres. PCBs have been detected in soil and sediment from surface water drainage features in the East and South facilities on the property. As early as 1981 PCBs were detected at the Former Fueling Facility Portion of the Maintenance Facility Area, with concentrations up to 0.638 mg/kg. Sampling in 1982 of an adjacent portion to the Former Fueling Facility Portion yielded concentrations up to 18.9 mg/kg. Additional sampling using EPA Method 8080 of the Former Fueling Facility Portion in 1995 yielded concentrations of Aroclor 1260 up to 2.03 mg/kg.

Between 1984 and 1985 approximately 10,000 cubic yards of soil contaminated with PCBs was removed from various “hot spots” as well as the Maintenance Facility Area. Contaminated soil at the Former Fueling Facility Portion was not remediated due to the low levels of contamination reported.

Drainage ditches on the property drain to a pond which drains to an unnamed tributary to Brandywine Creek. A characterization of the Eastern and Western drainage ditches in 1998 yielded samples with concentrations up to 72.3 mg/kg and 3.4 mg/kg from the Western and Eastern ditches, respectively.

In 2002 DNREC directed the National Railroad Passenger Corporation to sample for PCB congeners to differentiate Amtrak from other sources and to investigate Shellpot Creek for PCBs (letter dated August 12, 2002).

In May 2006 the owner submitted to the DNREC a summary of the proposed scope of supplemental Phase II remedial investigations and noted that additional sampling is necessary for the Eastern drainage ditch area. Additionally, a former and abandoned sewer will be sampled for PCBs. Samples of sediments from a ditch north of the Eastern drainage ditch yielded concentrations up to 210 mg/kg; sediment from the Western drainage ditch and the confluence area yielded concentrations of up to 94 mg/kg; sediment from the Eastern drainage ditch yielded concentrations up to 320 mg/kg.

DNREC

Site Name:	Budd Metal	
Agency Site ID:	DE-0270	
Site Location:	Wilmington, Delaware	
Site County:	New Castle County	
Site Coordinates:	**Latitude:**	39.720272
	Longitude:	-75.548889
Last history update by agency:		June 2006
Site Category:		Industrial
Site Watershed:		Christina River
Discharge Point(s):		N/A
Name of Nearest Water Body:		Christina River
Distance to Nearest Water Body:		Nearby
Adjacent to Delaware River?		No
PCBs in groundwater?		No
Remediation Complete?		No
If so, when did it end?		N/A

Site submitted in 2007

The Budd Metal property occupies 12 acres. After a former transformer storage area was vandalized, PCBs were tested for using EPA Method 8080. PCBs were also detected in an area near a former garage with concentrations ranging from below detection limits to as high as 210 ppm. No PCBs were detected in ground water. The site owners entered into DNREC's VCP. As of June 12, 2006 25 tons of contaminated soil were excavated to a one foot depth. Further excavation was halted due to the presence of a natural gas line. The site owners have recommended to the DNREC that no further action is warranted in the transformer storage area. DNREC is currently reviewing the progress of this site.

DNREC

Site Name:	Capitol Scrap	
Agency Site ID:	DE-1171	
Site Location:	39 S. West Street, Dover, DE	
Site County:	Kent	
Site Coordinates:	**Latitude:**	39.158611
	Longitude:	-75.532500
Last history update by agency:		July 2006
Site Category:		Former scrap yard
Site Watershed:		St. Jones River
Discharge Point(s):		none
Name of Nearest Water Body:		St. Jones River
Distance to Nearest Water Body:		3,000 feet
Adjacent to Delaware River?		No
PCBs in groundwater?		No
PCB Remediation Complete?		No
If so, when did it end?		N/A

Site submitted in 2007

As of July 2006, the final work plan for excavation of site soils which contain several different PCB Aroclors, along with various other contaminants. The historic range of PCB soil concentrations since 1999 is 43 µg/kg to 17,000 µg/kg. The work plan calls for the over-excavation of contaminated soils on site, down to a depth of 3-4 bgs, which should, according to estimates prepared by both the consultant and DNREC SIRB, bring PCB levels to below the targeted level of 1 ppm. Any sample that reveals PCB levels over 1 ppm will therefore be excavated and removed from site to be disposed of in an appropriate facility, so that the 2.1 acre site can be redeveloped by the City of Dover/Downtown Dover Development Corp., the present owner. Neither sediments nor surface water of St. Jones River are believed to be affected. Groundwater was not encountered onsite.

DNREC

Site Name:	CitiSteel Area A	
Agency Site ID:	DE-0046	
Site Location:	Claymont, Delaware	
Site County:	New Castle	
Site Coordinates:	**Latitude:**	39.813087
	Longitude:	-75.450457
Last history update by agency:		October 2002
Site Category:		Industrial
Site Watershed:		Naamans Creek
Discharge Point(s):		Unknown
Name of Nearest Water Body:		Naamans Creek
Distance to Nearest Water Body:		on-site
Adjacent to Delaware River?		No
PCBs in groundwater?		No
Remediation Complete?		No
If so, when did it end?		N/A

CitiSteel Area A occupies 425 acres and is bisected by Naamans Creek and an unnamed tributary to Naamans Creek. The site is divided into multiple parcels. Approximately 50 cubic yards of soil contaminated with PCBs was removed circa 1990 from Parcel 4, also known as the Scrap Sorting Area. No PCBs have been detected in groundwater, but there were no significant detections of PCBs in sediment. However, there are high levels of PCBs in shallow soils that exceed TSCA limits: Aroclor 1242 detected at 6,800 µg/kg; Aroclor 1248 detected at 1,300 µg/kg; Aroclor 1254 detected at 5,800 µg/kg; Aroclor 1260 detected at 110,000 µg/kg.

As of October 2002, CitiSteel submitted a work plan to the DNREC for further delineation of the PCB impacted soils in the Scrap Sorting Area. Currently DNREC is working with CitiSteel to enter into a Voluntary Cleanup agreement.

DNREC

Site Name:	Delaware Compressed Steel	
Agency Site ID:	DE-1068	
Site Location:	503 South Market Street, Wilmington, DE	
Site County:	New Castle	
Site Coordinates:	**Latitude:**	39.7332620
	Longitude:	-75.5561120
Last history update by agency:		November 2005
Site Category:		Former metal recycling facility
Site Watershed:		Christina River
Discharge Point(s):		Christina River
Name of Nearest Water Body:		Christina River
Distance to Nearest Water Body:		<1,000 feet
Adjacent to Delaware River?		No
PCBs in groundwater?		Unknown
PCB Remediation Complete?		No
If so, when did it end?		N/A

Site submitted in 2007

In 1999, the owners of the Delaware Compressed steel entered into a Voluntary Cleanup Agreement in order to characterize historic contamination in order to facilitate redevelopment of the parcel. The site has been witness to extensive contamination resulting from past onsite metal reclamation and recycling. In December 2003, DNREC completed an interim response for PCB in surface and subsurface soils, which contained PCBs as high as 500 mg/kg. In addition, surface water in the unnamed creek was tested for PCBs and had a concentration of 3.04 µg/L. The DNREC/EPA remedial goal was to immediately remove any soil whose PCB concentrations were above 50 mg/kg and dredge any sediments whose current loading contributed to surface water contamination. A file review was unclear about whether the dredging ever occurred. Following the removal of roughly 2,000 square feet of soil to roughly 2 feet bgs, the highest remaining PCB concentration was 46.1 mg/kg. Groundwater was highly contaminated with a variety or organic compounds, but PCBs were not among them.

No remedial action has been decided for the site, as investigations are ongoing as of 2006. Further actions will involve minimizing potential exposure to contaminants and determining whether or not any other immediate or interim response measures are necessary to prevent any contaminants migrating off site.

DNREC

Site Name:	Diamond State Foundry / Pullman Car Works	
Agency Site ID:	DE-1144	
Site Location:	Wilmington, DE	
Site County:	New Castle	
Site Coordinates:	**Latitude:**	39.740448
	Longitude:	-75.533984
Last history update by agency:		September 2000
Site Category:		Industrial
Site Watershed:		Brandywine Creek
Discharge Point(s):		Unknown
Name of Nearest Water Body:		Brandywine Creek
Distance to Nearest Water Body:		Adjacent
Adjacent to Delaware River?		No
PCBs in groundwater?		Unknown
Remediation Complete?		No
If so, when did it end?		N/A

The former Electric Hose and Rubber property, the Diamond State Foundry/Pullman Car Works site occupies 34 acres. A 2000 report indicated high PCB concentrations in soil: Aroclor 1254 detected at 670,000 µg/kg; Aroclor 1260 detected at 1,300,000 µg/kg. The presence of PCBs was also detected in the area of two banks of transformers and was noted to "require immediate remediation" (Final Brownfield Preliminary Assessment II, September 2000). The report also noted possible historic impacts to Brandywine Creek, as well as the recommendation to assess any PCB impact to ground water in the future. DNREC recommends that the property owners enter into a VCP and may refer the site to the EPA Superfund program if the owners are unresponsive.

DNREC

Site Name:	Diamond State Salvage	
Agency Site ID:	DE-1281	
Site Location:	Wilmington, DE	
Site County:	New Castle	
Site Coordinates:	**Latitude:**	39.7431111
	Longitude:	-75.5383337
Last history update by agency:		June 2006
Site Category:		Former metal salvaging
Site Watershed:		Lower Brandywine/Christina
Discharge Point(s):		Bank of Brandywine Creek, underground pipe
Name of Nearest Water Body:		Brandywine Creek
Distance to Nearest Water Body:		Adjacent
Adjacent to Delaware River?		No
PCBs in groundwater?		Unknown
Remediation Complete?		No
If so, when did it end?		N/A

From 1949 to 1992, metal salvaging operations at Diamond State Salvage created significant amounts of contamination on land and the adjacent tidal Brandywine Creek. With virtually all surface water leaving the site via runoff directed to the Creek, the cleanup has involved preventing future runoff, dredging of contaminated sediments, removal of roughly 125,000 tons of contaminated soil, and continual monitoring of air and groundwater. Significant PCB contamination is believed to have come from an underground pipe and a fractured concrete trail at the bedrock level that discharged oil (as high as 340 ppm) directly into the Brandywine Creek. In 1997, total PCB concentrations were elevated in the mud flats adjacent to the site (ranging from 101 µg/kg to 370 µg/kg, using EPA method 680). In addition, Diamond State Salvage's metal reclamation produced significant quantities of contaminated oil that eventually migrated to subsurface soils that may have been carried to the Brandywine by the relatively fast moving groundwater. Contaminants may have been pushed upstream due to tidal influences; PCB contaminated sediments have been found upstream in trace amounts, but possibly due to other sources. Testing could not definitively confirm that these PCBs were actually the result of historic activities at Diamond State Salvage.

The site has reportedly been fully excavated and restored through actions that include: construction of an onsite sedimentation basin, stabilization of the stream bank, grading of site to prevent stormwater runoff, installation of water velocity buffers that diminish overland flow rate during rain storms, and planting and hydro seeding. Though these actions have restored the site to usable status with few restriction (i.e. soil disturbance may cause exposure to latent contamination beneath the clean infill that is above the action level of 10 ppm), DNREC has recently expressed uncertainty as to whether or not this site is still contributing PCBs to the Brandywine Creek (DNREC emails June 22-26, 2006). Currently, the US EPA is seeking a Certification of Completion of Remediation (COCR) in order to facilitate sale of the site to partially recover costs incurred from cleanup activities since 1996.

EPA Region 3

Site Name:	Dover Air Force Base	
Agency Site ID:	DED0000605972	
Site Location:	Route 113 Dover, DE	
Site County:	Kent	
Site Coordinates:	**Latitude:**	39.127781
	Longitude:	-75.466669
Last history update by agency:		October 2006
Site Category:		Department of Defense site
Site Watershed:		Army Creek
Discharge Point(s):		Unknown
Name of Nearest Water Body:		Saint Jones River
Distance to Nearest Water Body:		50 feet
Adjacent to Delaware River?		No
PCBs in groundwater?		Unknown
Remediation Complete?		No
If so, when did it end?		N/A

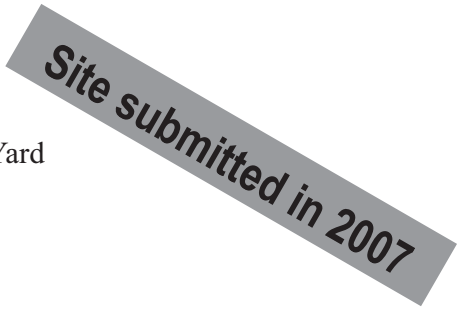
The 3,700-acre Dover AFB site in Dover, Delaware, is the base of operation for the 436th Airlift Wing. The base contains 23 areas on site that were used for the disposal of industrial waste. An estimated 23,000 cubic feet of waste were disposed of from 1951 to 1970. The base's operations generated numerous wastes, some, but not all, in drums, including paints, solvents, waste fuels, and oil. These wastes were disposed of in various on-base locations including 12 landfills and three fire training areas. Access to the site is restricted. There are approximately 1,000 people living on base, and 39,000 people living within a three-mile radius of the site. The distance from the base to the nearest residence is a half mile, and the site is located in a commercial and residential area that is densely populated. The base groundwater well system serves about 10,000 people and is routinely monitored by the Air Force. No contaminants have ever been reported in this system.

Shallow on-site groundwater is contaminated with volatile organic compounds (VOCs) from former waste disposal practices and site operations. A variety of VOCs have been detected in both on- and off-site groundwater including trichloroethylene (TCE), tetrachloroethylene (PCE) and carbon tetrachloride. VOCs also have been detected in the sediments. VOCs and heavy metals including mercury, chromium, and cadmium have been detected in on-site stream waters. EPA did not provide specific descriptions of whether PCBs were still present, and if so, at what concentrations.

Twelve contaminant plumes have been identified in shallow, on-site and off-site ground water. The contaminants are primarily petroleum, volatile organic compounds (VOCs) and to a lesser extent, metals and pesticides. The VOCs include fuel-related components (benzene, toluene, ethylbenzene, and xylene) and industrial-use compounds such as tetrachloroethylene, trichloroethylene, 1,2-dichloroethylene and carbon tetrachloride. Petroleum hydrocarbons, VOCs, metals, pesticides, and semi-volatile organic compounds have also been detected in on-site soils, drainage ditches, surface water and sediments. Potential health threats include exposure to and ingestion of contaminated ground water used for potable purposes. Direct contact with contaminated soil by workers and potential residents may also be a concern. Freshwater wetlands are located on site.

DNREC

Site Name:	Fitzgerald's Auto Salvage	
Agency Site ID:	DE-1315	
Site Location:	17115 Fitzgerald Road, Lincoln, DE	
Site County:	Sussex	
Site Coordinates:	**Latitude:**	38.872778
	Longitude:	-75.441100
Last history update by agency:		April 2006
Site Category:		Former Salvage Yard
Site Watershed:		Mispillion Creek
Discharge Point(s):		Unknown
Name of Nearest Water Body:		Herring Branch
Distance to Nearest Water Body:		Adjacent
Adjacent to Delaware River?		No
PCBs in groundwater?		Unknown
Remediation Complete?		No
If so, when did it end?		N/A



Fitzgerald's Auto Salvage has operated as a salvage yard since 1937. Initial DNREC and EPA site visits revealed the presence of spilled auto fluids and several areas with soil staining. Groundwater at the site, though not tested for PCBs is roughly 10 feet bgs, thus there is a significant chance that surface water and groundwater may be impacted by historic operations at the site especially given the sandy soil types onsite. PCBs were detected at a maximum concentration of 11 mg/kg near a set of scales in surface soil. PCBs are not widespread onsite and, where present, are generally lower than 4.5 ppm according to 2005 sampling. DNREC currently classifies this site as "pre-remedial". Presently, no sediment sampling of adjacent Herring Branch has taken place.

DNREC

Site Name:	Fox Point Park	
Agency Site ID:	DE-1011	
Site Location:	Wilmington, DE	
Site County:	New Castle	
Site Coordinates:	**Latitude:**	39.760000
	Longitude:	-75.488052
Last history update by agency:		April 4, 2006
Site Category:		Former railroad and waste disposal site
Site Watershed:		Brandywine-Christina
Discharge Point(s):		Drainage ditches carry runoff to Delaware River
Name of Nearest Water Body:		Delaware River
Distance to Nearest Water Body:		Adjacent
Adjacent to Delaware River?		Yes
PCBs in groundwater?		Unknown
Remediation Complete?		No
If so, when did it end?		N/A

Site submitted in 2007

This site has a long history of ownership that has presented both opportunities and challenges to its future use. Split into four separate parcels (A, B, C, and D), remediation work has been carried out in several phases. Parcels A and B, the subject of the first Fox Point cleanup by DNREC, were remediated for PCBs by 1994. After placing an impervious cap on these parcels and placing clean soil as a second layer, the site became suitable for, according to Delaware State standards, the creation of Fox Point State Park, its current use. The two remaining contaminated parcels (C and D) are the subject of current remediation efforts (the most recent surface soil sampling found PCBs in 31 of 41 samples averaging 2,390 µg/kg with a maximum of 14,368 µg/kg) and remain closed to public access. Proposed remedial actions will include:

1. Deposition of clean soil that extends over the contaminated surface of parcels C and D that will be accessible to the public through the park entrance when the property is opened as a park
2. Installation of new culverts to isolate three of the four drainage ditches from contaminated sediments and subsurface soil. These drainages ditches carry runoff and potentially contaminated surface soil from as far away the I-495 right-of-way into the Delaware River. These culverts will then be covered and brought to consistent grade with clean fill.
3. A fence will be placed along the Delaware River bank which, "with appropriate park rules, will reduce exposure of park visitors to contaminated sediment in or along the Delaware River" (2005 Consent Order and Agreement).

The current remedial actions are intended to enable parcels C and D to be eventually developed and annexed to the current Fox Point Park. As such, the sediments along the Delaware River, that have PCB loadings that average 224 µg/kg (maximum 583 µg/kg) will be addressed in a subsequent cleanup action.

Groundwater is not believed to be contaminated underneath the site to any significant degree, though further groundwater testing will occur during remedial investigations for the second operable unit (OU2), which is for the aforementioned Delaware River sediments.

DNREC

Site Name:	Former Georgetown Substation	
Agency Site ID:	DE-1286	
Site Location:	Railroad Avenue and Clayton Street, Dagsboro, DE	
Site County:	Sussex	
Site Coordinates:	**Latitude:**	39.735833
	Longitude:	-75.562218
Last history update by agency:		June 2006
Site Category:		Former gas manufacturing plant
Site Watershed:		Broadkill River
Discharge Point(s):		none
Name of Nearest Water Body:		Pepper Creek
Distance to Nearest Water Body:		~300 feet
Adjacent to Delaware River?		No
PCBs in groundwater?		Unknown
PCB Remediation Complete?		Unknown, no post excavation sampling available
If so, when did it end?		N/A

PCBs at low concentrations (4.8 ppm max), but in exceedance of the 2 ppm URS benchmark for restricted development were found during a Phase II site assessment (at generally low levels, but one sample showed 890 ppm near the old capacitor house). This investigation concluded that removal of an estimated 400 yd^3 would suffice to remove all PCB-related contamination from the site. This soil was removed. However, DNREC has advised that should the ongoing groundwater investigation reveal impacted aquifer quality, soil excavation may need to be repeated. Groundwater contamination is being further studied because several other potential pollutant sources are present in the immediate area.

DNREC

Site Name:	Harper-Thiel (former)	
Agency Site ID:	DE-1057	
Site Location:	Wilmington, DE	
Site County:	New Castle	
Site Coordinates:	**Latitude:**	39.7431111
	Longitude:	-75.5383337
Last history update by agency:		June 2006
Site Category:		Former electroplating facility
Site Watershed:		Brandywine
Discharge Point(s):		Potential sewer discharge
Name of Nearest Water Body:		Brandywine River
Distance to Nearest Water Body:		~1 mile
Adjacent to Delaware River?		No
PCBs in groundwater?		No
Remediation Complete?		No
If so, when did it end?		N/A

Site submitted in 2007

The Harper-Thiel site was operated as an electroplating facility from 1946 until April 2000. The electroplating process utilized at the facility involved the use of chrome, nickel, cadmium, copper, gold and silver. After purchasing the site in April of 2000, Karun LLC entered Delaware's Voluntary Cleanup Program (VCP). PCBs present onsite were generally widespread but at low levels in soil (2003 sampling showed maximum levels of 9.8 ppm in the northeast corner of the site). Additional PCB contamination was found beneath a building where a machine shop once stood (up to 11 ppm in one sample of Aroclor 1254). Floor drains within the building were connected to the City of Wilmington sewer in 1970, but the drainage point prior to 1970 is unknown. Additionally, a hardened storm sewer located along adjacent Miller Road conveys water runoff south to a stream in Haynes Park. PCB testing in soil, sediment, and surface water at Haynes Park did not reveal any PCBs. The groundwater at the former Harper-Thiel site is not contaminated with PCBs. Thus, the site's primary contaminant is a variety of metals; PCBs are not a substantial concern and will presumably be removed through excavation of soil contaminated with other substances.

Site Name: Harvey Knott & Drum Co.
Agency Site ID: DED980713093
Site Location: Old County Road, Kirkwood, DE
Site County: New Castle
Site Coordinates: **Latitude:** 39.573331
Longitude: -75.770839
Last history update by agency: October, 2006
Distance to Nearest Water Body: Long Creek
Adjacent to Delaware River? No
PCBs in groundwater? No
PCB Remediation Complete? Yes
If so, when did it end? 1994

This site is outside the Delaware River basin

EPA Region 3

DNREC

Site submitted in 2007

Site Name:	Hay Street Sludge Drying Site	
Agency Site ID:	DE-0024	
Site Location:	Cherry Island, DE	
Site County:	New Castle	
Site Coordinates:	**Latitude**:	39.733333
	Longitude:	-75.508333
Last history update by agency:		July 2006
Site Category:		Industrial fill and municipal waste disposal
Watershed:		Shellpot Creek
Discharge Point(s):		Unknown
Name of Nearest Water Body:		Shellpot Creek, Delaware River
Distance to Nearest Water Body:		Adjacent
Adjacent to Delaware River?		Yes
PCBs in groundwater?		No
Remediation Complete?		No
If so, when did it end?		N/A

A conglomeration of industrial uses both past and present, DuPont, the Hay Street Sludge Drying site's owner, is currently enrolled in DNREC's Voluntary Cleanup Agreement program. In 1958 DuPont purchased the 108 acre Cherry Island property from American Dredging Company and until 1996, operated a disposal site for the DuPont Edgemore plant, roughly one half mile to the north. Though PCBs are not a significant concern (they have been detected at an average of 0.8 ppm site wide, and at 1.639 ppm max), dioxins and metals are the primary COCs at this site. The sources of contamination are twofold: 1) historical deposition of material from the dredging of the Delaware River shipping channel prior to 1958, and 2) disposal of material extremely rich in iron and other substances from DuPont's white pigment producing plant at Edgemore deposited between 1997 and 2001. While the entirety of Cherry Island, wholly owned by DuPont, is zoned for heavy industrial uses, the entire area lies outside of the 100-year floodplain. However, in 2003, hurricane Isabelle caused a large amount of iron rich material to erode into the Delaware River, thus proving the ineffectiveness of the interim remedy, which was to spray a polymer material to prevent both dusting and wind erosion, as well as significant stormwater erosion. Currently, two remedial alternatives are being considered. The first and most likely, is an elaborate impervious surface cap of the former landfill, and the second is full excavation and offsite incineration of roughly 410,000 cubic yards (500,000 tons) of iron rich material with an estimated cost of $386,666,857.

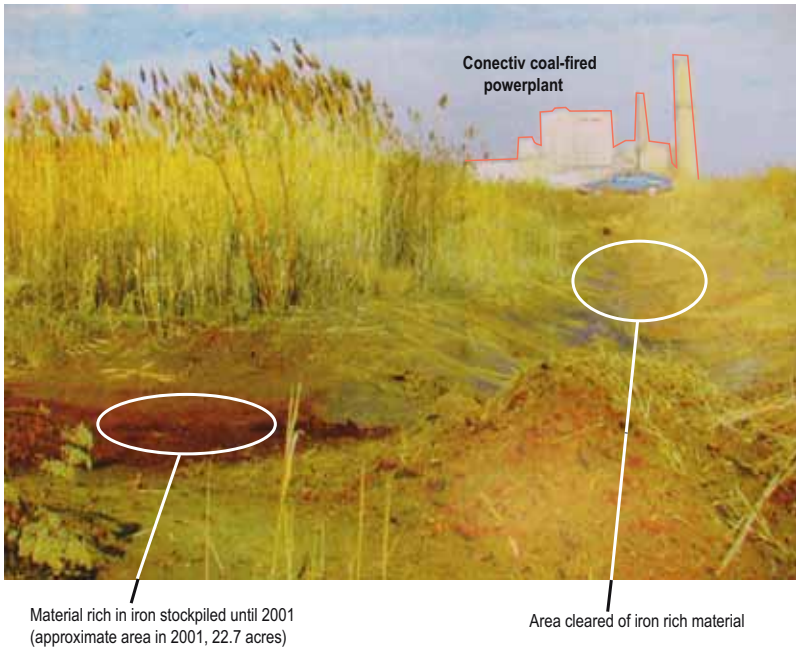


Fig. 7. Iron rich material at Hay Street on Cherry Island in Delaware. *Source*: DNREC

Site Name:	Justison's Landing	
Agency Site ID:	DE-1377	
Site Location:	300 South Madison Street, Wilmington, DE	
Site County:	New Castle	
Site Coordinates:	**Latitude:**	39.7361150
	Longitude:	-75.5597690
Last history update by agency:		May 2006
Site Category:		Industrial
Site Watershed:		Christina River
Discharge Point(s):		N/A
Name of Nearest Water Body:		Christina River
Distance to Nearest Water Body:		Adjacent
Adjacent to Delaware River?		No
PCBs in groundwater?		Yes
PCB Remediation Complete?		No
If so, when did it end?		N/A

This site is also known as Wilmington Public Works Yard. The area has been in constant industrial use since the late 1700s. In 1984, it was purchased by the city. Several structures once existed and the buildings are no longer there, but many foundations remain, as well as active utility lines for water, natural gas, electricity, sewer systems, and phone cables. Surface water runoff drains into the stormwater and sanitary sewer system, which is connected to the publicly owned treatment works.

According to a recent feasibility study, PCBs were found in the river and riverbank sediments around the Christina River Pedestrian Walkway. Proposed remediation included construction of a stormwater management system, the building of concrete and brick walkways over impacted soil, and the stabilization of the riverbank by removing some impacted soil and covering the bank with a geotextile material and riprap armory.

The site is divided into two Operable Units. A groundwater sample taken from OU1 in February 2004 revealed Aroclor-1260 at 15 µg/L in one monitoring well. In June 2004, four out of 27 borings exceeded DNREC soil URS for PCBs (which is 3 mg/kg). In August 2004, four more borings were tested. All were below DNREC URS but one, at 4.2 mg/kg. In groundwater testing, no PCBs were detected in the filtered sample, but 0.94 µg/L were detected in the unfiltered sample (URS is 0.5 µg/L).

Generally, PCB concentrations in OU1 are low enough that exposure does not pose either carcinogenic or non-carcinogenic risks, either restricted or unrestricted. OU2 had no PCBs. Remediation for soil potentially includes excavation and backfilling, which would eliminate the exposed surface soil. Capping and the installation of a vapor barrier are also options. For groundwater, monitoring will be done semi-annually for eight years. There is restricted use of groundwater under the site.

As far as groundwater discharge, PCBs were measured below the URS but above the fish ingestion criteria. PCB removal was performed in OU1 (2005) and recent groundwater samples did not contain PCBs, so ingesting fish is no longer a risk. (Focused Feasibility Study, 2004-2005). "PCBs were identified in the soil ranging from non-detect to 11.8 mg/kg. Soil will be removed to 3 mg/kg. Soil was removed from one area. DNREC has not received the disposal report. The removal for the other area is slated for Fall 2006."

DNREC

Site Name:	Kreiger/Finger Property	
Agency Site ID:	DE-1067	
Site Location:	Bordered by Lombard, Poplar, B and C Streets, Wilmington, DE	
Site County:	New Castle	
Site Coordinates:	**Latitude:**	39.7318510
	Longitude:	-75.5514710
Last history update by agency:		
Site Category:		Industrial/Salvage
Site Watershed:		Christina River
Discharge Point(s):		Unknown
Name of Nearest Water Body:		Christina River
Distance to Nearest Water Body:		1,600 feet southwest
Adjacent to Delaware River?		No
PCBs in groundwater?		Yes
PCB Remediation Complete?		No
If so, when did it end?		N/A

The Kreiger/Finger property takes up 2 acres between Lombard, Poplar, B and C Streets in Wilmington. It is located on the northwest side of a man-made intermittent drainage ditch which flows along the property in a northeasterly direction to the Christina River. The site was home to a scrap metal business for about twenty years, and then an auto salvage yard for an additional thirty. There has been no industrial activity since 1988. Fill from the neighboring Amtrak yard was at one time deposited onto the Krieger/Finger Property, which is the most likely source of PCBs.

8/11/88: There is no evidence that this site is used by the public. "PCB levels as high as 63.5 ppm in grab samples and 84.7 ppm in composite samples were detected in surface soil" (DelTRiP Site Tracking Form, 4/11/2006). Estimated maximum concentration in any spot, based on sample readings, was 384 ppm. Assuming the highest possible concentration, the PCBs in the air would be 15 ng/m^3 (The threshold limit value is 250,000 times this number). Thus airborne PCBs do not pose a threat. Migration could lead to contamination of the Christina River, but this is improbable, due to the size of the site, surface concentration, and distance to the River. It was determined that no further analysis or cleanup was imperative to public health, based on the isolated nature of the site. However, there is still a need for proper closure to prevent off-site migration of contaminants.

8/25/88: No further action required, but residential development is advised against.

DNREC

Site Name:	Meco Drive/Wayman Fire Protection Site	
Agency Site ID:	DE-1103	
Site Location:	Wilmington, DE	
Site County:	New Castle	
Site Coordinates:	**Latitude:**	39.725030
	Longitude:	-75.579910
Last history update by agency:		June 2006
Site Category:		Unknown
Site Watershed:		Brandywine
Discharge Point(s):		Drainage ditch
Name of Nearest Water Body:		Unnamed tributary
Distance to Nearest Water Body:		Runs through site
Adjacent to Delaware River?		No
PCBs in groundwater?		No
Remediation Complete?		No
If so, when did it end?		N/A

The Meco Drive cleanup project consists of seven adjacent properties along Meco Drive in Wilmington, DE (parcel #'s 401, 403, 404, 406, 407, 408, and 410). The entire area was allegedly used as a dump in the 1960s. In 1986, a complaint prompted an investigation that revealed the presence of an oily subsurface plume (later found to be petroleum related wastes, possibly due to one underground storage tank on #406) that was discharging to Little Mill Creek intermittently through a pipe. A drainage culvert running throughout the collective site had been receiving discharge almost continuously, though surface waters showed no contamination above action levels. Because the area is zoned for commercial and industrial use, there is little risk of human exposure but DNREC has initiated remediation of the PCB-free LNAPL plume. PCBs have been found on one property at low levels (1,400 µg/kg Aroclor-1260 and 420 µg/kg Aroclor-1248, or roughly 1,400 parts per billion (ppb) and 420 ppb, respectively). Each of these levels is below Delaware action levels and neither spot sample has any potential of migrating off site.

DNREC

Site Name:	Penn-Del Metal Recycling Corporation	
Agency Site ID:	DE-1057	
Site Location:	Wilmington, DE	
Site County:	New Castle	
Site Coordinates:	**Latitude:**	39.7431111
	Longitude:	-75.5383337
Last history update by agency:		June 2006
Site Category:		Metal recycling
Site Watershed:		Christina River
Discharge Point(s):		None
Name of Nearest Water Body:		Christina River
Distance to Nearest Water Body:		~500 feet
Adjacent to Delaware River?		No
PCBs in groundwater?		No
PCB Remediation Complete?		No
If so, when did it end?		N/A

Penn-Del Recycling Corporation is the current contractor for metal recycling for the city of Wilmington, DE. Having enrolled in Delaware's Voluntary Cleanup Program (VCP), the site has been contaminated with PCBs averaging 39 ppm, but as high as 220 ppm in one sample (in a 2001 test using USEPA method 8082) from past activities. Comprising seven tax parcels, Penn-Del's total area is 3.8 acres, with a two-acre section called the "operations yard" that is used mostly for mechanical sorting of metals, bundling, and shipment of scrap material. There are railroad tracks in the operations yard that ceased operations in the early 1980s, which are believed to be the primary source of PCB contamination. Though further sampling has been ordered to fully delineate onsite contamination, PCBs are not believed to be an offsite risk since little to no surface runoff leaves the site. In addition, both standing water and oil contained on site are not PCB contaminated.

DNREC

Site Name:	Purina Tower Area B	
Agency Site ID:	DE-1264	
Site Location:	South of Northeast Blvd., west of Shellpot Creek, northwest of the Amtrak Maintenance Yard (Wilmington)	
Site County:	New Castle County	
Site Coordinates:	**Latitude:**	39.773056
	Longitude:	-75.519167
Last history update by agency:		Last available record, 2002
Site Category:		Industrial/Landfill
Site Watershed:		Shellpot Creek
Discharge Point(s):		Unknown
Name of Nearest Water Body:		Shellpot Creek
Distance to Nearest Water Body:		Several hundred feet
Adjacent to Delaware River?		No
PCBs in groundwater?		No
PCB Remediation Complete?		No
If so, when did it end?		N/A

Purina Tower Area B is located south of Northeast Boulevard, west of Shellpot Creek, and northwest of the Amtrak Maintenance Yard in Wilmington. It was formerly the location of Ralston Purina Company, beginning ~1940. It is actually 4 property parcels totaling 6.2 acres, but the area of concern is a 3.5 acre portion housing 3 buildings. Concrete silos (from Purina), a masonry block truck garage, and a bus transportation administration building for the Brandywine School District are all housed on the premises. The site is also suspected of formerly containing a municipal landfill, but is now used for bus storage and maintenance.

Surface water is directed to Shellpot Creek, located several hundred feet to the east side of the property. This in turn drains to the Delaware River. In 1988, a general site remediation plan was devised that would remove all non-contaminated building debris (as determined by visual inspection) and transported to a landfill. Contaminated debris was to be wetted, cut into smaller pieces, and disposed of.

Later, in 1995, the Brandywine School District completed a cleanup, including the removal of underground sludge separators, associated petroleum-contaminated soils, the sealing of floor drains, removal of empty 55-gallon drums, four ASTs, and 15 tons of soil. In 1997, two 10,000 gallon fuel tanks and pumps were removed with 933 tons of contaminated soil. Additionally, 68 tons of contaminated soil were excavated and disposed of after a diesel spill.

In 2002, while no PCBs were detected in groundwater, two soil samples were found to exceed the RBC Industrial and RBC Residential limits. In one sample, Aroclor-1254 was at 19,000 mg/kg. In the other contaminated sample, Aroclor-1254 was found to be 410 mg/kg, and Aroclor-1260 was measured at 330 mg/kg. The RBC benchmarks for Industrial and Residential are 2900c and 320c mg/kg, respectively. The “c” refers to carcinogenic hazard.

According to the 2006 DelTRiP Report, “the BPA II report was sent to the EPA on July 23, 2002. PAHs and metals were detected on site but do not appear to be impacting the groundwater beneath the site. DNREC recommended further investigation of the PCB impacted soils outside of the fenced bus parking area. The area where PCBs were detected may be part of the adjacent AMTRAK facility. A survey may be required on site determine the property boundaries.” No information was available after this Brownfields Assessment.

Site Name:	Standard Chlorine/Metachem	
Agency Site ID:	DE-0053, EPA ID# DED041212473	
Site Location:	745 Governor Lea Road, Delaware City, DE	
Site County:	New Castle	
Site Coordinates:	**Latitude:**	39.600000
	Longitude:	-75.640000
Last history update by agency:		November 2005
Site Category:		Former chemical manufacturing facility
Site Watershed:		Red Lion Creek
Discharge Point(s):		Red Lion Creek
Name of Nearest Water Body:		Red Lion Creek, unnamed creek
Distance to Nearest Water Body:		Onsite
Adjacent to Delaware River?		No
PCBs in groundwater?		No
PCB Remediation Complete?		No
If so, when did it end?		N/A

Added to the NPL in 1987 in response to several tank spills, Metachem declared bankruptcy in 2002 after purchasing the site from Standard Chlorine of Delaware (SCD) in 1998. Throughout its operations since 1967, the facility produced several organic chemicals and constituents that have contributed to soil, groundwater, and air contamination. A 1995 Record of Decision (ROD) by EPA listed PCBs as an onsite contaminant. PCB concentrations have been found primarily in a PCB/dioxin area where these substances were loaded into drums, which would have eventually been removed for offsite disposal. PCBs were also found in sediments in both Red Lion Creek and in very small concentrations in onsite soils (0.110 ppm max), described in the ROD mentioned above. PCBs were also produced as byproducts of chemical fabrication processes; thus, PCB contamination has been discovered primarily in wastes at concentrations exceeding 50 ppm (regulating it under TSCA), and must be fully characterized and incinerated offsite. PCBs are primarily found in one tank used to house them after they were distilled out of other liquid waste products by EPA, as well as in other rinse fluids and column bottoms. Between 2002 - 2006, EPA cleaned PCBs out of the process equipment and turned the clean equipment over to a process equipment salvage firm. Since EPA took over the site, the majority of the PCB-containing liquid wastes present have been sent offsite for incineration. The remainder are properly stored onsite awaiting offsite incineration. EPA anticipates making a final remedial decision regarding all remaining onsite soils not addressed in the 1995 ROD (including some PCB-contaminated soils) in 2008.

Most of the site related remediation activities have been in response to several tank spills that released and estimated 574,000 gallons of chlorobenzenes and other constituents that ultimately impacted surface soils, onsite sediments, groundwater, and air quality. The most recent reports available do not refer to PCBs in any media with the exception of the onsite substances referred to above. These substances are classified as being either below 50 ppm (RCRA controlled substance, not in need of incineration) or greater than 50 ppm (TSCA controlled, i.e. mandatory incineration).

DNREC

Site Name:	Wilmington Coal Gas (Northern Section)	
Agency Site ID:	DE-1046	
Site Location:	Madison & Front Streets, Wilmington, DE	
Site County:	New Castle	
Site Coordinates:	**Latitude:**	39.735833
	Longitude:	-75.562218
Last history update by agency:		June 2006
Site Category:		Former gas manufacturing plant
Site Watershed:		Christina River
Discharge Point(s):		Not fully understood
Name of Nearest Water Body:		Christina River
Distance to Nearest Water Body:		~200 yards
Adjacent to Delaware River?		No
PCBs in groundwater?		Unknown
Remediation Complete?		No
If so, when did it end?		N/A

A former gas manufacturing plant, Wilmington Coal Gas (northern section) fabricated carbureted water gas from 1905 until 1956. After 1956, when Delmarva Power purchased the property, transformers were stored in the northern section of the site. Since 1956 the site had a variety of non-intensive uses, most notably the storage of liquid propane gases, and a majority of the site was paved with asphalt, while the remainder is either gravel-covered or vegetated. A variety of contaminants exists beneath the site, but DNREC and its contractors feel that excavation poses a greater risk to both onsite workers and the surrounding community.

PCBs were detected in historic sampling (32.8 ppm, Jan. 1988 in one sample) in soil. Subsequent reports from 2001 to 2005 have not discussed the presence of any PCBs, though an Amtrak electrified railroad passes very close to the site, which are often sources of PCB contamination. There have been inconsistencies in data regarding PCBs. There has been no definitive statement as to whether, or in what concentrations PCB exist onsite, through DNREC has submitted data to DRBC (2003) that indicates Wilmington Coal Gas (northern section) is a current contributor to PCB loadings in the Christina River (2.2378×10^{-6} kg/day). This suggests that sewer culverts on the north end of the site that divert water to the Christina River may be receiving storm runoff that passes over contaminated surfaces, according to at least one DNREC consultant.

Current remedial investigations in 2006 are focusing on site soils and groundwater impacted by NAPLs but no decisions have been made as to the future of the site.

3.3 SITES WITH REPORTEDLY COMPLETE PCB REMEDIATION IN DELAWARE

DNREC

Site Name:	Bancroft Mills	
Agency Site ID:	DE-1130	
Site Location:	1 Mill Road, Wilmington, DE	
Site County:	New Castle	
Site Coordinates:	**Latitude:**	39.733587
	Longitude:	-75.538896
Site Watershed:		Christina River
PCBs in groundwater?		No
PCB Remediation Complete?		Yes
If so, when did it end?		2002
Remedial level attained?		Non residential

Bancroft Mills, located adjacent to the Brandywine Creek, was a die manufacturer since 1831. Site investigation since 1989 included soil, surface water, sediment, air, and groundwater tests. Remediation was completed in 2002, though PCBs were not present in media besides containerized dyes and refuse. A portion of the site was donated to DNREC's Parks and Recreation Division to integrate the property into an existing greenway. Roughly 225 cubic yards of site soils underwent excavation and offsite disposal, though the disposal records do not indicate the presence of PCBs. The site was regraded to near natural topography, and where soil contamination was low enough, was covered with asphalt.

DNREC

Site Name:	Conectiv, Hay Road Facility	
Agency Site ID:	DE-1265	
Site Location:	Hay Road, Wilmington, DE, 19809	
Site County:	New Castle	
Site Coordinates:	**Latitude:**	39.738589
	Longitude:	-75.503618
Site Watershed:		Shellpot Creek
PCBs in groundwater?		Unknown
PCB Remediation Complete?		Unknown
If so, when did it end?		N/A
Remedial standard attained?		N/A

No files were available for Conectiv's (now Delmarva's) facility at Hay Road in Wilmington other than for a variety of air releases of non-PCB containing gases. DNREC submitted this 311 MW power generating station to DRBC, highlighting the presence of PCBs, either currently or in the past, but no information related to PCBs could be found through a file review. In addition DNREC's *2006 Fiscal Outlook* report listed the Conectiv site as "low priority".

DNREC

Site Name:	Former Dagsboro Substation	
Agency Site ID:	DE-1287	
Site Location:	Railroad Avenue and Clayton Street, Dagsboro, DE	
Site County:	Sussex	
Site Coordinates:	**Latitude:**	38.547500
	Longitude:	-75.248511
Site Watershed:		Indian River Bay
PCBs in groundwater?		No
PCB Remediation Complete?		Yes
If so, when did it end?		2006
Remedial standard attained?		Unknown

This site is outside the Delaware River basin

EPA Region 3

Site Name:	Delaware Sand & Gravel	
Agency Site ID:	DED000605972	
Site Location:	229 Grantham Lane, New Castle, DE	
Site County:	New Castle County	
Site Coordinates:	**Latitude:**	39.651389
	Longitude:	-75.602781
Site Watershed:		Christina River
PCBs in groundwater?		No
PCB Remediation Complete?		Yes
If so, when did it end?		2002
Remedial standard attained?		1997

All remedial construction at the site is complete. The site is now in the operation and maintenance phase, which includes operating the soil treatment system, plus quarterly groundwater and vapor testing to ensure the cleanup continues to be effective. Formerly a sand and gravel quarry, the 27-acre site is now an inactive industrial waste landfill located adjacent to another NPL site, the Army Creek Landfill. As early as 1968, the site operated 24 hours a day and accepted municipal trash, construction debris, and industrial wastes; the industrial wastes included at least 13,000 drums of liquids and sludge from chemical production, manufacturing and petroleum refining processes. Beginning in 1983, remediation activities included excavation and off-site disposal of buried drums and 4,000 tons of PCB-contaminated soil, installation of a slurry wall, bioventing, landfill capping and revegetation and groundwater pumping and treatment. The site is currently in its operations and management phase.

DNREC

Site Name:	The Estate of Lester Nolan	
Agency Site ID:	DE-0165	
Site Location:	Area bounded by New York Avenue, New Castle Avenue, Christina Avenue, and the Christina River	
Site County:	New Castle County	
Site Coordinates:	**Latitude:**	39.724167
	Longitude:	-75.541667
Site Watershed:		Christina River
PCBs in groundwater?		No
PCB Remediation Complete?		Yes
If so, when did it end?		2002
Remedial standard attained?		Unknown

The Estate of Lester Nolan has been the location of industrial properties since 1893. The entire property is 33.09 acres, but the area of interest is a 2.9 acre landfill. This landfill is located north of the main plant building of Insteel Industries, Inc, which currently operates as a wire fabricating plant on the site. 0.7 acres of wetlands divides the landfill into east and west sections.

There are no drainage channels within the site, but there is a small channel that was formerly part of a larger tributary system. The wetlands on the site (including the area dividing the landfill) used to drain to the tidal marches adjacent to the Christina River, but railroad construction blocked the connection. During precipitation, groundwater flows in all directions away from the landfill. Within the vicinity of the site, surface water flow is toward the Lobdell Canal, into the Christina River.

Aroclor-1260 was detected in soil having a maximum concentration of 1.7 mg/kg. The next highest concentration was 0.480 mg/kg. The soil regulatory criteria for surface soil is 0.74 mg/kg, and 8.2 mg/kg for subsurface soils. "PCBs were found to exceed DNREC HSCA Reporting Levels for industrial subsurface soils. This detection (one location only) did not exceed the 10^{-5} cancer risk level and therefore, will not require remediation."

DNREC proposed a closure cover option for remediation to deal with other contaminants of concern. This cap was constructed in 2000, and DNREC approved the site closeout report in September of 2002. The site entered the Operations and Maintenance Phase in 2003.

DNREC

Site Name:	Governor Bacon Health Center	
Agency Site ID:	DE-1007	
Site Location:	East of Delaware City, DE 19720	
Site County:	New Castle	
Site Coordinates:	**Latitude:**	39.568056
	Longitude:	-75.582501
Site Watershed:		C&D Canal East
PCBs in groundwater?		None

PCB Remediation Complete? Yes
If so, when did it end? 1992

A former Department of Defense site, decommissioned on December 31, 1945, the Governor Bacon Health Center occupies three contiguous parcels owned by the State of Delaware. The site spans 382 acres, with a tidal marsh present on the property. In 1992 water and soil samples were tested for PCBs using EPA Method 8080. Results indicated PCB levels present below applicable cleanup goals: Aroclor 1254 was detected in soil at 0.46 mg/kg; 510 µg/kg was detected in sediment. No PCBs were detected in groundwater.

A portion of the site noted as *Drum Fire Area* was sampled in 1987 and indicated PCB concentrations as high as 10,000 ppm. However, additional sampling of the *Drum Fire Area* in 1994 revealed that no PCBs were then present, and the 1987 data was regarded as "inaccurate or incorrectly reported" (Site Inspection Governor Bacon Health Center/Fort DuPont State Park, April 2003). According to a 2003 report, Aroclor 1254 may be present in a portion of the property known as *Landfill #1*. However, sediment samples in this area were not collected due to the potential of unexploded ordinance. The report recommends that any future owner of developer of the property enter into a Voluntary Cleanup Program and collect samples for analysis.

DNREC

Site Name: Former Delmarva Power & Light Holly Oak Substation
Agency Site ID: DE-1200
Site Location: NE corner of Delaware Ave. and Governor Printz Blvd., Claymont, DE
Site County: New Castle
Site Coordinates: **Latitude:** 39.784264
Longitude: -75.473256
Site Watershed: Naamans Creek
PCBs in groundwater? No
PCB remediation complete? Yes
If so, when did it end? 2004
Remedial standard attained? Non-residential

This site was an electrical substation until the property was sold in 1999 by Delmarva Power & Light (a wholly owned subsidiary of Conectiv). DNREC requested Conectiv to perform and remedial investigation given the history of released compounds during the substation's operating history. This investigation resulted in the removal of soil contaminated with PCBs, petroleum hydrocarbons, and SVOCs. Post excavation sampling showed one PCB sample (Aroclor 1254) at a concentration of 0.320 mg/kg, which slightly exceeds the URS value for unrestricted use (0.3 mg/kg). The property continues, however, to be zoned residential. Some time after December 2003, the owners have attempted to sell the property, which would likely be eligible for State Brownfields funding. The property currently has soil contaminated with metals and one remaining concrete pad which could potentially still be PCB-contaminated.

DNREC

Site Name: NVF Wilmington
Agency Site ID: DE-1374
Site Location: Bounded by Maryland Avenue, Beech Street, Anchorage and Oak Streets
Site County: New Castle
Site Coordinates: **Latitude:** 39.7400000
Longitude: -75.5300000
Site Watershed: Christina River
PCBs in groundwater? No
PCB Remediation Complete? Yes
If so, when did it end? Unknown
Remedial standard attained? Unknown

National Vulcanized Fibre (NVF) operated a manufacturing company on the ~2 acre site from 1927 until February of 2005. NVF produced engineered plastics and electrical/electronic insulations. According to the Brownfield Investigation Report published in February 2006, the soil had elevated levels of SVOCs and inorganics, but the groundwater was not a threat to human health. As far as PCBs, 58 surface and 49 subsurface soil samples were taken. Very low concentrations of PCBs were found in 2 out of 21 tested samples. These concentrations did not exceed standards. The maximum detected Aroclor-1254 concentration was 0.023 mg/kg, and the maximum detected concentration of Aroclor-1260 was 0.046 mg/kg. The URS for Unrestricted Use for a Non-Critical Water Resource 3 Area is 0.3 mg/kg for both of these types of PCBs. No PCBs were found in the groundwater.

EPA Region 3

Site Name: Wildcat Landfill
Agency Site ID: DED980704951
Site Location: Delaware Rte. 356A & Delaware Rte. 10, Dover, DE
Site County: Kent
Site Coordinates: **Latitude:** 39.120831
Longitude: -75.500000
Site Watershed: Army Creek
PCBs in groundwater? No
PCB Remediation Complete? Yes
If so, when did it end? Unknown

This former landfill has been remediated using several engineering and land use controls. Following the removal of approximately 200 drums and the drainage and treatment of roughly 16,000 gallons of contaminated surface water, development on the site, including the installation of drinking wells on or near the site, has been restricted. In January 2005, with the site's design solutions being fully protective, Kent County purchased several parcels of land to develop into a county park and greenway, as well as a future archaeological research site. The third five-year review was scheduled to be completed in October 2006. Site cleanup was completed in 1992. Information offered by EPA in January 2007 indicated that "PCBs were apparently only detected in subsurface waste samples".

DNREC

Site Name: Wilmington Coal Gas (Southern Section)
Agency Site ID: DE-0114
Site Location: Wilmington, DE
Site County: New Castle
Site Coordinates: **Latitude:** 39.734444
Longitude: -75.563051
Site Watershed: Christina River
PCBs in groundwater? No
PCB Remediation Complete? Yes
If so, when did it end? Unknown

Located approximately 1.5 miles east of the Delaware River, the Wilmington Coal Gas (Southern Section) site occupies 4.4 acres and is divided into five parcels. The property was first developed in 1937, and until 1978 utility poles were stored near a railroad spur on the property. A preliminary investigation in 1987 utilized EPA Methods 5503, 3540 and 8080, and 608 for air (5503 and 3540), soil, and water, respectively. No PCBs were detected in ground water or subsurface soils. However, Aroclor 1260 was detected in surface soils at 32.8 ppm, with further sampling recommended. PCBs were also detected in low levels in unconsolidated material. In 2006 in-situ stabilization combined with excavation was recommended for soil contaminated with diesel range organics and petroleum hydrocarbons. No PCB contamination was noted.

4.1 NEW JERSEY REMEDIATION STANDARDS

New Jersey recognizes several different levels of remedial action. Based on the intended future use, a contaminated site may be cleaned up to one of several standards, which are as follows, based on the New Jersey Brownfields and Contaminated Site Remediation Act (BCSRA) of 1997. (For an effective summary of New Jersey's Brownfield redevelopment criteria and implementation tools, see "New Jersey Gives Brownfields Shot in the Arm" by Bruce S. Katcher, which first appeared in *The Legal Intelligencer* in Jan. 1998).

Essentially, New Jersey's standards provide for one of three options, namely unrestricted (e.g. residential), restricted (e.g. non-residential), industrial or a site-specific arrangement. Whatever the standard, each contaminant must fall at or below the prescribed risk-based value, which in New Jersey does not change per future use. In short , New Jersey's *Technical Rules for Site Remediation* (7:26 E) broadly defines remedial action as "...those actions taken at a contaminated site as may be required by the Department [NJDEP], including, without limitation, removal, treatment measures, containment, transportation, securing, or other engineering or institutional controls, whether to an unrestricted use or otherwise, designed to ensure that any discharged contaminant is remediated in compliance with 7:26 E".

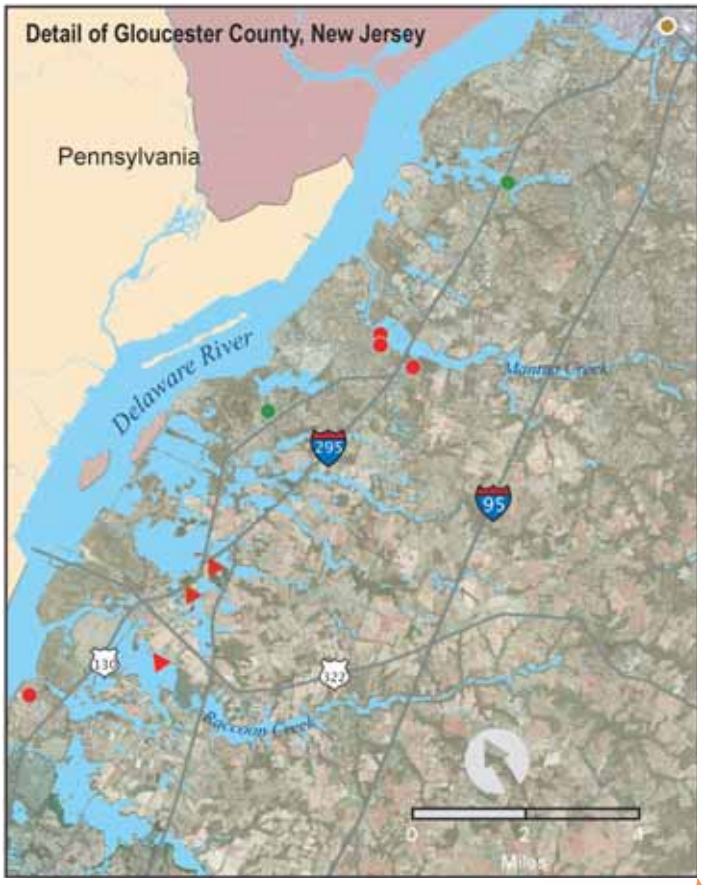
It defines different surface water bodies according to their natural characteristics and also their intended use. N.J.A.C. 7.9B-1.12 designates the uses for all types of waters. Within the Delaware River Basin there are five separate distinct types of surface water bodies and, as illustrated below, have different allowable concentrations of PCBs. Each of these uses also allow for "other reasonable uses", that do not lead to impairment of their intended use. The surface water standards apply to all other water bodies as well. Sediments, while not having a specific remediation standard, must not be allowed to contribute to substantial risk to human uses (i.e. fishing, recreation, potable water etc.) or ecological vitality. This threshold is considered to be crossed when a given contaminant is found in concentrations that exceed the risk value greater than 1 x 10^{-6} over an expected human lifetime of 70 years.

Table 11. New Jersey Remediation/Quality Standards for PCBs

SOIL (N.J.A.C 7:26D, 1992)		
Residential Direct Contact Soil Cleanup Criteria	**Non-Residential Direct Contact Soil Cleanup Criteria**	**Impact to Groundwater Soil Cleanup Criteria**
0.49 mg/kg	2 mg/kg	50 mg/kg
GROUNDWATER (N.J.A.C 7:9C, 2005)		
Groundwater Quality Criteria	**Practical Quantitation Level**	
0.02 µg/L	0.05 µg/L	
SURFACE WATER (N.J.A.C. 7:9B, 2005)	**Surface Water Body Classification**	
Criteria in µg/L		
0.014 c; 0.00017 hc	All FW2	
0.03 c; 0.00017 hc	All SE	

NOTE: for a listing of waterbodies by catgory, please see N.J.A.C 7:9B, infra., available at www.state.nj.us/dep/wmm/sgwqt/swqs-docs.html.

Fig. 8. Status of Known PCB Sites in the State of New Jersey



NJDEP submitted 10 sites for the 2006 DelTRiP report. Files for all but one site (Woodstown-Pilesgrove Sanitary Landfill) were available and an additional two sites were discovered through outside research, both of whose remedial statuses could not be confirmed through file review (Trenton Fibre Drum Company, Inc. and Fazio Sanitary Landfill). These three sites may still contain PCBs. In addition, Safety Kleen Bridgeport is now solely under EPA Region 2 lead. Therefore, EPA Region 2 leads remediations at eight sites undergoing cleanup for PCBs. Additionally, three sites submitted by EPA were found to be outside of the Delaware River basin, and thus, will not be summarized in the current 2007 report or in future editions.

Number of Known PCB Sites in the State of New Jersey by Lead Agency and Current Remedial Status

- 4 — EPA Region 2 sites with reportedly completed remediation
- 8 — EPA Region 2 lead sites with ongoing PCB remediation
- 2 — NJDEP lead sites with reportedly completed PCB remediation
- 4 — NJDEP lead sites with ongoing PCB remediation
- 3 — Unknown remedial status (NJDEP)

4.2 SITES WITH ONGOING PCB REMEDIATION IN NEW JERSEY

EPA Region 2

Site Name:	Bridgeport Disposal, LLC (previously known as Safety Kleen, Inc., Bridgeport, Laidlaw Environmental Services, and Rollins Environmental (submitted in 2006 by NJDEP)	
Agency Site ID:	NJDEP ID# 004586 (EPA ID# NJD053288239)	
Site Location:	Bridgeport, NJ	
Site County:	Gloucester	
Site Coordinates:	**Latitude:**	39.786667
	Longitude:	-75.353056
Last history update by agency:		2006
Site Category:		Former Hazardous Waste Disposal Facility
Site Watershed:		Delaware River
Discharge Point(s):		Raccoon Creek
Name of Nearest Water Body:		Raccoon Creek, unnamed wetlands
Distance to Nearest Water Body:		Adjacent
Adjacent to Delaware River?		No
PCBs in groundwater?		Potentially
Remediation Complete?		No
If so, when did it end?		N/A

Bridgeport Disposal, LLC is currently at the beginning stages of its PCB-related remediation under a RCRA corrective action. Operating under several different names and under the ownership of several different proprietors, it operated as a RCRA-approved commercial treatment, storage and disposal facility for hazardous wastes from 1969 to 2001. The facility accepted a variety of wastes that were incinerated. Incineration activities also generated residues (such as fly ash) that were disposed onsite before 1980.

Adjacent to Raccoon Creek, a tributary to the Delaware River, and a series of unnamed wetlands, most of the PCB-related contamination likely resulted from an explosion and fire in December 1977 that destroyed 18 of 31 tanks that contained a variety of wastes and constituents, including PCBs. To extinguish the extensive fire, crews used water from nearby lagoons that were tainted with a variety of contaminants, thereby resulting in a wide dispersion of organic substances. Following the fire, NJDEP ordered the facility closed for one month, whence removal of the top 12 inches of soil from the tank farm, roughly 120,000 gallons of contaminated liquids and ponded "fire water", and the planning for the removal of liquids present in the lagoons would take place. In addition, the 11 hazardous waste "impoundment areas" that held liquid wastes were to be closed (closure was completed in 1986). Although these efforts were intended to remediate any resulting contamination from either the fire or that water used to put it out, data generated between 1988 and 1996 in a series of RCRA remedial investigations indicate that these efforts were only partially successful.

A 1981 NJDEP issued administrative and consent order (ACO) ordered the then owner, Rollins Environmental Services, to begin groundwater monitoring and abatement for a variety of substances, including PCBs, which continues to present day. Treated water is discharged intermittently into Raccoon Creek under a NJPDES permit during outgoing tide periods, averaging roughly 0.47 mgd. Numerous sampling events between 1988 and 1996 (totaling 369 samples from 0-16 feet bgs and 191 samples from 0-2 feet bgs) samples have revealed widespread PCB contamination in almost all areas of the 78 acres where the facility previously operated ranging from below detectable levels to over 500 ppm. The validity of prior testing has been brought into question by Bridgeport Disposal, LLC's consultant in 2005 in which they claim that "quantitative [phase I soil sampling] statements about the results cannot be extrapolated to the entire site…Therefore, a more appropriate approach to sampling must be implemented to collect data required to evaluate remediation strategies (if required). It is anticipated that only [one] additional phase will be required to define the extent of impacts; additional phases may be required for area-specific delineation based on results of the first [two] phases" (Clean Harbors, Inc., 2005). An additional 60

samples are therefore planned to fully delineate PCB concentrations in surface and subsurface soils using EPA methods 8082 and 1668A, a more expensive variant capable of detected more specific congeners. 1993 testing of the area known as the Northern Marsh (the adjacent NJ-recognized wetland area) showed PCB results ranging from 0.16 ppm to 159 ppm in soils. This is the data that will reportedly be used for a future ecological risk assessment.

Site Name:	Bridgeport Rental Oil Services (BROS)	
Agency Site ID:	NJD053292652	
Site Location:	Logan Township (Town of Bridgeport)	
Site County:	Gloucester	
Site Coordinates:	**Latitude:**	39.801669
	Longitude:	-75.321661
Last history update by agency:		July 2006
Site Category:		Former waste oil recycling facility
Site Watershed:		Delaware River
Discharge Point(s):		Little Timber Creek
Name of Nearest Water Body:		Little Timber Creek, Cedar Swamp
Distance to Nearest Water Body:		Onsite
Adjacent to Delaware River?		No
PCBs in groundwater?		Yes
PCB Remediation Complete?		No
If so, when did it end?		N/A

Fig. 9. BROS in the 1980s. *Source:* US EPA

BROS represents one of the most complex and expensive cleanups in New Jersey's history according to the EPA. The 30-acre parcel of land was once used as a waste oil storage and recovery facility that housed a tank farm with roughly 100 tanks, process vessels, drums, tank trucks, and, most significantly, a 13-acre unlined waste oil and wastewater lagoon. The sludge that settled to the bottom of the lagoon acted to partially prevent certain portions from fully entering the water table, which remains fairly constant throughout the site at roughly 10 feet below the surface of the lagoon; thus, the lagoon was in direct contact with groundwater. Initial estimates in 1981 indicated that the waste oil lagoon contained roughly 2.5 million gallons of oil contaminated with a variety of substances, primarily PCBs, and an additional 70 million gallons of contaminated wastewater. More accurate assessments of contaminated surfaces became apparent later, when as of 2005, over 250 million gallons of wastewater had been treated and discharged to Little Timber Creek. An onsite incinerator was installed in 1991, which ultimately eliminated over 172,000 tons of contaminants, including roughly 80,000 tons of PCB impacted sediments from the lagoon (with PCB levels as high as 6,000 ppm). The lagoon was eventually fully excavated and backfilled with almost half a million tons of clean fill after the last of the over 5,200 55-gallon drums had been removed from it and its bank in 1996. Additionally, 350 drums, eight large gas cylinders, and approximately 4,000 cubic yards of soil were excavated and removed from site between 2001-2003.

At present, efforts are being made to address three different plumes of PCB-containing LNAPL that are believed to have migrated up to one-half-mile from site and the dissolved phase organic compound water plume. The LNAPL plumes are distributed over a three acre on-site area and have impacted the Potomac-Raritan-Magothy aquifer. LNAPL characterization data collected at the site indicates total PCB concentrations up to 4,300 ppm. EPA's September 2006 Record of Decision proposes innovative technologies as well as traditional methods to address the LNAPL and groundwater plumes. The 800 nearby residents who have historically used well water have been connected to public water supplies. Ten acres of sediment and soil from neighboring Little Timber Creek Swamp will also be excavated (PCBs as high as 400 ppm and 120 ppm, respectively) down to depths of over three feet. The wetland will be restored upon completion of the remedial action. In addition, PCB impacted onsite soil remains and extends to depths exceeding 25 feet below ground surface.

EPA Region 2

Site Name:	Burnt Fly Bog	
Agency Site ID:	NJD980504997	
Site Location:	Marlboro Township, NJ	
Site County:	Monmouth	
Site Coordinates:	**Latitude:**	40.375
	Longitude:	-74.279169
Last history update by agency:		June 2006
Adjacent to Delaware River?		No
PCBs in groundwater?		Yes
PCB Remediation Complete?		No
If so, when did it end?		N/A

This site is outside the Delaware River basin

EPA Region 2

Site Name:	Chemical Leaman Tank Lines, Inc.	
Agency Site ID:	NJD047321443	
Site Location:	Logan Township	
Site County:	Gloucester	
Site Coordinates:	**Latitude:**	39.798331
	Longitude:	-75.332781
Last history update by agency:		May 2006
Site Category:		Former tanker truck washing facility
Site Watershed:		Delaware River
Discharge Point(s):		Great Cedar Swamp
Name of Nearest Water Body:		Great Cedar Swamp, Moss Branch Creek
Distance to Nearest Water Body:		Adjacent
Adjacent to Delaware River?		No
PCBs in groundwater?		Yes
PCB Remediation Complete?		No
If so, when did it end?		N/A

Since 1961, Chemical Leaman Tank Lines, Inc. (CLTL) has operated a tank washing facility on its 34 acre property. Prior to 1975, the wastewater from cleaning the trucks that contained chemicals was stored in seven unlined lagoons which ultimately discharged to adjacent Great Cedar Swamp and Moss Branch Creek. EPA noted during a 1990 site visit that "…there is a 75-foot wide swath of dead trees that marks the effluent flow path". When these lagoons were closed, the sludges that covered the bottoms were removed and disposed off site.

PCB levels in soil averaged 2,160 µg/kg of Aroclors-1254 and 1248 in 1991. In addition, PCBs were found in two out of 30 sediment samples in adjacent Great Cedar Swamp up to 7.4 mg/kg but not in surface water or groundwater. The choice of remediation for the swamp was excavation of a swale area, totaling roughly 11,500

tons over 7.3 acres, filling with clean infill, and restricting access to the site while groundwater continues to be monitored over the long term for a variety of COCs. Reconstruction of the diminished wetlands is also ongoing.

The onsite soils (operable unit 2) were reportedly not remediated upon choosing a "no action" as the preferred alternative. This decision by EPA's cleanup branch has received criticism from within EPA, and from NJDEP and NOAA. This will have left in place unsaturated zone soils and sludges within the former lagoons, which are believed to be a continual source of groundwater contamination. Thus, the PCB levels reported above are presumably still onsite, leaving an estimated 26,000 cubic yards of contaminated surface and subsurface soil, though there has been no recent soil or sediment sampling to confirm this. Aroclor 1248 was found at a concentration of 1.6 mg/kg in 1991 surface soils. The EPA is currently completing a remedial investigation of the remaining areas and have not yet selected a remedial alternative; they expect to issue a ROD for this OU in 2008.

OU3 consists of onsite wetlands. Remediation of the wetlands was completed in June 2006. The remediation consisted of the excavation, backfill and restoration of the wetlands. A total volume of 8421 tons of soil and sediments consisting of metals, SVOCs and pesticide/PCB contaminants were removed during the remedial action. The only PCB of concern found in sediment was Aroclor 1254. All detected levels were excavated and replaced with clean fill and the cleanup confirmed with post-excavation sampling. The target cleanup goal established was 1,000 ppb and the highest post excavation sample measured at 410 ppb.

Site Name: Dayco Corp./L.E. Carpenter Co..
Agency Site ID: NJD002168748
Site Location: Wharton, NJ
Site County: Morris
Site Coordinates: **Latitude:** 40.90333
Longitude: -75.5775
Last history update by agency: June 2006
Distance to Nearest Water Body: Adjacent
Adjacent to Delaware River? No
PCBs in groundwater? Yes
PCB Remediation Complete? No
If so, when did it end? N/A

This site is outside the Delaware River basin

EPA Region 2

Site Name: Fort Dix Landfill
Agency Site ID: NJ2210020275
Site Location: Pemberton, NJ
Site County: Burlington County
Site Coordinates: **Latitude:** 39.980100
Longitude: -74.624400
Last history update by agency: Last available record dated
Site Category: Department of Defense site
Site Watershed: Newbold Run
Discharge Point(s): Unknown
Name of Nearest Water Body: Newbold Run
Distance to Nearest Water Body: 1,200 feet
Adjacent to Delaware River? No
PCBs in groundwater? No
Remediation Complete? No
If so, when did it end? N/A

EPA Region 2

The NPL Fort Dix Landfill Site consists of a 126-acre (principal) landfill. This site has been capped and is not leaching any PCBs into the environment. The remaining 33,000 acres of Fort Dix is divided into seven BRAC

properties that are tracked by EPA and 30 plus sites that are tracked by the State. The BRAC properties are grouped into four operable units been divided into multiple operating units (OU1 through OU4) to facilitate study and remediation described below. The remediation activities at OU4 have been completed. Activities at OU1 and OU2 are ongoing. No PCBs were detected in the area of OU3.

OU1
PCB contamination in the area of OU1 was studied in three phases. Phases 1 and 2 identified and studied the transformers in the survey area. The Phase 3 study identified Aroclor 1260 contamination in a high voltage room in the Mid-State Correctional Facility, located on the property. Concrete chips from the room indicated PCB concentrations as high as 57,000 mg/kg. The aroclor was also found in the soil outside of the exterior door to the room with a concentration as high as 13 ppm. The next step for this operating unit, under State oversight, is to evaluate the options for treatment and removal. In addition to the Mid-State Correctional Facility, also included in OU1 is a landfill area. A 1989 study indicated that PCBs were not detected in ground water or in the surface water of Cannon Run.

OU2
A survey of the area of OU2 indicated two underground tanks used to store waste oil. No PCBs were found in ground water, though Aroclor 1260 was detected in surface and subsurface soils. The underground storage tanks were removed in 1997, along with 100 cubic yards of soil that had a PCB concentration ranging from 5.2 ppm to 24.4 ppm. Further delineation of the area of OU2 in 2000 and 2001 indicated surface concentrations of Aroclor 1260 ranging from 0.017 mg/kg to 2,000 mg/kg, and subsurface concentrations of this aroclor ranging from 0.018 mg/kg to 3,400 mg/kg. In the spring of 2003 an interim solution to remove and dispose of PCB contaminated soil was approved. A Remedial Investigation and Closure Report was prepared in 2004 but was not yet released to the EPA's record management system as of the DelTRiP review in June 2006.

OU4
The area of OU4 was divided into multiple Areas Requiring Environmental Evaluation (AREE). The PCB transformer storage area, also known as *AREE29*, was initially investigated in 1993. Soil concentrations of Aroclor 1260 were as high as 0.850 µg/kg. PCBs were not detected in the surface water of Newbold Run or sediment. Aroclor 1260 was also detected on the interior walls and floor of a building with a concentration as high as 2,291 µg/kg. Likewise, Aroclor 1016 was detected on the interior walls and floor as high as 24.5 µg/kg. In 2002 the building was demolished and 34 tons of soil was removed.

Transformers with PCB oil were also found atop poles in *AREE41* of OU4. The soil under the poles was tested and ranged from 1 ppm to 4 ppm. No further action was recommended.

NJDEP

Site Name:	Hercules Incorporated Facility (Burlington)	
Agency Site ID:	N/A	
Site Location:	300 Neck Road, Burlington NJ	
Site County:	Burlington County	
Site Coordinates:	**Latitude:**	40.092222
	Longitude:	-75.833056
Last history update by agency:		
Site Category:		Industrial
Site Watershed:		Delaware River
Discharge Point(s):		N/A
Name of Nearest Water Body:		Delaware River
Distance to Nearest Water Body:		Adjacent
Adjacent to Delaware River?		Yes
PCBs in groundwater?		Yes
PCB Remediation Complete?		No
If so, when did it end?		N/A

This 135 acre site is at the juncture of River and Neck Roads, in Burlington County. The west side of the site borders the Delaware River. From 1947-1992, Hercules manufactured resins that were used in ink, gum, and perfume production. From 1953-1971, the company produced dimethylterephthalate, and from 1962-1969, it made Herban, an agricultural herbicide. Industrial operations on the site ceased in 1992. The site is currently owned by Burlington Neck, LLC. According to the Final (100%) Remedial Design, "Surface water runoff from the Site is collected in man-made ditches which discharge to stormwater basin at southwest corner of site. Water discharges from basin to Delaware River."

As of 2001, 64 out of 101 Areas of Concern (AOCs) were determined to require No Further Action. Out of the remaining 37 AOCs, PCBs were detected in 27, which were grouped into 4 Operating Units (OUs). OU1 consists of sediment and surface soils in and around the stormwater drainage system. OU2 includes the contaminated surface soils in other areas of the site. OU3 refers to the former wastewater lagoons, including the South Pit. OU4 is composed of four groundwater AOCs. NJDEP approved monitoring natural attenuation at OU4 with a classification of Exception Area Designation. OU4 is not part of the scope of PCB remediation. "In general, the PCB soil contamination at the Hercules Burlington site can be described as widespread and low level. Most of the PCB results which exceed the standard are in the 1-3 ppm range." (DelTRiP Annual Report, January 2006) The PCBs on site have not migrated to the water table and the impact to groundwater has not been exceeded. Soil boring samples taken from both OU1 and OU2 on 3/30/2006 had a maximum PCB concentration of 10.5 mg/kg. All other concentrations were under 2 mg/kg, which is the level for non-residential use. No PCBs were found in the stormwater.

Proposed remedial action for OU1 and OU2 consists of excavation and onsite reuse. OU3 will be filled with rubble fill and excavated material from OU1 and OU2 and then capped. Soils with PCBs over 100 mg/kg will be excavated and disposed of off-site. This is estimated to be about 45 yd^3. According to the April 2006 monthly progress report, remedial closeout is scheduled to end October of 2006, and the project would then end in August of 2007.

EPA Region 2

Site Name: Imperial Oil Co. Inc./Carpenter Chemicals
Agency Site ID: NJD980654099
Site Location:
Site County: Monmouth
Site Coordinates: **Latitude:** 40.383889
Longitude: -74.245831
Last history update by agency:
Distance to Nearest Water Body:
Adjacent to Delaware River? No
PCBs in groundwater? N/A
PCB Remediation Complete? No
If so, when did it end? N/A

This site is outside the Delaware River basin

NJDEP

Name: Lail Property (Exxon/Mobil)
Agency Site ID: PI#G000005968
Site Location: East Greenwich Township, Borough of Paulsboro
Site County: Gloucester County
Site Coordinates: **Latitude:** 39.832222
Longitude: -75.231667
Last history update by agency:
Site Category: Industrial
Site Watershed: Mantua Creek
Discharge Point(s): N/A
Name of Nearest Water Body: Mantua Creek
Distance to Nearest Water Body: ~300 feet
Adjacent to Delaware River? No
PCBs in groundwater? Yes
PCB Remediation Complete? No
If so, when did it end? N/A

This site is in Gloucester County, southeast of the Interstate 295 overpass of Mantua Creek. The property is about 16 acres and includes a tidally influenced freshwater embayment, a freshwater wetland, and upland areas. The Delaware River is about 2 miles from the site, which is bounded by I-295 and commercial facilities. The site was previously investigated in 1986, and 17 subsurface anomalies were found. Four were determined to be potential drum areas. Three of these were remediated by removing drums and soil, and no further action was required. The fourth site contained aluminosilicate materials (ASM), high in PCB concentrations, which had been dumped there in the 1950s.

FROM DelTRiP ANNUAL REPORT, JANUARY 2006 (Revised)

The site consists of a tidally influenced embayment off the Mantua Creek (which contains up to 4' of water during high tide and only isolated puddles during low tide), and emergent wetland and surrounding upland areas. The embayment was created through excavation for borrow material and is part of the Mantua Creek, which flows into the Delaware River two miles from the site. The site is surrounded by industrial, commercial, and residential properties. Previous environmental investigations and remediation revealed and removed buried drums and associated contaminated soils from six separate areas of the site. Area J was revealed to be an area with buried material containing PCBs, specifically Aroclor-1254. The material placed into the former borrow pit was a catalyst used in the petroleum industry and consists of ASM which was passed through a bath containing Aroclor

1254 and fired to a glass-like consistency. The material was placed into the borrow pit during the 1950s. ASM is only found in the locations in which it was originally dumped in the 1950s, because of its cohesive properties when saturated. According to the referenced document and portions of a report included as Appendix A, the aluminosilicate material is up to nine feet thick and contains PCB levels of either up to 5,800 ppm or up to 21,000 ppm (conflicting data exists). Regardless of which data is more accurate, the PCB levels exceed NJDEP soil cleanup criteria (0.49 ppm), ecological screening benchmarks 0.060 ppm of Aroclor-1254) and TSCA removal criteria (100 ppm) by several orders of magnitude.

The sample containing 5,800 ppm of Aroclor-1254 yielded a TCLP concentration of 0.011 ppm or 11 ppb (0.0002% of the total concentration). The solubility of Aroclor 1254 is 12 ppb. Therefore, even though conditions in the TCLP analysis provide a more favorable condition for leaching than pure water at 20º C, this result still indicates a high level of solubility. The cover over the buried ASM is anywhere from nonexistent to five feet thick. Approximately 30,000 cubic yards of material exists in the embayment and adjacent upland areas with approximately 75% of the emergent wetland containing ASM.

SEDIMENTS

The embayment and wetland area sediments consist mainly of sands on the western portion of the embayment, the mudflats and the southern emergent wetland area. The northern portion of the embayment is comprised of gravel and sand, and the middle portion of the embayment and the eastern emergent wetland is comprised mainly of silt. During the May/June 2001 sampling event, sediment samples were collected in twenty-seven locations, with PCBs detected in twenty-five of these locations. PCB concentrations in the shallow sediments ranged from 0.14 ppm to 1,200 ppm while concentration in deep sediments ranged from 0.092 ppm to 1,060 ppm. PCB levels in all 25 locations (49 samples) exceed ecological screening benchmarks for fresh water sediments (0.060 ppm for Aroclor 1254 and 0.070 ppm for total PCBs). Twenty-two of the shallow sediment samples and twenty-one of the deep sediment samples exceed the NJDEP soil cleanup criteria (SCC) (0.49 ppm), and four of the shallow sediment samples and one deep sediment sample exceed the TSCA removal criteria (100 ppm). Previous investigations revealed PCB concentrations up to 21,000 ppm, but this result was never approached or duplicated. In addition to aluminosilicate material (ASM), which was detected in five locations in the May/June 2001 sampling event, a petroleum odor or sheen was observed in four locations during this event.

As evidenced in file review during the summer of 2006, in sediments, there were no PCBs detected in 37% of 480 samples. Concentrations exceeded the Lowest Effect Levels in the Delaware River, Mantua Creek, embayment, and the connecting channel. 72% were below the Severe Effects Level Sediment Quality Guideline. The range of these results were 0.52 mg/kg – 1200 mg/kg. The average was 155 mg/kg in ASM areas, down to an average of 1.3 mg/kg with increasing depth. Outside ASM areas, the average PCB concentration was 1.3 mg/kg, down to 0.22 mg/kg at deeper levels. (Remedial Action Work Plan, 2/2006)

SOIL

Six soil samples were collected from the three monitoring wells (two samples from each well) during installation in April 2001. Four of the six soil samples exhibited PCB concentrations ranging from 0.21 to 3.9 ppm, with three of the six soil samples exceeding the NJDEP SCC. The remaining two samples, MW1 S1 0”-6” and MW2 S-1 12”-18” exhibited estimated concentrations of 0.094 ppb and 0.075 ppb, respectively.

As of summer 2006, PCBs were nondetect in 46% of 221 soil samples. Concentrations were below the Residential Direct Contact Soil Cleanup Criteria of 0.49 mg/kg in 64% of samples. The range of results was 0.32 – 2300 mg/kg, and the average was 155 mg/kg. With depth, the range was ND – 2.8 mg/kg; the average was 0.56. Outside ASM area, the average concentration was 0.67 mg/kg. (Remedial Action Work Plan, 2/2006)

GROUNDWATER

Three groundwater samples were collected from the monitoring wells in May 2001. MW3 exhibited a PCB concentration of 2.54 ppb, which exceeds the NJDEP groundwater quality standard (GWQS) of 0.5 ppb. MW1 and MW2 exhibited estimated concentrations of 0.5 ppb and 0.56 ppb, respectively.

During summer 2006 file review, it was revealed that in three subsequent rounds of sampling and testing (8/2002, 8/2003, and 9/2003), no PCBs were detected. No further action was required by the NJDEP. (Remedial Action Work Plan, 2/2006)

SURFACE WATER

Eight surface water samples were collected from selected sediment sample locations in May 2001. One surface water sample exhibited a PCB concentration of 3 ppb, which exceeds the NJDEP surface water quality standard (SWQS) of 0.014 ppb (freshwater aquatic) and 0.000244 ppb (freshwater human health). The SWQS is based on total concentration in unfiltered samples. One of the surface water sample bottles was broken by the laboratory and was not analyzed and two of the samples were collected four feet above the sediments instead of the zero to six-inch interval above the sediments.

As of summer 2006, 2001/2002 samples had PCB concentrations exceeding surface SWQC (0.014 ug/L) by almost 240 ug/L. However, results from a 2004 analysis from the embayment area showed concentrations below SWGC. (Remedial

WILDLIFE

Six vegetation samples (common Spatterdock) were collected within the embayment and wetlands in May 2001. All vegetation samples were ND for PCBs. Eight composite samples of mummichogs and rainwater killifish along with one duplicate sample and one MS/MSD sample were collected within the embayment in June 2001 for analysis of PCBs and % lipids. All ten samples exhibited PCB concentrations ranging from 1.26 ppm to 8/6 ppm. The fish were collected from the northern and northeastern portion of the embayment where PCB concentrations are at the lowest levels within the embayment; however, the fish were collected at low tide from the remaining water within the channel and represent fish from the entire embayment. During low tide, small fish are densely packed into available standing water. One unidentified killifish and one juvenile stripped bass were also caught during the sampling event.

PROPOSED REMEDIAL ACTIONS as of 2/2006:

As of 2/2/2006, Exxon Mobil had determined the extent of PCB contamination, and will asses the potential environmental hazards associated with it. This will be found in the Ecological and Human Health Risk Assessments, when it is published.

Proposed remedial actions include:

1. Construction of two stone berms to reduce movement of sediments and fish between ASM and Mantua Creek.
2. Removal and disposal of ASM containing PCBs. Exxon Mobile submitted a Site-Specific PCB disposal approval request to the EPA to outline where the PCBs will be disposed. However, Site Specific standards have not yet been determined. Also submitted was a plan for post-remedial monitoring, including quarterly and storm event inspections. (Remedial Action Work Plan, 2/2006)

NJDEP

Site Name:	Manchester Machinery and Salvage Site (former)/Dana Transport	
Agency Site ID:	NJDEP# 7754	
Site Location:	Crown Point Road, West Deptford Township	
Site County:	Gloucester	
Site Coordinates:	**Latitude:**	39.832222
	Longitude:	-75.226389
Last history update by agency:		June 2006
Site Category:		Industrial
Site Watershed:		Mantua Creek
Discharge Point(s):		Mantua Creek
Name of Nearest Water Body:		Mantua Creek
Distance to Nearest Water Body:		Adjacent
Adjacent to Delaware River?		No
PCBs in groundwater?		Yes
Remediation Complete?		No
If so, when did it end?		N/A

This site includes several properties located along Crown Point Road and adjacent to Mantua Creek, a tributary to the Delaware River. The site was in use for more than 40 years fort machine, salvage, welding, and other assorted operations. Contamination has been confirmed from waste oils and drums disposed onsite and draining of transformer oil that contributed PCBs, petroleum hydrocarbons, metals, PAHs, and pesticides to soil, groundwater, surface waters and sediments of Mantua Creek. PCBs seem to be widespread across the site, consisting of ten separate tax parcels, with one soil sample revealing a range of concentrations between 0.009 ppm and 1,240 ppm on lot 22, acquired by Dana Transport in 1995 from Shell Oil. Though not extensive, several rounds of sampling in 1986 and 1997, with one additional sampling event in 1999 for sediments, revealed extensive contamination, principally with PCBs. Lot 25, whose historic operations include scrap and equipment salvage from 1963 to 1987 had a maximum PCB soil concentration of 36 ppm in 1997.

The most recent (1997) groundwater and surface water sampling revealed PCBs as high as 390 ppb and 5.5 ppm, respectively. The NJDEP standards for groundwater and surface water concentrations are 0.5 ppb and 0.014 ppb (for freshwater aquatic life). The most recent 1999 sediment sampling event revealed PCBs in 11 of 17 samples with a maximum concentration of 11 ppm. To date, there has been no effective cleanup of any of the ten parcels. Currently, NJDEP is coordinating an extensive sampling plan with its contractor, Louis Berger Group, Inc., in order to determine possible remediation strategies.

EPA Region 2

Site Name:	Martin Aaron, Inc. (submitted in 2006 by NJDEP)	
Agency Site ID:	NJDEP ID# 12007 EPA ID# NJD014623854	
Site Location:	1542 South Broadway, Camden, NJ	
Site County:	Camden	
Site Coordinates:	**Latitude:**	39.926286
	Longitude:	-75.119378
Last history update by agency:		2006
Site Category:		Industrial
Site Watershed:		Woodbury Creek
Discharge Point(s):		Unknown
Name of Nearest Water Body:		Delaware River
Distance to Nearest Water Body:		~0.75 miles
Adjacent to Delaware River?		No
PCBs in groundwater?		No
Remediation Complete?		No
If so, when did it end?		N/A

Added to the NPL in 1999, EPA is now the lead agency for this site, though a file review was performed only at NJDEP. Originally encompassing five properties (Martin Aaron, Inc., South Jersey Port Corporation (SJPC), Comarco Products, Ponte Company, and Royal Auto Center scrap yard), EPA and NJDEP approved a request from a potential purchaser of SJPC to address this site separately. The remaining four properties are being addressed by EPA.

Some of the existing contamination is the result of historic fill, which is considered non-indigenous material placed on a site to raise its topographic elevation. Ash, cinders, brick, concrete, and other random debris underlies all five properties and is a source of some contamination, though not necessarily from Martin Aarons Inc. Martin Aarons Inc. contributed heavily to contamination of the area through its almost 25 years of operations as a drum recycling business. Anonymous sources indicated that containerized waste was buried on site, confirmed by inspections as early as 1981-1983 by EPA and NJDEP, who found unpermitted discharges of hazardous wastes that were leaking from drums and roll-off containers.

PCBs are a concern only at the Martin Aaron Inc. property, though one soil spot sample for in 2000 showed 3.2 ppm of Aroclor 1254 in the neighboring property, owned by Comarco Products, an active meat processing plant on Jackson Street. PCBs, detected in four surface soil samples at Martin Aaron, showed the presence of Aroclors 1254 and 1260 above NRDCSCC. The analytical results ranged from 0.047 ppm to 19 ppm. Subsurface PCB contaminated soils (2-21 feet below ground surface) were detected in fewer samples, however, where they were detected, were at higher levels than in surface soil (1.6 ppm to 48 ppm).

Though the 2005 Record of Decision (ROD) for both contaminated soil and groundwater, the selected remedies involve excavating highly contaminated arsenic and VOC soils, eliminating direct contact through capping the remaining residual contaminated soils, and utilizing a groundwater collection and treatment system. Although the ROD identified only VOCs and arsenic as principal threat wastes since they are considered a source of groundwater contamination, both Aroclors 1254 and 1260 were included as part of the Cleanup Goals for the site. Since there are no surface water bodies close by (the Delaware River is roughly .75 miles west of the site, Cooper River is roughly 2 miles north-northeast, and Newton Creek is roughly 1.5 miles south), there is very little possibility that on site PCBs or other site related contaminants will reach any of these water bodies. In addition, groundwater, though contaminated with a variety of substances, is believed to flow away from the Delaware River. The site, however, sits within the 100-year floodplain.

Site Name:	Matteo & Sons, Inc. (submitted in 2006 by NJDEP)	
Agency Site ID:	NJD011770013	
Site Location:	1708 Rte. 130, Thorofare, NJ	
Site County:	Gloucester County	
Site Coordinates:	**Latitude:**	39.822222
	Longitude:	-75.231667
Last history update by agency:		2006
Site Category:		Industrial/Landfill
Site Watershed:		Mantua Creek
Discharge Point(s):		Unknown
Name of Nearest Water Body:		Hessian Run, Woodbury Creek
Distance to Nearest Water Body:		Adjacent
Adjacent to Delaware River?		No
PCBs in groundwater?		Yes
PCB Remediation Complete?		No
If so, when did it end?		N/A

This site is 80 acres, bounded by a residential trailer park, Routes 130/295, Hessian Run, and Woodbury Creek. This property has been owned by the Matteo family since 1947. It was once the site of a battery-metals reclamation business and from 1971-1985 it was also the site of a lead melting operation. Portions of the site were used as an unauthorized landfill for solid and industrial wastes until the 1970s. Materials disposed of at this site include incinerator ash and production wastes from the battery business. Previous investigations at the site led to actions such as onsite waste burial (around 1972), drum removals, and sampling. A scrap metal recycling facility is operating onsite. Two underground pipelines (Buckeye and PSE&G) run through the site. During excavation for the installation of these two pipelines, anonymous complaints of "acidic vapors" prompted sampling and testing of soil and nearby water. NJDEP investigations revealed "a "lead sweating operation," landfilling of crushed automobile battery casings along the banks of Hessian Run, unauthorized use of an incinerator for lead smelting operation, ash from lead smelting operation hauled to on-site landfill, two fires at the landfill, discovery of abandoned drums of unknown waste, and discovery of a yellow waste dispersed across the Site." *(Final Remedial Investigation Report, May 2004)*

As stated in the 2006 DelTRiP Report, "Site is 80 acres along Hessian Run in the Woodbury-Hessian Run marshes (freshwater tidal). Both lead and PCB contamination are widespread in site soils and sediments. The sources of PCBs are unknown, but it is speculated that the source may have been a widespread application of a PCB-containing agent for dust and weed control on unpaved roadways and lots that supported the junkyard and past waste-disposal activities. A PCB containing material may have also been mixed in with the waste that was buried at the site.

File reviews during the summer of 2006 revealed that in surface soils, 457 samples were taken at various depths. Aroclor-1248, -1254, and -1260 were detected. Of 187 lab samples, 42 exceeded the RDCSCC, and 29 exceeded the NRDCSCC. Only 9 of 187 had a PCB concentration over 10 mg/kg, the highest of which was 49 mg/kg. Most of the affected areas were in the top layer of soil, as opposed to intermediate or deep soils. The majority of Hessian Run estuary is affected, with the exception of the central channel portions.

The major media of concern are waste/soil, sediment, and groundwater. There are three AOCs for waste soil: the waste disposal areas along Hessian Run, the open field area, and the scrapyard area. All have PCBs. The site was listed on the final NPL in September 2006. Though EPA has not not selected a remedy, options for remediation include no further action, institutional and engineering controls that would limit exposure, capping, excavation and disposal on or off-site, or a combination of these alternatives. Groundwater remediation could include limiting exposure and enhanced monitored natural attenuation. These alternatives are being analyzed to determine which is the best option for treatment of this facility.

NJDEP

Site Name:	Monsanto (later Solutia)	
Agency Site ID:	N/A	
Site Location:	Logan Township, NJ	
Site County:	Gloucester	
Site Coordinates:	**Latitude:**	39.795833
	Longitude:	-75.396389
Last history update by agency:		
Site Category:		Industrial
Site Watershed:		Delaware River
Discharge Point(s):		Unknown
Name of Nearest Water Body:		Delaware River (north), Birch Creek (east)
Distance to Nearest Water Body:		The above water bodies form the property line
Adjacent to Delaware River?		Yes
PCBs in groundwater?		Yes
PCB Remediation Complete?		No
If so, when did it end?		N/A

Monsanto was the sole manufacturer of PCBs for over forty years. They ceased production several years before the passage of TSCA in 1977, which criminalized the production of PCBs and made their transport, use, and disposal a federally regulated activity. Monsanto Co. (certain subsidiaries were reorganized under the name Solutia) in Logan Township was engaged in the manufacture of plasticizers, flame retardants, organic industrial chemicals and dyes since 1961. Each of these products potentially contain PCBs as a constituent. Solutia operated a RCRA regulated landfill on the northeast portion of the property until 1985 and a separate landfill for PCB wastes in the northwest. PCBs have been found in soils at the PCB landfill up to 1,230 ppm (from 12-14 feet bgs) and in groundwater at concentrations up to 402,000 µg/L (ppb) in 1984 and 1983, respectively. More recent analyses have shown PCB impaired soils with concentrations of up to 360 ppm.

Groundwater remediation commenced in 1986 and has been continually monitored at least twice a year since; 2005 sampling showed Aroclor-1268 at 3.6 µg/L, far in exceedance of NJDEP's allowable limit of 0.5 µg/L. While TCE and benzyl alcohol have reportedly discharged to the Delaware River via groundwater, it is currently unclear whether PCBs migrated as well.

Site Name:	Roebling Steel	
Agency Site ID:	NJD073732257	
Site Location:	Florence Township, NJ	
Site County:	Burlington	
Site Coordinates:	**Latitude:**	40.120831
	Longitude:	-74.770839
Last history update by agency:		July 2006
Site Category:		Former steel and wire manufacturer
Site Watershed:		Crafts Creek
Discharge Point(s):		Delaware River
Name of Nearest Water Body:		Delaware River, Crafts Creek
Distance to Nearest Water Body:		Adjacent
Adjacent to Delaware River?		Yes
PCBs in groundwater?		Yes
PCB Remediation Complete?		No
If so, when did it end?		N/A

The John A. Roebling Steel Company (JARSCO) was used between 1906 and 1982 for the fabrication of steel and wire products. The site witnessed numerous other companies and a variety of different operations including truck and auto repair, chemical companies, and storage and warehousing when the steel and wire company ceased operations in 1981. Slag residue from historic steel production was used to fill a 34-acre section of the Delaware River shoreline, producing an enormous area that has and continues to contribute to both on and off site contamination. In addition, as late as 1964, roughly 15 million gallons of wastewater and other products containing acids, iron and other metals, oil, and a high volume of suspended solids were being discharged per year. Several extensive cleanups have taken place at Roebling Steel since 1987 after NJDEP declared Roebling Steel one of its sites most in need of cleanup.

Fig. 10. Roebling Steel in late 1970's. *Source*: http://geog135.tripod.com/index.html

The first remedial action (after a significant initial removal of a large number of immediately hazardous materials) constituted the removal of contamination sources areas. 860,709 pounds of transformer carcasses were removed along with 45,864 gallons of transformer oil, over a quarter million gallons of tank liquids and tank sludges, 800 tons of baghouse dust, 126 tons of burnt tires, 261 tons of recyclable tires, roughly 750 tons of soil, all PCB-contaminated or containing. Since then, the site has been dealt with in several phases, or operable units, two of which have addressed the enormous slag pile, estimated to contain 1,458,000 cubic yards of heavy metals and PAH. Eventhough one of the prior remedies was capping with impervious material, there is still potential that over time contaminated fill may leach into the Delaware River. Cleanup has also involved the demolition and removal of many site structures, including buildings, underground pipes, and a number of USTs, all of which had PCB contamination to some extent. One UST, tested and removed in 1989, contained PCB contaminated oil was to have levels as high as 810,000 µg/L. Roughly 160 cubic yards of PCB impacted soil was removed from an adjacent playground.

PCBs levels as of 2003 are generally low level and isolated in site soils (found in 8 of 57 samples, averaging 1.428 ppm), but have also been identified in sediments in Crafts Creek (190 µg/kg in most recent sampling), Delaware River sediments (120 µg/kg in 11 of 16 samples). EPA estimates in 2003 indicated that the remediation was roughly fifty percent complete and involves the decontamination of the remaining buildings and removal of additional debris. In addition, prospective purchaser agreements (PPA) are being considered with potential

developers and investors to return the site to productive use when the lengthy and expensive remediation is completed.

EPA Region 2

Site Name:	Welsbach and General Gas Mantle	
Agency Site ID:	NJD986620995	
Site Location:	Camden, New Jersey	
Site County:	Camden, Gloucester	
Site Coordinates:	**Latitude:**	39.919722
	Longitude:	-75.121944
Last history update by agency:		Last available record, March 2006
Site Category:		Former industrial
Site Watershed:		Delaware River
Discharge Point(s):		Delaware River
Name of Nearest Water Body:		Delaware River, Newton Creek
Distance to Nearest Water Body:		Adjacent
Adjacent to Delaware River?		Yes
PCBs in groundwater?		No
PCB Remediation Complete?		See text
If so, when did it end?		N/A

Welsbach and General Gas Mantle (WGGM, unless otherwise noted) each manufactured thorium gas mantles (a type of lantern) since 1890. As thorium is a radioactive element, which primarily degrades to radium through radioactive decay, radiation is the principal contaminant of concern; in the 1990s, NJDEP investigated over 1,100 properties in Camden and Gloucester City for radiological contamination. More than 30 properties had radiation shielding and radon ventilation systems installed. In total, the site consists of residential and commercial properties, a public park, and vacant land, in addition to the former Welsbach building, occurring over six distinct study areas, not all of which are noted for PCBs.

At present, PCBs have not been discovered in soils at WGGM proper but EPA, NJDEP, and their various consultants have determined that PCBs are present in sediments in neighboring Newton Creek and Delaware River. Levels of PCBs, Malcolm Pirnie stated in a 2005 Human Health Evaluation, "…exceeded EPA's cancer risk range and non cancer health hazard level…based on historic information [however]…it was determined that PCBs are not related to this site". In the same report, PCBs were identified in sediments in the Delaware River at 5,100 µg/kg (Aroclor-1254) and 3,300 µg/kg (Aroclor-1260). Aroclor-1254 was listed as the single greatest risk in the Delaware River and Newton Creek, both adjacent to the site. PCB concentrations in Newton Creek were not available during our file review.

Because of the enormous area that is believed to have been impacted by historic operations at WGGM, future work on site, as well as in the affected communities, will take place in a number of stages. But the most recent ROD for the site (OU3, which is for wetlands and sediments) decided on "no further action necessary," and again, lists PCBs as "the only non-radiological chemicals of concern identified in OU3…that poses an unacceptable risk to human health". Despite this, the ROD continues, "…PCBs were not in wide use when these facilities operated at the Welsbach Site. Therefore no additional evaluation of PCBs in the surface water, sediment, and wetland areas in the WGGM Site study area I is necessary under the Superfund Program."

OU1's remedy (explained in a 1999 ROD), addresses contamination in buildings and adjacent soils, which had low levels of PCB contamination. Though the ROD does not highlight PCB concentrations throughout the WGGM site, the decontamination and off site disposal of a large amount of soils and building debris would render PCBs a non-factor. PCB contamination on site was reportedly minimal, consisting mostly of sporadic amounts in soils and on some of the building surfaces. The onsite building were decontaminated and demolished. OU1 activities are ongoing as of summer 2006.

4.3 SITES WITH REPORTEDLY COMPLETE PCB REMEDIATION IN NEW JERSEY

EPA Region 2

Site Name:	Cosden Chemical Coatings Corporation (former)	
Agency Site ID:	NJD000565531	
Site Location:	Beverly, New Jersey	
Site County:	Burlington	
Site Coordinates:	**Latitude:**	40.058183
	Longitude:	-74.925899
Site Watershed:		Rancocas Creek
PCBs in groundwater?		Yes
PCB Remediation Complete?		Yes
If so, when did it end?		2003

The 6 ½ acre Cosden Chemical Coatings Corporation site operated under many different names from 1945 until its closure in 1989. This facility produced paints for mainly industrial applications that involved the use of solvents which were ultimately stored in drums on site. Remediation is being addressed in three stages, or operable units: 1) Building demolition and removal, 2) soil remediation and 3) groundwater remediation. Only groundwater contamination remains, though PCBs are not a contaminant of concern. Soil sampling in 1988 revealed PCB concentrations up to 120 parts per million (ppm). Early cleanup actions were the removal of drums, paint cans and the contents of a leaking underground storage tank (UST). In 1999, roughly 9,000 tons of soil, 1,800 tons of PCB- contaminated building debris, and 3,000 gallons of liquid wastes were removed from site. An additional 724 tons of PCB contaminated soil was removed in 2002 to eliminate several low level "hot spots". At present, PCB levels on site are below the New Jersey residential requirement of .49 ppm and the site has been refilled with clean soil, regraded and replanted.

EPA Region 2

Site Name:	Ellis Property	
Agency Site ID:	NJD980529085	
Site Location:	Evesham and Medford Townships	
Site County:	Burlington County, New Jersey	
Site Coordinates:	**Latitude:**	39.905000
	Longitude:	74.864719
Site Watershed:		Sharps Run (tributary to Rancocas Creek)
PCBs in groundwater?		No
PCB Remediation Complete?		Yes
If so, when did it end?		1998

A 1992 Phase 2 Remedial Investigation Report for this site indicated that several drums were leaking PCB fluid with a concentration of 3 mg/kg. Soil borings indicated contamination concentration as high as 100 mg/kg; a concentration of 23.10 mg/kg was detected in shallow soil samples. Sediment concentrations were non-detect. The drums were removed as well as 60 cubic yards of soil (soil excavation completed in 1998). The Preliminary Closeout Report dated September 2000 was not available for review.

The first five year review of the site, in September 2005, indicated that there is an ongoing ground water pump and treat program for fouling metals and VOCs.

NJDEP

Site Name:	Hercules (Gibbstown)	
Agency Site ID:	NJDEP ID 3450 (EPA ID NJD002349058)	
Site Location:	Greenwich, NJ	
Site County:	Gloucester	
Site Coordinates:	**Latitude:**	39.838889
	Longitude:	-75.277781
Last history update by agency:	2003 (last available reference)	
Name of Nearest Water Body:	Delaware River, unnamed wetlands	
Distance to Nearest Water Body:	Adjacent	
Adjacent to Delaware River?	Yes	
PCBs in groundwater?	No	
Remediation Complete?	N/A – PCBs were never addressed in cleanup actions	
If so, when did it end?	N/A	
Remedial standard attained?	N/A	

Listed on the NPL in 1983, primarily for extensive groundwater contamination, Hercules Gibbstown has had a number of non PCB-related cleanup actions. Hercules purchased the site in 1952 from E.I. du Pont de Nemours and Company, who used the northernmost section of the property, which is adjacent to the Delaware River, as a landfill for dark, tar-like substances. These substances were mostly removed before the sale of the site. Throughout the course of this site's history, a number of chemicals and intermediaries were manufactured.

PCBs were tested for in site soils, adjacent creek and onsite wetlands sediments, and groundwater. They were determined to not be a contaminant of concern, since they were fairly localized and at low levels (1-2 ppm range). In addition, removal of these samples would have involved the expensive dredging of up to 24 inches of sediment from a swale located at the base of the Delaware River levee found at the northernmost section of the 300 acre site known as the Northern Ditch. Dredging these sediments would have lacked both financial sense and permanence, since "…replacement of the [removed] sediments and vegetation would eventually restore the wetland conditions…but the regional presence of pesticides and PCBs would likely result in recontamination of the ditch ("Feasibility Study of the Solid Waste Disposal Area", ERM, 1993).

Further, sediment sampling from this area, which is within the 100-year floodplain, reveals that "background levels" of PCBs, derived from control points along the Delaware River, were actually higher than the PCB-affected areas at the Hercules site. PCB levels in fish from the Northern Ditch and Clonmell Creek were all well within the reported range of concentrations for fish collected in the Delaware River, which reflects ambient PCB concentration.

NJDEP

Site Name:	Former General Engines Company (a.k.a. The Estate of Frances Flowers)	
Agency Site ID:	N/A	
Site Location:	Next to Interstate 295, Thorofare and West Deptford Township	
Site County:	Gloucester County	
Site Coordinates:	**Latitude:**	39.849167
	Longitude:	-75.173611
Site Watershed:	Delaware River	
PCBs in groundwater?	Unknown	
PCB Remediation Complete?	Yes	
If so, when did it end?	2001	
Remedial standard attained?	Unknown	

General Engines formerly ran an assembly plant, which produced specialty truck beds, starting in the early 1950s. In the mid-1980s, an expansion warranted the purchase of the neighboring Neely property. The Neely property was a former auto and truck salvage and towing yard, and also had a drum reconditioning business. These industries produced limited quantities of waste oils, waste thinners, and paint scrapings. Waste materials and oil-contaminated soil were removed and disposed of off-site. In 1992, operations on the site ceased. All surface drums were removed. Since the first Remedial Investigation, much of the contaminated soil has been removed.

Groundwater flow is west to southwest, and as of 8/25/2005, there were no PCBs above the Ground Water Quality Criteria (GWQC). The site is now composed of three Areas of Concern (AOCs): 3, 6, and 7.
AOC-3 is the former Neely Drum Storage Area. Several samples were found to have elevated PCBs, meaning they were above the Unrestricted Use Criteria. Two hot spots were found, and have since been excavated. All areas with concentrations greater than ten times the Unrestricted Use Criteria (UUC) have been remediated by soil removal. The highest remaining concentration is 4.4 mg/kg. This is more than a tenth less than the previous highest concentration. A 2-ft native soil cover for areas with PCB concentrations greater than the UUC and a Deed Notice to restrict uses in the area were proposed, and approved by the NJDEP 2/1/2001. Work was done to complete the cap in October and November of 2002.

AOC-6 is the former drum storage area. PCBs were found to be below UUC for surface soils. Concentrations were above UUC for subsurface soils but well below the impact to groundwater criteria. A deed notice was proposed, and accepted 2/1/2001.

AOC-7 is the refuse area. Subsurface soils in this area had PCBs above the Residential Direct Contact Soil Cleanup Criteria (RDCSCC), and contamination was delineated. In the surface soil, there were two locations in which the PCBs were above RDCSCC. Excavation of PCB soil was conducted, and a deed notice for subsurface soil was approved 2/1/2001.

There is a monitoring and inspection plan in place for all three areas of concern. In June 2005, the Semi-Annual Remedial Action Progress Report was approved by the NJDEP.

EPA Region 2

Site Name:	Pijak Farm	
Agency Site ID:	NJD980532808	
Site Location:	New Egypt, NJ	
Site County:	Ocean County	
Site Coordinates:	**Latitude:**	40.075550
	Longitude:	74.499439
Site Watershed:		Crosswicks Creek
PCBs in groundwater?		No
PCB Remediation Complete?		Yes
If so, when did it end?		1996

A 1984 site investigation yielded a soil sample as with a PCB concentration as high as 2,300 µg/kg. Approximately 4,000 cubic yards of soil was excavated. No PCBs were found in ground water, nor in surface water. The Pijak Farm was deleted from the NPL in 1999.

EPA Region 2

Site Name:	Swope Oil & Chemical Company	
Agency Site ID:	NJD041743220	
Site Location:	Pennsauken Township	
Site County:	Camden	
Site Coordinates:	**Latitude:**	39.988600
	Longitude:	-75.034700
Site Watershed:		Delaware River
PCBs in groundwater?		Yes
PCB Remediation Complete?		Yes
If so, when did it end?		

Between 1969 and 1979, Swope Oil operated as a processing facility for chemicals including phosphate-esters, hydraulic fluids, paints and varnishes, solvents, oils, plasticizers, and printing ink. Some of these products have historically used PCBs as a component. Initial testing revealed that soils had PCBs "generally in the 50-500 ppm range" (ROD, 1985), though one sample along the southwest border of the site contained levels greater than 500 ppm. Other contaminants were found as deep as 42 feet bgs, though soils below 1.5 feet generally had PCB concentrations less than 1 ppm.

Remedial actions have involved the removal of onsite storage tanks and building demolition, excavation of sludge (1,375 cubic yards containing PCBs greater than 500 ppm) and placing an impervious cap over the affected area to minimize potential exposure. Remnants of this sludge supposedly still remain that have affected soils, which are currently being treated with in situ soil vaporization. PCBs were not detected in groundwater during the most recent sampling event conducted in 1990. No additional sampling for PCBs in groundwater is planned.

Excavation removed roughly 24,000 tons of PCB impacted soil and the current in situ soil vaporization treatment is intended to remediate upwards of 392,000 tons of soil. The last five-year review, completed in 2002 concluded that the groundwater remediation is effective. Monitoring of groundwater continues. Information offered by EPA in January 2007 indicated that "PCB remediation at the site has been completed."

5.1 PENNSYLVANIA REMEDIATION STANDARDS

Among States in the Delaware River basin, Pennsylvania has the most complex guidance in terms of remedial standards. Pennsylvania's Act 2 Land Recycling program (Pennsylvania Code, Chapter 250) provides a comprehensive set of valuations for all contaminants in order to effectuate brownfield redevelopment. The goal of Chapter 250 is, in fact, to facilitate development on the numerous contaminated and former industrial sites throughout Pennsylvania. This legislation, signed in 1995, correlates strongly with Pennsylvania's land use goals, which seeks to promote development in designated growth areas, preservation of farmland and open space, increased greenway development, and regional coordination between local governments. Key to this is the "recycling" of former industrial and contaminated sites.

Owners of a site may elect to remediate contaminated sites to one of three possible standards, or a case-by-case combination of standards. They are:

Background: (*PA Code Chapter 250, Subchapter B*) the conditions of the surrounding environment are ascertained and then all contaminants or "foreign" substances are removed. Restoring both the chemical and physical continuity with the surrounding ecosystem will restore the site to pre-development status to the greatest extent deemed to be cost effective. This is oftentimes the most expensive option, and is generally selected when a site has not experienced substantial contamination. This level is generally used when the contaminated media is localized in area or when the decision to remediate happens quickly after the contamination is released.

Statewide health: (*PA Code Chapter 250, Subchapter C*) each contaminant will be removed or remediated to the point where the expected risk of cancer is between 10^{-4} and 10^{-6} (i.e. one instance per 10,000 to 1,000,000 people) based on risk assessments and other toxicological studies.

Site specific: (*PA Code Chapter 250, Subchapter D*) cleanup levels can be developed specifically for a site. This approach is a more detailed process that involves developing a risk assessment based on the conditions and potential human exposures at the site. The surrounding community may be involved in each step of this cleanup process by request of the host municipality. This is the legal and scientific basis for the **SIA** designation, which stands for Special Industrial Area, whereby sites that are abandoned or are located in enterprise zones are eligible for special remediation requirements (for further information see *PA Code Chapter 250, Subchapter E*). Qualifying sites have limited requirements to perform a baseline environmental investigation and remediate any direct and imminent threats to public health or the environment, such as drummed waste. Site specific standards are negotiated between responsible or potentially responsible parties, PADEP, and ideally, the local community.

Water quality standards in Pennsylvania are codified in PA Code Chapter 93 (for more specific information about toxics in PA surface waters, refer particularly to Chapter § 93.6 - § 93.8a and Chapter 16). Essentially, no toxics can be present in surface water bodies such that they exceed a human risk management level of 10^{-6} over an expected lifetime of 70 years. Site specific water criteria are also negotiable, but the scientific burden of proof is considerable. More specific information about site-specific water criteria can be found at § 93.8. Waters of the Delaware River basin are listed in § 93.9a by name and river mile, and in general, their quality is determined by their intended use; the waters within the basin encompass drainage lists A through G. The main stem Delaware River is wholly regulated by DRBC.

TABLE 12: Statewide Health Standard Maximum Contaminant Levels in soil in Pennsylvania

(Source: PA Code Chapter 250, Statewide Health Standards, Tables 2, 3a, and 3b)

CASRN:	12674112	11104282	11141165	53469219	12672296	11097691	11096825	
AROCLOR NUMBER:	1016	1221	1232	1242	1248	1254	1260	
SOIL MSCs in mg/kg								
RESIDENTIAL								BASIS
DIRECT CONTACT (0 - 15 FEET)	15	36	36	36	9.9	4.4	30	GS
SOIL to GROUNDWATER USED AQUIFER, TDS ≤ 2,500 mg/L								
100 X GROUNDWATER MSC	0.26	0.13	0.13	0.13	0.037	0.037	0.11	
GENERIC VALUE	72	0.63	0.5	16	18	75	500	E
USED AQUIFER, TDS > 2,500 mg/L								
100 X GROUNDWATER MSC	25	13	13	10	4	4	8	
GENERIC VALUE	6900	63	50	1200	1800	7500	36000	E
NON-USE AQUIFER								
100 X GROUNDWATER MSC	0.26	0.13	0.13	0.13	0.04	0.04	0.11	
GENERIC VALUE	72	0.63	0.5	16	18	75	500	E
NON-RESIDENTIAL								
DIRECT CONTACT, SURFACE SOIL (0 - 2 FEET)	200	160	160	160	44	44	130	GS
DIRECT CONTACT, SUBSURFACE SOIL (2 - 15 FEET)	10000	10000	10000	10000	10000	10000	190000	C
SOIL to GROUNDWATER USED AQUIFER, TDS ≤ 2,500 mg/L								
100 X GROUNDWATER MSC	0.72	0.52	0.52	0.52	0.14	0.14	0.43	
GENERIC VALUE	200	2.5	2	62	67	280	1900	E
USED AQUIFER, TDS > 2,500 mg/L								
100 X GROUNDWATER MSC	25	52	52	10	5	6	8	
GENERIC VALUE	6900	250	200	1200	2600	10000	36000	E
NON-USE AQUIFER								
100 X GROUNDWATER MSC	0.72	0.52	0.52	0.52	0.14	0.14	0.43	
GENERIC VALUE	200	2.5	2	62	67	280	1900	E
BUFFER DISTANCE (FEET)	10	20	20	10	10	5	5	

Basis Codes:
GS - Systemic effects from ingestion

C - Cap

E - Value calculated by § 250.30

TABLE 13: Groundwater Standards for PCBs in Pennsylvania

(Source: PA Code Chapter 250, table 1)

CASRN:	12674112	11104282	11141165	53469219	12672296	11097691	11096825	
AROCLOR NUMBER:	1016	1221	1232	1242	1248	1254	1260	
GROUNDWATER MSCs in mg/L								
RESIDENTIAL								BASIS
USED AQUIFER, TDS ≤ 2,500 mg/L	0.0026	0.0013	0.0013	0.0013	0.00037	0.00037	0.0011	GS
USED AQUIFER, TDS > 2,500 mg/L	0.25	0.13	0.13	0.1	0.037	0.037	0.08	S
NON-USE AQUIFER	0.0026	0.0013	0.0013	0.0013	0.00037	0.00037	0.0011	GS
NON-RESIDENTIAL								
USED AQUIFER, TDS ≤ 2,500 mg/L	0.0072	0.0052	0.0052	0.0052	0.0014	0.0014	0.0043	GS
USED AQUIFER, TDS > 2,500 mg/L	0.25	0.52	0.52	0.1	0.054	0.057	0.08	S
NON-USE AQUIFER	0.0072	0.0052	0.0052	0.0052	0.0014	0.0014	0.0043	GS
SMCL	NA	NA	NA	NA	NA	NA	NA	

Basis Codes:
S - Aqueous Solubility Cap

GS - Systemic effects from ingestion

The 2006 DelTRiP report depicted 212 sites in Pennsylvania that reportedly contained PCBs. The current report, 2007, contains 276. The overwhelming majority of which, however, had reportedly been remediated by the time of the report's publication. At present, Pennsylvania leads clean ups at *at least* 15 sites that have PCBs as a site-related contaminant undergoing remediation, summarized in chapter 5.2. There were 59 individual sites that were not available for review despite DRBC's repeated requests, some of which have been anecdotally confirmed to be remediated via other sources, while others have not. Despite oftentimes credible information, we were unable to receive verification from PADEP's files that these sites had indeed been remediated or otherwise had ongoing remedial activities. Thus, some of the sites that are listed as "unavailable or status unconfirmed" may have been remediated or even redeveloped.

Eight sites that were thoroughly reviewed never had PCBs found onsite, but were "flagged" by PADEP's search because sampling for PCBs may have occurred in some cases. The following list highlights the sites that were either not able to be located or were otherwise unavailable and as such, we were unable to describe the following sites as PCB-free or PCB impaired. There are also 44 sites that have no available geographic coordinates and thus could not be plotted on the map at Fig. 9.. The bulk of the sites that are both undergoing remediation as well as the "unknown" sites are in the Philadelphia area.

PENNSYLVANIA SITES WITH NO FILES

(as PADEP submitted them in the 2006 DelTRiP report)

18th & Callowhill St Site
Abandoned Fac
Action Mfg
Arkema Chem Research & Dev Lab Mag
Autocar Trucks Div Nfrap Site
Blue Ridge Winkler Site
Buttonwood Gateway Complex
Caloric
Chemclene
Chemrex Banner Inds Div
City of Phila Water Dept
Conoco Phillips Trainer Ref[inery]
Conrail Morrissville Train Maint Yard
CSX Intermodal Snyder Ave Yard Fac
Dana Truck & Car Frame Mfg Plt Reading
Defense Personnel Supp Ctr Public Admin
Defense Supply Ctr Phila
Dick Bros
E Orthodox St
Easter Elec Apparatus Rep
Freehand Hj Subdiv
GE Breaker Plt
Kaiser Refractories
Laurel Ctr II
Lehigh Landing Proj
Little Rio Grande Creek
Morris Pappas & Morris
Mulberry St Site
Nazareth Quarry
Palmer Town Ctr
Pennsburg SES
Pep Boys Paoli
Phila Elec Southwark Svc Bldg Util
PWD SW Water Pollution Control PLT
Reading Iron Met Ed parcel (former)
Reading Iron Oley St Storeyard (former)
Reading Iron PA Lines LLC Railspur (former)
Reserves Gwynedd
Richmond Waterfront Ind Prk LLC Rohm & Haas
Rohm & Haas Phila Plt
SEPTA Roberts Ave Railyard NFRAP Site
Slatebelt Ind Ctr
Sovereign Oil Site
Spring Mill Dev
Sunoco Girard Point Ref
Sunoco Partners Mkt & Term Lp Darby Creek Tank Farm
Texas Eastern Pipeline Bechtelsville Sta
Texas Eastern Pipeline Bernville Sta
Thelma H McGrail Trust
Thyssen Krupp Budd Co Die Storage Yard Site
Thyssenkrupp Budd
Tinicum Ind Prk
Trans Buck
US Plywood Fac
Valhal
Westtown Sch Kenneth Square Prop[erty]

Total = 56

In addition, 43 sites did not have available geographic coordinates or address, and thus will not appear on any graphics or maps depicting the location of PCB sites within the Delaware River basin.

PENNSYLVANIA SITES WITH NO AVAILABLE GEOGRAPHIC COORDINATES

(as they appeared in the 2006 report unless otherwise noted**)**

Cognis Corporation (site submitted in 2007)
Columbia Gas Oxford Opr Ctr
Kaiser Refractories
Little Rio Grand Creek
Pappas & Morris
Mulberry St. Site
Pennsburg SES
PennDOT Paper Prod Site
PPL Avoca

(**sites with no geographic coordinates continued)**
PPL Beekman Substation
PPL Brockton Substation
PPL Buttonwood Substation
PPL Clarks Summit Substation
PPL Electric Utilitities (unknown site – may be a generic reference to PPL)
PPL Gilbert Substation
PPL Hauto
PPL Harwood 69 Kv Substation
PPL Harwood Steam Electric Station
PPL Honesdale Gas Plant
PPL Horton Substation
PPL Jermyn Substation
PPL Jenkins Substation
PPL Madison Ave. Substation
PPL North Stroudsburg Substation
PPL Northern Div SVC CTR
PPL Old Forge Substation
PPL Oneida Substation (former)
PPL Palmerton Substation
PPL Peckville Active Substation
PPL Pittston Decommissioned Substation
PPL Providence Active Substation
PPL Quarry Substation
PPL Shawnee Decomissioned Substation
PPL South Side Substation
PPL Stanton Steam Electric (former)
PPL Stanton Substation
PPL Sullivan Trail Substation
PPL Tamaqua MGP
PPL Tatamy Substation
PPL W. Pittston Decommissioned Substation
PPL Weissport Substation
Slish Road
Wood Lane Parcel

Total = 43

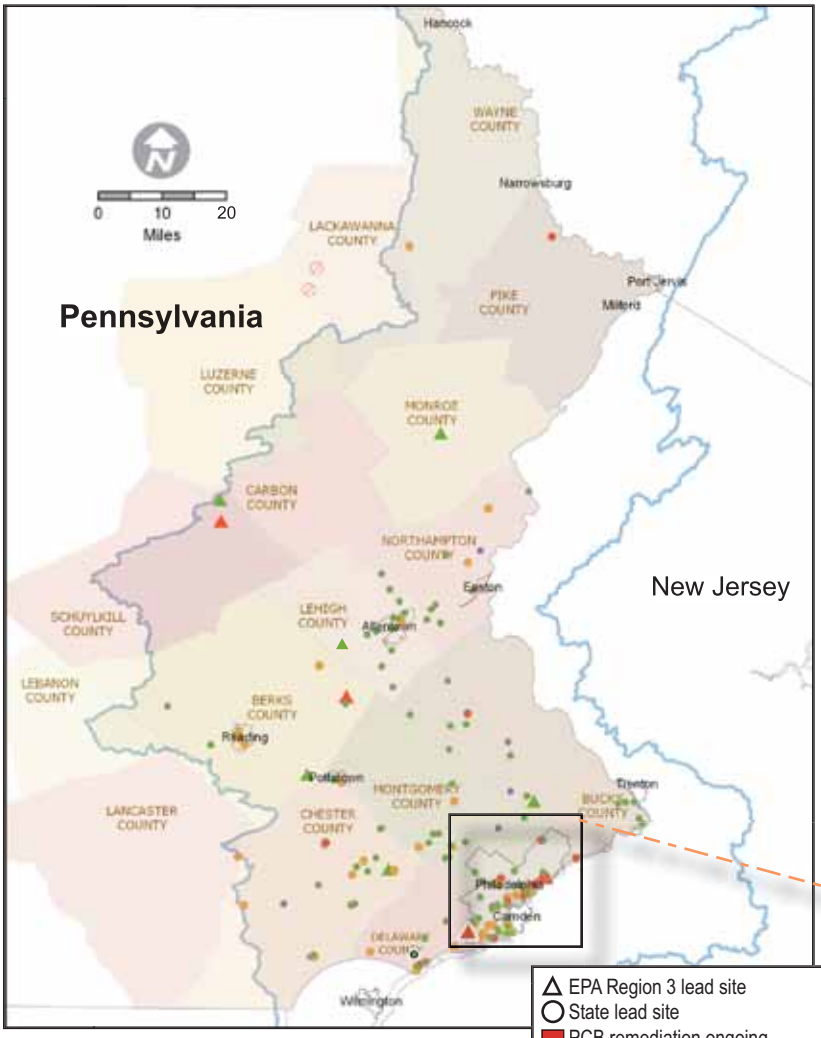
In the 2006 DelTRiP report, Pennsylavnia submitted eight sites that after DRBC's further investigation, had no history of PCBs ever being detected onsite. For more details on a particular site, please consult that site's respective summary in Chapter 5.3.

PENNSYLVANIA SITES THAT HAVE NO HISTORY OF PCBs ONSITE

Bottle House Property
Dodge Steel Castings
Drug Emporium Plaza
Easter Rotorcraft (former)
Glasgow Properties
Selas of Amer
Merit Metals
Safety Kleen Corporation

Total = 8

Fig. 9. Status of Known PCB Sites in Pennsylvania

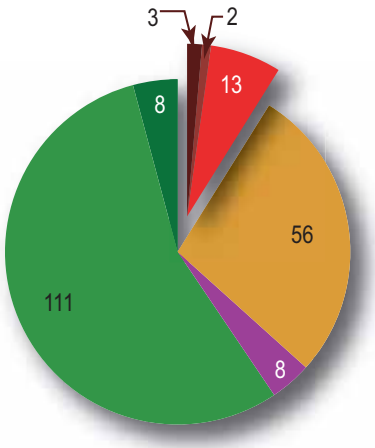


Pennsylvania had the highest number of sites in the 2006 DelTRiP report, which 217 submissions. As the chart below illustrates, the overwhelming majority had already been remediated by the report's publication. In 2007, two additional sites were submitted by PADEP, both of which had already been remediated. Thus, of the sites submitted in 2006, 147 were found to be reportedly remediated for PCBs and the two "new" sites submitted for the 2007 report bring the total number of sites remediated for PCBs in Pennsylvania under PADEP lead to 149. Fifty-nine sites were not available for review. EPA Region 3 submitted the Lower Darby Creek Area as a "new" site, which was added to the NPL in 2001. Finally, two sites are under joint EPA Region 3/PADEP lead (Bensalem Redevelopment, LP and Metal Bank/Metal Bank State Road).

- EPA Region 3 lead site
- State lead site
- PCB remediation ongoing
- PCB remediation reportedly completed
- Unknown remedial status
- No PCBs ever found
- Site added in 2007
- Site outside of Delaware River basin

DETAIL: Status of Known PCB sites in Philadelphia

Number of Known PCB Sites in the Commonwealth of Pennsylvania by Lead Agency and Current Remedial Status



- 8 EPA Region 3 sites reportedly remediated for PCBs
- 111 PADEP lead sites reportedly remediated for PCBs
- 8 Sites with no history of PCB-related contamination
- 56 Sites with unknown remedial status
- 13 PADEP lead site with ongoing PCB remediation
- 2 Shared Federal/State lead
- 3 EPA lead sites with ongoing PCB remediation

5.2 SITES WITH ONGOING PCB REMEDIATION IN PENNSYLVANIA

Site Name:	3200 E. Tioga Site (Also known as 3111 E. Ontario Street)	
Agency Site ID:	N/A	
Site Location:	3200 E. Tioga Street, Philadelphia PA	
Site County:	Philadelphia County	
Site Coordinates:	**Latitude:**	39.981300
	Longitude:	-75.092500
Last history update by agency:		2003
Site Category:		Scrapyard
Site Watershed:		Delaware River
Discharge Point(s):		None
Name of Nearest Water Body:		Delaware River
Distance to Nearest Water Body:		~1,500 feet
Adjacent to Delaware River?		No
PCBs in groundwater?		Unknown
PCB Remediation Complete?		Unknown
If so, when did it end?		N/A

This abandoned site, owned by the city of Philadelphia, is the former Blumberg and Nicholson Scrapyard. It is composed of a 6-acre parcel, which was used as a lumber yard, and a 3-acre scrapyard area. Scrapyard activities ended in 2002.

Soil samples and monitoring wells were analyzed for PCBs. No PCBs were found above the desired remedial level. In 2000, PCBs were not detected in soil sampling, but in 2003, the site's owner submitted a Notice of Intent to Remediate (NIR) for PCBs. Thus, we could not confirm whether or not PCBs were present on site and at what concentrations, but could only assume that if present, are in sufficient concentrations to warrant remediation.

PADEP

Site Name: 7401 State Road
Agency Site ID: 19136
Site Location: 7401 State Road, Philadelphia PA
Site County: Philadelphia
Site Coordinates: **Latitude:** 40.027222
Longitude: -75.028889
Last history update by agency: Last available file 2003
Site Category: Industrial
Site Watershed: Delaware River
Discharge Point(s): None
Name of Nearest Water Body: Delaware River
Distance to Nearest Water Body: 2,400 ft southwest
Adjacent to Delaware River? No
PCBs in groundwater? Unknown
PCB Remediation Complete? Approval pending
If so, when did it end? N/A

Janney Cylinder produced centrifugal castings of specialized wrought iron products. From 1979-1984, Ampco continued similar operations on the property. From 1985 to the late 1990s, the site was owned and operated by Feathermans, who used it to assemble and paint metal pieces. In 2005, State Road Storage bought the site, and demolished and removed all buildings from the site. Transformers were also removed at this time. The PCBs onsite, including a subfloor reservoir of up to 20,000 gallons of unidentified sludge, are leftover from historical activities, all are found inside or underground, and are immobile. There is no surface water pathway.

In 1985, the site's former owner removed about 190 yd^3 of hydraulic oil contaminated soil and installed an oil/water separator. PADEP took no other samples after the oil was no longer visibly apparent. PCBs were an issue in 1999 when a vandalized transformer began leaking PCB containing liquids. Oil flowed down an exterior wall located along State Road sides of building onto a grassy area and sidewalk. Aroclor-1260 was found at 10 ppm. Absorbent materials were used to clean the spill, as were pressure washing the wall and excavating the impacted soils. Post excavation sampling revealed one sample at 6' bgs to be 6.8 ppm. 360 ft^3 of impacted concrete were removed from the sidewalk, and 14 tons of contaminated soil were removed from the spill area.

Concrete containing 1-10 ppm was capped and left onsite beneath the north end of Building 5. Concrete containing 10-25 ppm was placed under a concrete slab at Building 5. Yellow sand with 1-10 ppm was placed under a 6-inch cap with 10^{-7} cm/sec permeability. The site is limited to industrial or commercial activity, excluding schools, nursing homes, and other residential-style facilities and recreational areas. Remediation at this time is complete but not yet approved by PADEP.

Site Name:	Bensalem Redevelopment (a.k.a. Elf Atochem North America – Cornwells Heights Plant, Riverfront South Property, former Atofina)	
Agency Site ID:	N/A, EPA ID# PAD002290823	
Site Location:	2375 State Road, Bensalem, PA	
Site County:	Bucks	
Site Coordinates:	**Latitude:**	40.068056
	Longitude:	-74.940000
Last history update by agency:		June 2006
Site Category:		Former industrial
Site Watershed:		Delaware River
Discharge Point(s):		none determined
Name of Nearest Water Body:		Delaware River
Distance to Nearest Water Body:		Adjacent
Adjacent to Delaware River?		Yes
PCBs in groundwater?		Yes
PCB Remediation Complete?		No
If so, when did it end?		N/A

Currently the subject of RCRA corrective action, this site is currently being further assessed by both EPA and PADEP. The recipient of several Brownfield redevelopment grants, it is currently not known whether or not substances from historic activities is contributing to contaminant loading in the Delaware River. There are 16 areas of concern, though only four are believed to be PCB containing. A 2004 RI/RA describes PCB contamination in soil and groundwater. Groundwater (Aroclor-1260, 13 µg/L max.) will not migrate to the neighboring Delaware River, though it has not been determined whether or not surface runoff was PCB containing. PCBs in soils have ranged from 0.2 ppm to 2,400 ppm. PCB concentration are most consistent around several onsite buildings (designated B-2 and B-3), where concentrations range between 30 ppm to 68 ppm.

Bensalem Redevelopment, LP (BRLP) has determined, with EPA Region 3 approval, that the 26 acre site can be remediated according to different standards. The current proposal is for a mixed use a area consisting of commercial, residential, and public open spaces, which also includes the five acres of undeveloped wooded land along the Delaware River. BRLP will "…remediate Aroclor-1254 in soil to 1.56 mg/kg or to a maximum depth of 2 feet below ground surface [whichever is encountered first]", but will remediate soil where the planned redevelopment is non-residential to 20.4 mg/kg. EPA concurred, stating that "…we understand that remediating soil to this non-residential standard will still maintain or provide a Hazard Quotient no higher than 1.0 since the human exposure scenario is different in a non-residential scenario" (EPA comments on proposed work plan, May 16, 2006). Thus, site soils will be remediated to different standards, by excavation and offsite removal, expected to begin in summer of 2006. No action has been determined for groundwater other than to restrict its use in perpetuity. Any future development will be connected to public water supply. This site is being handled under joint EPA/PADEP oversight, under an arrangement titled "Act 2 plus".

PADEP

Site Name:	Cira Ctl Site (Cira Centre Site)	
Agency Site ID:	N/A	
Site Location:	30th and Arch Street, Philadelphia PA	
Site County:	Philadelphia County	
Site Coordinates:	**Latitude:**	39.957100
	Longitude:	-75.181950
Last history update by agency:		Last available record, 2003
Site Category:		Rail Yard
Site Watershed:		Schuylkill River
Discharge Point(s):		Unknown
Name of Nearest Water Body:		Schuylkill River
Distance to Nearest Water Body:		~300 feet
Adjacent to Delaware River?		No
PCBs in groundwater?		No
PCB Remediation Complete?		No
If so, when did it end?		N/A

This property, currently owned by Amtrak, has been used as a railroad yard since at least 1855. It is used as a parking structure adjacent to the 30th Street station and was formerly part of the station next to the Schuylkill River. In 1993, Coach's rail yard soil and groundwater investigation led to the discovery of PCBs in the soil. In the Phase I Site Assessment published in 1996, it was pointed out that possible soil contamination could be due to former uses of the buildings onsite. Lead pipes, stained fill materials and the Race Street yard, reported oil spills, and problems with PCBs were all issues onsite. As recounted in a 1999 sampling event memo, samples from geotech borings were tested for SVOC, VOCs, diesel fuel, PCBs, and metals, but none exceeded the PADEP Act 2 Standards. There were five monitoring wells at the 30th Street station, but no PCB levels were above the Act 2 Cleanup Criteria for shallow groundwater

The Phase I Site Assessment published in 2001 recommended that future development consider possible subsurface, surface, and groundwater contamination by PCBs, heavy metals, and petroleum. A Notice of Intent to Remediate was submitted 11/7/2002 for a Special Industrial Area, including PCBs on the list of contaminants. Remediation would include the demolition of an existing parking structure and construction of an office tower at 30th and Race. Groundwater monitoring wells were to serve in establishing a reference point to document existing contamination. The Baseline RI found two samples containing Aroclor-1260, both at 0.3 ppm.

Site Name: Columbia Gas Transmission Corporation (Listed as Columbia Gas Eagle Compressor Sta, Columbia Gas Oxford Opr Ctr, and Columbia Gas Trans Downingtown in 2006 report)
Agency Site ID: N/A
Site Location: Downingtown Borough
Site County: Chester County
Site Coordinates: **Latitude**: 40.102222
Longitude: -75.6769444
Last history update by agency: 2003
Site Category: Natural Gas Facilities
Site Watershed: Pickering Creek
Discharge Point(s): Unknown
Name of Nearest Water Body: Pickering Creek
Distance to Nearest Water Body: ~1,000 feet
Adjacent to Delaware River? No
PCBs in groundwater? No
Remediation Complete? No
If so, when did it end? N/A

This site has been divided into multiple areas of concern, also known as *PRAs*, to facilitate remediation. PCBs have been found in soil and concrete at the site. PCBs were found in buildings and concrete at *PRA26, PRA27, PRA28, and PRA30* with concentrations as high as 100 mg/kg. Contaminated concrete at *PRA26* was removed and subsequent sampling showed remaining concentrations to be less than 1 mg/kg. Buildings at *PRA27, PRA28, and PRA30* were scheduled to be demolished and hauled away, as of August 2003. Surface soil samples among other *PRAs* yielded the following actions:

PRA	Representative Initial PCB Conc. (mg/kg)	Total Soil Removed (cubic yards)	Remaining PCB Conc. (mg/kg)	Future Recommendation
10	4.2	7	Below 1.0	NFA
14	NA	4	Below 25	NFA
15	84.5	239	Below 1.0	NFA
16	13.4	28	Below 1.0	NFA
17	24.6	6	Below 1.0	NFA
23	1.34	2	Below 1.0	NFA
31	3.5	8.5	Below 1.0	NFA

By letter dated October 28, 2003 the PADEP directed the PRP to collect and analyze soil from *PRA25* for PCBs. In addition, the PADEP directed the PRP to remediate the area of *PRA19*, as soil samples from that area had concentrations as high as 5.756 mg/kg. No further information was available.

EPA Region 3

Site Name:	Crossley Farm	
Agency Site ID:	PAD981740061	
Site Location:	Huff's Church Road & Blackhead Hill, Hereford Township, PA	
Site County:	Berks	
Site Coordinates:	**Latitude**:	40.435417
	Longitude:	-75.620611
Last history update by agency:		September 2006
Site Category:		Disposal Area
Site Watershed:		West Branch Perkiomen Creek
Discharge Point(s):		Unknown
Name of Nearest Water Body:		West Branch Perkiomen Creek
Distance to Nearest Water Body:		Adjacent
Adjacent to Delaware River?		No
PCBs in groundwater?		Unknown
Remediation Complete?		No
If so, when did it end?		N/A

EPA has designated two operable units at the Crossley Farm Site . The first operable unit (OU1) is for point-of-entry carbon treatment units on contaminated residential wells and the second operable unit (OU2) is for the regional groundwater contamination at the Site.

Under the 1997 OU1 Record of Decision (ROD), EPA has installed 53 point-of-entry carbon treatment units on residential wells. The Pennsylvania Department of Environmental Protection (PADEP) has responsibility for the long term operation and maintenance (O&M) of these treatment units. The area-wide residential well sampling program is conducted every two years to detect changes in concentrations and to determine if additional wells may require treatment.

The OU2 regional groundwater investigation was completed in September 2001 and the ROD required treatment for a limited area of the most contaminated groundwater at the top of Blackhead Hill. A monitoring well and extraction well system has been constructed and samples have been analyzed finding concentrations of trichloroethelyne (TCE) at extremely high levels. One well had a concentration over 700,000 micrograms per liter (ug/L), which greatly exceeds the drinking water standard of 5 ug/l. At this time the OU2 ROD has not been fully implemented. The OU2 ROD is only an interim measure and EPA continues to evaluate additional groundwater treatment for areas at the bottom of Blackhead Hill. An OU2 ROD Amendment is planned for the fall of 2006.

The July 2001 Remedial Investigation report prepared for EPA indicates that PCBs (Aroclor 1260) were detected sporadically and at low levels in site soils (three detected instances, 1,000 µg/kg max.). No PCBs were detected in any monitoring or residential wells, though small concentrations were detected in a nearby offsite spring at 0.13µg/L. PCBs (Aroclor 1254) were detected at several locations within Perkiomen Creek, including one upgradient location, though none were detected in onsite sediments.

PADEP

Site Name:	Crown Recycling and Recovery Inc.	
Agency Site ID:	N/A	
Site Location:	Lackawaxen Township, Pennsylvania	
Site County:	Pike County	
Site Coordinates:	**Latitude:**	41.481431
	Longitude:	-75.010000
Last history update by agency:		2004
Site Category:		Industrial
Site Watershed:		Lackawaxen River
Discharge Point(s):		Unknown
Name of Nearest Water Body:		Lackawaxen River
Distance to Nearest Water Body:		less than 300 feet
Adjacent to Delaware River?		No
PCBs in groundwater?		Unknown
Remediation Complete?		No
If so, when did it end?		N/A

In November 1998 the PADEP concluded a Final Remedial Action at the site by excavating soil, sediments and ash as well as the removal of a fence. However, during the removal actions fractures in the bedrock were found that were filled with PCB-containing oil. The PADEP planned to investigate the fractures more thoroughly and determine if additional remedial action was necessary.

From the early 1960s until approximately 1988, Crown Industries operated as a metal processing and salvage yard. In addition, a wire burning and stripping operation and landfill, both unpermitted, resulted in the accumulation of various other wastes. The site was contaminated with a variety of substances, most notably heavy metals, dioxins, PAH, PCE, and PCBs. PCBs were only present in site soil. The Remedial Investigation and Feasibility Study recommended the removal of all scrap metal, municipal and residual waste, and lead and PCB-contaminated soil and ash. Any substances that were considered "unrecoverable" were placed underneath an impervious cap so as to minimize potential exposure. These remedial activities were concluded 11/20/1998.

Out of 12 groundwater samples taking 10/8/2002, four had detections of Aroclor-1242 over the reporting limit. In samples tested 7/8/2004, there were 6 samples above the reporting limit for either Aroclor-1242 or Aroclor-1248, all the rest were within the acceptable range as determined for the site.

EPA Region 3

Site Name:	Eastern Diversified Metals	
Agency Site ID:	PAD980830533	
Site Location:	Lincoln Ave., Rush Township, PA	
Site County:	Schuylkill	
Site Coordinates:	**Latitude:**	40.829439
	Longitude:	-75.997500
Last history update by agency:		October 2006
Site Category:		Recycling
Site Watershed:		Little Schuylkill River
Discharge Point(s):		Unknown
Name of Nearest Water Body:		Unnamed tributary to Little Schuylkill River
Distance to Nearest Water Body:		Onsite
Adjacent to Delaware River?		No
Pathway to/from groundwater?		Yes
PCB Remediation Complete?		No
If so, when did it end?		N/A

The 25-acre Eastern Diversified Metals site is a former wire recycling facility. From 1966 to 1977, the company disposed of approximately 350 million pounds of waste insulation material, commonly called "fluff", in an open pile. This fluff comes from stripping the coverings off of copper and aluminum wire. The fluff disposal pile is, at present, approximately 40 feet high, 250 feet wide and 1,500 feet long, totaling roughly 350 million pounds. Contained within are several "hot spots" with PCB concentrations estimated in the early 1990s at a maximum of 5,560 mg/kg. Average PCB concentrations in the fluff were 15.7 mg/kg, excluding the three highest sample results.

PCB concentrations have been noted in surface and subsurface soils, sediments of the onsite unnamed tributary to the Little Schuylkill River, and the fluff pile. PCBs were not detected in the Little Schuylkill River, though traces of fluff have been noted as far downstream as 23 miles. Various removal activities have taken place that have included the offsite disposal and incineration of hundreds cubic yards of fluff material, contaminated soil, and the diversion of the onsite unnamed tributary away from the fluff pile, which had been receiving several leachate streams with PCB concentrations of up to 6 µg/L.

Currently, ongoing studies are focusing on how to remove additional contamination from the fluff pile and prevent its offsite migration as well as developing more refined engineering solutions to remedy the remaining pollutants.

Fig. 12. Fluff pile at EDM in 2003. *Source:* US EPA

PADEP

Site Name:	Frankford Arsenal	
Agency Site ID:	N/A	
Site Location:	City of Philadelphia, Pennsylvania	
Site County:	Philadelphia County	
Site Coordinates:	**Latitude:**	40.008056
	Longitude:	-75.061111
Last history update by agency:		May 2006
Site Category:		Department of Defense Site
Site Watershed:		Delaware River
Discharge Point(s):		Unknown
Name of Nearest Water Body:		Delaware River
Distance to Nearest Water Body:		Delaware River
Adjacent to Delaware River?		Yes
PCBs in groundwater?		Unknown
Remediation Complete?		No
If so, when did it end?		N/A

The Frankford Arsenal base, which was primarily licensed for the use of depleted uranium, closed in 1977. A 2001 PADEP memo noted that a number of inactive transformers on the property were labeled as containing PCBs. In May 2006 the PADEP requested maps detailing ongoing PCB sampling. The consulting firm working on the project plans to revisit historical documents to find where historical building usage may warrant additional site characterization for PCBs and other contaminants. After any buildings are demolished, soils with PCB contamination above 50 mg/kg will be excavated, primarily buildings Nos. 64, 128, and 235. Additional files were not available as they had been sent to Harrisburg for review.

PADEP

Site Name:	Lenape Manufacturing Company	
Agency Site ID:	N/A	
Site Location:	1803 North 5th Street, Perkasie, PA 18944	
Site County:	Bucks County	
Site Coordinates:	**Latitude:**	40.395833
	Longitude:	-75.258333
Last history update by agency:		Last available record, 2000
Site Category:		Industrial
Site Watershed:		East Branch Perkiomen Creek
Discharge Point(s):		Unknown
Name of Nearest Water Body:		Perkiomen Creek
Distance to Nearest Water Body:		80-100 feet
Adjacent to Delaware River?		No
PCBs in groundwater?		Unknown
PCB Remediation Complete?		Unknown
If so, when did it end?		N/A

Lenape Manufacturing Company was the site of metal machining and fabrication operations. The nearest stream is between 80-100 feet away from the site. Runoff from contaminated soils could reach the east branch of Perkiomen Creek. In 1980, TCE and PCE contamination was discovered, which remained the main source of contamination concern for the remediation process. Many of the files available focus on the possible contamination of neighboring wells.

In 1995, surface soil was collected from below the base of the 12-inch foundation press pit floor. This was analyzed for TPHs, VOCs, and PCBs. The results of this test showed no impact due to the historical operations at the site. No concentrations were available in these files. In September of 1995, however, a second sampling event showed Aroclors 1016, 1221, 1232, 1242, 1248, 1254, and 1260 were all 40 ug/kg using EPA method 8080. 40 ug/kg is a non-detect level, thus no determination was made as to whether or not PCBs were present. In 1998, a NIR was submitted for soils under the foundation press for PCBs, but further correspondence did not reveal what concentrations or what congeners were present onsite.

Site Name:	Lower Darby Creek Area	
Agency Site ID:	PASFN0305521	
Site Location:	Darby Township and Folcroft Borough	
Site County:	Delaware and Philadelphia	
Site Coordinates:	**Latitude:**	39.902500
	Longitude:	-75.254167
Last history update by agency:		9/1/2005
Site Category:		Landfill
Site Watershed:		Darby Creek
Discharge Point(s):		Unknown
Name of Nearest Water Body:		Darby, Hermesprota, Cobbs, Muckinipattis Creeks
Distance to Nearest Water Body:		Adjacent
Adjacent to Delaware River?		No
Pathway to/from groundwater?		Yes
PCB Remediation Complete?		No
If so, when did it end?		N/A

The lower Darby Creek area is currently the subject of an ongoing EPA remedial investigation. Two former landfills, Folcroft and Clearview, are being investigated for a variety of contaminants including PCBs, PAH and metals. Folcroft landfill is located within the 1,200 acre John Heinz National Wildlife Refuge at Tinicum (formerly the Tinicum National Environmental Center) at the highest topographic point in this tidal marsh, the largest in Pennsylvania. This landfill also has an annex that also received unpermitted trash and industrial wastes from the 1950s to the 1990s. Clearview landfill operated until around 1973 and was used for disposal of municipal and industrial waste. In 1976, the Philadelphia Redevelopment Authority covered and seeded a portion of Clearview landfill. In addition, between 1976 and 1977, hundreds of residences were constructed around the eastern and southern borders of both Folcroft and Clearview landfills. The United States Fish and Wildlife Service will manage the remediation.

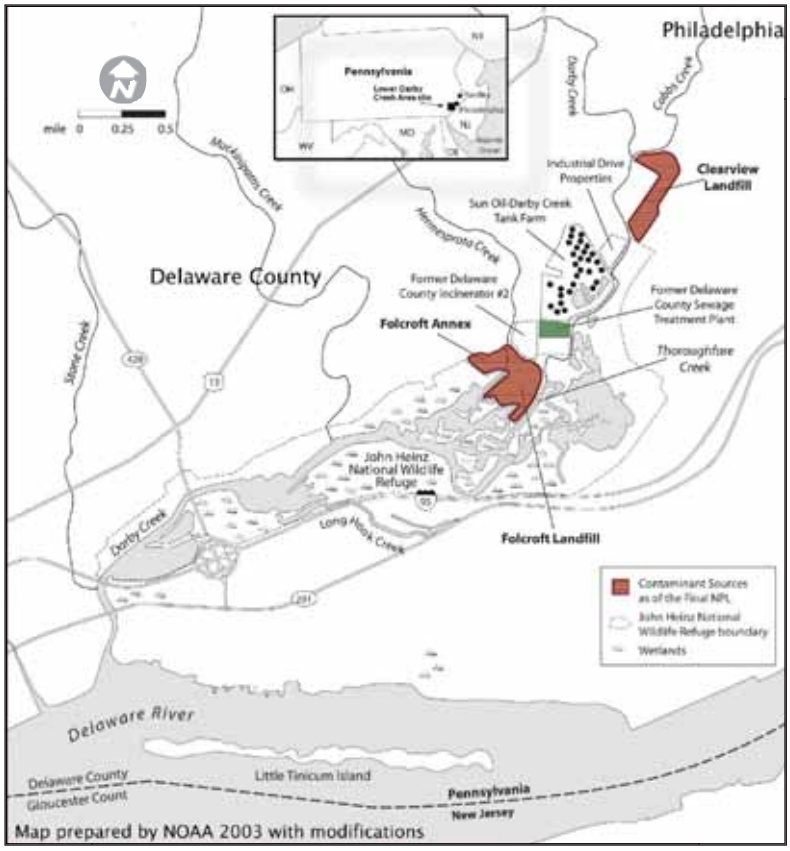


Fig. 13. Detail of Lower Darby Creek Area. *Source:* NOAA

The current investigation focuses primarily on Clearview landfill, adjacent to the Eastwick neighborhood in southwest Philadelphia**.** In late 2005 EPA finally gained access to the Clearview Landfill through a federal court-order. In 2006 EPA started sampling the Clearview Landfill collecting soil, air, and groundwater samples. EPA also installed groundwater monitoring wells on the landfill property. A November 26, 2006 Philadelphia Inquirer article reported that a settlement between the EPA and 14 "potentially responsible parties" had been reached for an "unknown amount".

EPA Region 3/PADEP

Site Name:	Metal Bank/Cottman Avenue	
Agency Site ID:	N/A, EPA ID# PAD046557096	
Site Location:	7301 Milnor St., Philadelphia, PA	
Site County:	Philadelphia	
Site Coordinates:	**Latitude:**	40.020278
	Longitude:	-75.039167
Last history update by agency:		July 2006
Site Category:		Scrap metal and transformer salvaging
Site Watershed:		Delaware River
Discharge Point(s):		Delaware River
Name of Nearest Water Body:		Delaware River
Distance to Nearest Water Body:		Adjacent
Adjacent to Delaware River?		Yes
Pathway to/from groundwater?		Yes
PCB Remediation Complete?		No
If so, when did it end?		N/A

Metal Bank is currently the subject of an extensive ongoing cleanup. The United States Coast Guard determined in 1972 that oil was leaking into the Delaware River emanating from transformer reclamation activities. Metal Bank performed several remedial actions between 1972 and 1973 and ended all transformer related activities in 1973. The presence of PCBs in groundwater was confirmed in 1977 in a large LNAPL plume as high as 1,539 ppm, which was virtually the same amount (1,540 ppm) in 1989 when the attempt at oil recovery ended. Contamination is believed to be the result of a ruptured UST that held PCB containing oil that was drained from transformers so that copper could be recovered. Groundwater testing downgrade of this UST showed Aroclors-1248 and 1260 at 430,000 µg/L and 660,000 µg/L, respectively; thus, the site was added to the NPL in 1982. Most of the site and its buildings, in which the concrete contained PCBs as high as 372 ppm, have been demolished. Contamination at the site is the result of many sources, though no primary sources are known to remain. Contaminated groundwater continues to be the most pressing issue.

Fig. 12. Metal Bank site in 2005. *Source:* US EPA

PCBs are ubiquitous in soils, as well, especially below four feet bgs. 2000 testing revealed a range of 25.5 ppm to 680 ppm PCB in soils four to six feet bgs, with soil contamination in lower concentrations in surface soils. Following the removal and incineration of over 125,000 pounds of scrap metal that may have had PCB contamination and around 200 tons of PCB impacted soil in 1985, PCBs are known to remain in soil, groundwater, and sediments in the adjacent Delaware River. In 1986, blacktopping of the "cleaned" areas was completed, but subsequent risk assessments list exposure to PCBs in remaining onsite soils as the greatest hazard to onsite workers. In addition, though estimates of the oil plume's volume vary, it is believed to be contributing PCBs to the adjacent Delaware River. Testing of sediments reveals that the bulk of PCB contamination is within 50 feet of the shore in a localized area around the site generally averaging about 2 ppm. This site is currently being addressed through EPA efforts and, after a lengthy 25 year period of litigation, financial resources available from some PRPs have been forthcoming. Remedies that were proposed in 2000 for cleanup of contaminated soils, sediments, groundwater, and surface waters included excavation, dredging of sediments out to roughly 100 feet into the Delaware River, and a new toil collection system. In 2003, EPA estimates reveal that Metal Bank contributes roughly $9.9092e^{-5}$ kg/day penta-PCBs (or 36.16858 grams/yr) to the Delaware River; this site was evaluated for the first stage TMDL.

The most recent discussions over the fate of the Metal Bank/Cottman Ave. (as of July, 2006) site have revolved around proposed remedies for contaminated soils and Delaware River sediments. The sediment remedy, which is the placement of a sub-aqueous impervious cap has not proven itself to an effective remedy. In addition, there is a lack of supporting data to suggest that this could be a reasonable "fix" that would mitigate the migration of PCB-contaminated sediments downstream. "Background" levels of PCBs are also insufficiently understood to warrant the selection of a final remedy. Significant discussion has also surrounded the selection of COCs for the site. Several metals have been determined to exceed applicable hazard index values, but not all have received thorough enough treatment so as to ensure that their overall risk to the environment will be diminished.

PADEP

Site Name:	Former Metro Container Corp./Trainer Industries, LLC	
Agency Site ID:	N/A, EPA ID# PAD044545895	
Site Location:	Calcon Hook Road, Trainer, PA	
Site County:	Delaware	
Site Coordinates:	**Latitude:**	39.890278
	Longitude:	-75.264444
Last history update by agency:		Last available record, November 2005
Site Category:		Industrial
Site Watershed:		Stoney Creek
Discharge Point(s):		Stoney Creek, groundwater migration
Name of Nearest Water Body:		Stoney Creek
Distance to Nearest Water Body:		Adjacent
Adjacent to Delaware River?		No
PCBs in groundwater?		Yes
PCB Remediation Complete?		No
If so, when did it end?		N/A

The former Metro Container site has had several confirmed releases of contaminants throughout its operation. Renamed Metro Enterprise Container Corp. in 1985, reportedly to circumvent union contracts, a former onsite operator, Universal Container Corp. was cited for illegal discharges into Stony Creek as early as 1965 by the PA Department of Health. PCBs and a number of other contaminants are widespread in high concentrations on site. In addition, according to an addendum to a 2001 RI/FS, contamination in groundwater monitoring wells was increasing, rather than decreasing as time passes, despite no facility operations and ongoing remedial activity onsite, though the full details of these activities are unavailable.

Between 1989-1990, EPA began attempts to stabilize the site by removing more than 60,000 drums of various sizes (mostly 55-gallon), the removal of 21 large storage tanks, asbestos abatement, and the disposal of 6,000 cubic yards of visibly contaminated soil. In addition, they built a retaining wall to prevent contaminant migration. Despite these efforts, a 2005 site characterization states that "…there are several noteworthy locations of considerable impact that substantively exceed the [PADEP MSC] cleanup criteria, which are enveloped by areas of lesser impact…", which includes Aroclors 1248, 1254, and 1260 in concentrations up to 744 mg/kg, 417 mg/kg, and 1,300 mg/kg in soil, respectively. PCB impacted soil was detected at depths as great as almost 22 feet (Aroclor-1248, 94.6 mg/kg, Aroclor-1254, 53.6 mg/kg), which was directly attributable to spillage during transport of waste from the former drum reclaiming building to the disposal lagoon and from chemical spills inside the buildings throughout the operations of several companies. The highest concentrations of PCBs in soil, again as of 2005, were between 2 and 8.5 feet bgs.

Sediments in the adjacent creek were noted as having the presence of the same Aroclors as the site's soils. During an August, 2005 sampling event, the range of highest detects in sediment were 2.14 mg/kg – 3.30 mg/kg, down to a depth of 6 inches. Groundwater, which contributes to the baseflow of Stoney Creek, has been verified as having the presence of PCBs. PCBs of various Aroclors have been found along Stoney Creek in groundwater between 35 µg/L - 6,400 µg/L in 2001. This creek joins with the Delaware River roughly 1,000 feet south of site.

PADEP

Site Name:	Former Schmidt's Brewery (a.k.a. Tower Investment)	
Agency Site ID:	N/A	
Site Location:	2 Girard Ave. Philadelphia, PA	
Site County:	Philadelphia	
Site Coordinates:	**Latitude:**	39.969444
	Longitude:	-75.140000
Last history update by agency:		16 November, 2006
Site Category:		Former brewery
Site Watershed:		Delaware River
Discharge Point(s):		Unknown
Name of Nearest Water Body:		Delaware River
Distance to Nearest Water Body:		~1/4 mile
Adjacent to Delaware River?		No
PCBs in groundwater?		Unknown
Remediation Complete?		No
If so, when did it end?		N/A

NOTE: *Remedial investigations files were not provided by PADEP for this site. However, as of November 16, 2006, the PADEP provided the following update:*

"PCB's [*sic*] identified in soils onsite at building #21 foundation. Additional excavations planned."

Site Name:	SEPTA Wayne Junction	
Agency Site ID:	N/A	
Site Location:	4500 Germantown Ave. Philadelphia, PA	
Site County:	Philadelphia	
Site Coordinates:	**Latitude:**	40.022222
	Longitude:	-75.160278
Last history update by agency:		16 November, 2006
Site Category:		Railyard
Site Watershed:		Frankford Creek
Discharge Point(s):		Unknown
Name of Nearest Water Body:		Schuylkill River, Wissahickon Creek
Distance to Nearest Water Body:		~1/2 mile
Adjacent to Delaware River?		No
PCBs in groundwater?		Unknown
Remediation Complete?		No
If so, when did it end?		N/A

NOTE: *Remedial investigations files were not provided by PADEP for this site. However, as of November 16, 2006, the PADEP provided the following update:*

"PCB's [*sic*] identified in soils only. Hot spots have been delineated and plans are underway to excavate them."

PADEP

Site Name:	United States Navy Public Administration	
Agency Site ID:	N/A	
Site Location:	Broad Street, Philadelphia	
Site County:	Philadelphia	
Site Coordinates:	**Latitude:**	39.886944
	Longitude:	-75.180000
Last history update by agency:		16 November, 2006
Site Category:		Department of Defense Site
Site Watershed:		Delaware River
Discharge Point(s):		Unknown
Name of Nearest Water Body:		Delaware River
Distance to Nearest Water Body:		Adjacent
Adjacent to Delaware River?		Yes
PCBs in groundwater?		Unknown
Remediation Complete?		No
If so, when did it end?		N/A

NOTE: *Remedial investigations files were not provided by PADEP for this site. However, as of November 16, 2006, the PADEP provided the following update:*

"Site wide NIR; several separate projects; ongoing dredging project Oct-Dec. 2006 aka Reserve Basin Sediments."

Site Name:	Wharf at Rivertown (aka PECO Chester Station)	
Agency Site ID:	N/A	
Site Location:	Chester City, PA	
Site County:	DELCO	
Site Coordinates:	**Latitude:**	39.831389
	Longitude:	-75.381944
Last history update by agency:		16 November, 2006
Site Category:		N/A
Site Watershed:		Delaware River
Discharge Point(s):		Unknown
Name of Nearest Water Body:		Delaware River
Distance to Nearest Water Body:		Adjacent
Adjacent to Delaware River?		No
PCBs in groundwater?		Unknown
Remediation Complete?		No
If so, when did it end?		N/A

NOTE: *Remedial investigations files were not provided by PADEP for this site. However, as of November 16, 2006, the PADEP provided the following update:*

"Partially redeveloped; ongoing groundwater cleanup; former Chem Clear RCRA site."

PADEP

Site Name:	White Pines Partners Golf Course	
Agency Site ID:	N/A	
Site Location:	1 Red Lion Road, Philadelphia, PA	
Site County:	Philadelphia	
Site Coordinates:	**Latitude:**	40.108333
	Longitude:	-75.041667
Last history update by agency:		N/A
Site Category:		
Site Watershed:		Pennypack Creek
Discharge Point(s):		Unknown
Name of Nearest Water Body:		Unnamed tributary to Pennypack Creek
Distance to Nearest Water Body:		~300 feet
Adjacent to Delaware River?		No
PCBs in groundwater?		Yes
PCB Remediation Complete?		No
If so, when did it end?		N/A

White Pines Partners, L.P's Island Green Golf Course is currently undergoing groundwater treatment, for which PCBs are a contaminant. Though PCBs have generally been below levels required by PA Statewide health standards, an active carbon pump and treat system has been in place for some time that requires regular sampling to ensure the effectiveness of this remedy.

5.3 SITES WITH REPORTEDLY COMPLETED PCB REMEDIATION IN PENNSYLVANIA

PADEP

Site Name: 1 Montgomery Plaza
Agency Site ID: N/A
Site Location: 425 Swede Road, Norristown, PA
Site County: Montgomery
Site Coordinates: **Latitude:** 40.102778
Longitude: -75.375000
Site Watershed: Schuylkill River
PCBs in groundwater? No
PCB Remediation Complete? Yes
If so, when did it end? 1999
Remedial standard attained? Statewide Health, Non-residential

Following the failure of a PCB containing transformer, 625.03 tons of contaminated soil and asphalt were removed from a parking lot behind an office complex across the street from the Montgomery County courthouse in Norristown. A further overexcavation of roughly 2,950 square feet to 5-6 feet bgs was needed to remediate site soils below the residential statewide health standard for soils for Aroclor-1254 of 4.4 ppm.

PADEP

Site Name: 3742 Main Street
Agency Site ID: N/A
Site Location: 3742 Main Street, Philadelphia, PA
Site County: Philadelphia
Site Coordinates: **Latitude:** 40.015278
Longitude: -75.210556
Site Watershed: Schuylkill River
PCBs in groundwater? No
PCB Remediation Complete? Yes
If so, when did it end? 4/20/2005
Remedial standard attained? Site specific and statewide health

This site is composed of a multi-unit residential building and parking lots. Historically, the site was used as a structure for railcar storage and later a parking lot. Down a steep embankment on the west side of the site flows the Schuylkill River. The Phase I ESA showed a transformer in the southeast corner of the site. Over 2003-2004, a residential building was constructed on the site. In 2005, the site was remediated to Statewide Health and Site Specific Standards. The PADEP-approved cleanup plan included asphalt covers (i.e. parking lots), the addition of 12 inches of clean soil, erosion control in the form of vegetated buffers, and deed restrictions. 2.8 ppm of Aroclor-1260 are buried under a cap.

PADEP

Site Name: 5 Tower Bridge
Agency Site ID: N/A
Site Location: River Road and Fayette Street, West Conshohocken, PA
Site County: Montgomery
Site Coordinates: **Latitude:** 40.070833
Longitude: -75.311667
Site Watershed: Schuylkill River
PCBs in groundwater? No
PCB Remediation Complete? Yes
If so, when did it end? Unknown, last available report, 1999
Remedial standard attained? Statewide Health, Residential

There was very little available information on Five Tower Bridge. The owner of the property submitted a notice of intent to remediate in 1999 and initial site visits discovered transformers and fluorescent lights that may have contained PCBs. Supposedly, most or all of the PCB contamination was contained indoors except for sporadic localized concentrations throughout the site from past industrial processes. As of the writing of this report, Five Tower Bridge is a low rise apartment complex.

PADEP

Site Name: 6 Tower Bridge
Agency Site ID: N/A
Site Location: Conshohocken
Site County: Montgomery County
Site Coordinates: **Latitude:** 40.237778
Longitude: -75.306111
Site Watershed: Skippack Creek
PCBs in groundwater? Unknown
PCB Remediation Complete? Yes
If so, when did it end? 1998
Remedial standard attained? Statewide health, non-residential

The 6 Tower Bridge site, also known as Tower Bridge North, occupies 9.83 acres. The site was found to have PCBs in surface and shallow soils. Aroclor 1254 was detected at concentrations ranging from 0.776 mg/kg to 5.29 mg/kg between zero and two feet below ground surface. Aroclor 1254 was also detected at concentrations ranging from 0.532 mg/kg to 5.89 mg/kg from two to fifteen feet below ground surface. The PADEP approved Act 2 attainment of MSC on December 24, 1998 and no further action was required. The property has since been redeveloped into an office tower and an inn/hotel.

PADEP

Site Name: Abrams Metals Co.
Agency Site ID: N/A
Site Location: 5800 Woodland Avenue, Philadelphia, PA
Site County: Philadelphia
Site Coordinates: **Latitude:** 39.931389
Longitude: -75.224722
Site Watershed: Schuylkill River
PCBs in groundwater? No
PCB Remediation Complete? Yes
If so, when did it end? 2003
Remedial standard attained? Statewide Health

Historically, this site was occupied in the 1920s by a brick manufacturing company, and then became a railroad freight yard. In the 1950s, the property was turned over to Abrams Metals Co. In 2002, the owner of the property wanted to develop it into a "much needed" supermarket.

The Phase I ESA in 2001 found metals and PCB impacted soil located adjacent to the former metal shear. PCB testing was done in surface and subsurface soil and in groundwater, using Method 8082. In the soil, Aroclor-1248 was found in two surface samples, at concentrations of 97 and 59 ppm. Aroclor-1254 was present in surface soil at 75 and 80 ppm. The groundwater had no PCBs.

Remediation included the removal of almost 500 tons of PCB-impacted soil. Post-removal sampling showed that no PCB levels were above statewide health standards. In 2003, there were still some remedial activities planned to remove soil contaminated with lead.

PADEP

Site Name: Alfa Laval, Inc. Separation Facility
Agency Site ID: N/A
Site Location: Warminster, PA
Site County: Bucks
Site Coordinates: **Latitude:** 40.210278
Longitude: -75.085000
Site Watershed: Little Neshaminy
PCBs in groundwater? No
PCB Remediation Complete? Yes
If so, when did it end? 2002
Remediation standard attained? Statewide Health, Non-Residential

Very little information was available for site-related contaminants at Alfa Laval in Warminster, PA. The 19 acre site had soil contaminated with PCBs, lead, heavy metals, BTEX, PAH, pesticides, and various solvents. Groundwater was also impaired but has reportedly been remediated. Upon submission of the final report for the site's remediation, PADEP certified the site as remediated to Statewide Health standards.

PADEP

Site Name: Allentown Tower Properties (listed twice in 2006 report)
Agency Site ID: N/A
Site Location: 545-563 Lehigh Pkwy East, Allentown, PA
Site County: Lehigh
Site Coordinates: **Latitude:** 40.588611
Longitude: -75.4875
Site Watershed: Little Lehigh Creek
PCBs in groundwater? Yes
PCB Remediation Complete? Yes
If so, when did it end? 2002
Remedial standard attained? Site specific

The Allentown Tower Properties site occupies 3.044 acres of the former Union Carbide – Linde Division package gas plant, of which 2 acres were impacted with PCBs and PAHs. An investigation of the site yielded soil samples that exceeded the Residential MSC for Aroclors 1232, 1248, and 1254. Soil concentrations as high as 56 mg/kg for Aroclor 1248 and 11 mg/kg for Aroclor 1254 were detected. The ground water concentration did not exceed the MSC.

No excavation of the site was performed as the exposure pathway was eliminated by the proposed development on the site. Approximately 80% of the site will be covered with an impervious surface and two feet of clean soil will be spread over the remaining portion during construction activities.

By letter of October 7, 2002 the PADEP notified the owners that a deed notice and restriction is required and the final report was approved. Remediation under Act 2 was complete. However, a 2005 report revealed additional PCB contaminated soil in an area 200 feet by 40 feet, along a railroad spur. Similar to the remedy for the majority of the site, the remediation method is an impervious cap and clean soil.

PADEP

Site Name: Alto Sign, Inc.
Agency Site ID: N/A
Site Location: 2032-2038 S. 71st Street, Philadelphia, PA
Site County: Philadelphia
Site Coordinates: **Latitude:** 39.922222
Longitude: -75.245000
Site Watershed: Cobbs Creek
PCBs in groundwater? Unknown
PCB Remediation Complete? Yes
If so, when did it end? Unknown
Remedial standard attained? Statewide Health

This property was previously owned by various metal and automotive manufacturing companies. It was developed in the 1930s and used for manufacturing until 1986. In 1988, the main building was demolished and stockpile was removed (including automotive fluff, wood, and other solid waste debris, none of which contained PCBs). As a part of the Phase II ESA in 1998, part of the site was graded with debris/fill which contributed various contaminants. PCBs were tested for in groundwater, soil, subsurface soil, and the Wissahickon bedrock. Aroclor-1260 was present with a concentration of 0.0659 ppm, and nothing else was affected. No PCBs were found above any standard for health. There was a Human Health Assessment in 2002, which focused on TCE and petroleum from old USTs and groundwater contamination.

PADEP

Site Name: Andela Site (same location as Riverbend site)
Agency Site ID: N/A
Site Location: 960 Creek Road, Warwick Township, PA
Site County: Bucks
Site Coordinates: **Latitude:** 40.900833
Longitude: -75.079167
Site Watershed: Delaware River
PCBs in groundwater? No
PCB Remediation Complete? Yes
If so, when did it end? 1997
Remediation level attained? Statewide Health, Residential

From 1970-1987 Andela was used for agriculture, but portions were used as a auto body repair and paint shop and a sandblasting business. Between January and September 1997, EPA excavated and removed 1,000 tons of TSCA qualifying soils (PCB >50 ppm),

as well as containers of liquids, batteries, rubbish, debris (totaling roughly 13,000 pounds). Post excavation/removal included 132 samples that were tested for lead and PCBs and all were below the Residential State Health Standard for soil.

PADEP

Site Name: Bottle House Industries
Agency Site ID: N/A
Site Location: 401-451 North Front Street, Allentown, PA
Site County: Lehigh
Site Coordinates: **Latitude:** 40.612961
Longitude: -75.458414
Site Watershed: Lehigh
PCBs in groundwater? No
PCB Remediation Complete? N/A
If so, when did it end? N/A

PCBs have not been found onsite

This former brewery bottling facility was later used as a facility for the production and packaging of pesticides, herbicides, plasticizers, and cleaning compounds from 1992 through 1998. This site was erroneously flagged as containing PCBs in the 2006 DelTRiP report. However, further investigation revealed that PCBs were not a contaminant present on the site. Furthermore, after drum removal in May 2000 no further action has been taken on this site.

EPA Region 3

Site Name: Butz Landfill
Agency Site ID: PAD981034705
Site Location: Township Route 601, Stroudsburg, PA
Site County: Monroe
Site Coordinates: **Latitude:** 41.033500
Longitude: -75.343800
Site Watershed: Pocono Creek
PCBs in groundwater? No
PCB Remediation Complete? Yes
If so, when did it end? 2001
Remedial standard attained? Unknown

PCBs were not a contaminant of concern at this site in Stroudsburg, PA. Primary contaminants were contaminated groundwater that resulted from landfill operations over a number of years. EPA continues to operate a groundwater pump and treat system with regular testing for VOCs and TCE.

PADEP

Site Name: Cedar Hollow Quarry
Agency Site ID: N/A
Site Location: Tredyffrin and East Whiteland Townships, Pennsylvania
Site County: Chester County
Site Coordinates: **Latitude:** 40.068611
Longitude: -75.529444
Site Watershed: Valley Creek
PCBs in groundwater? Unknown
PCB Remediation Complete? Yes
If so, when did it end? 2005
Remedial standard attained? Statewide Health, non-residential

The Cedar Hollow Quarry site is a former quarry and lime processing plant with a proposed future use of a non-residential commercial office park. A 2000 overview of the Act 2 closure activities noted that PCBs were identified in equipment onsite, but limited PCB-impacted soil was encountered. Cleanup of building material contaminated with PCBs was underway in 2000. Act 2 remediation completion for the site was attained on April 28, 2005.

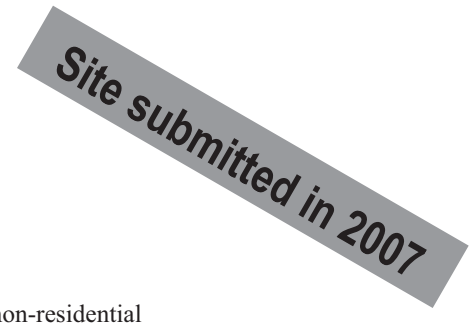
PADEP

Site Name: Chelsea Historic Properties
Agency Site ID: N/A
Site Location: 4041 Ridge Avenue, Philadelphia, PA
Site County: Philadelphia
Site Coordinates: **Latitude:** 40.007694
Longitude: -75.188389
Site Watershed: Schuylkill River
PCBs in groundwater? No
PCB Remediation Complete? Yes
If so, when did it end? Unknown
Remedial standard attained? Site Specific

Chelsea Historic Properties, also known as Chelsea Housing, is a 13-acre site which, as of March 2003, was being used for residential purposes only. In the 1850s, the site was a textile mill known as Dobson Mills. Since then, owners and tenants have used the site for textile manufacturing, tire sales and service, a materials testing lab, sheet metal fabrication, cardboard box manufacturing, fabric dying, carpentry, and metal machining. Chelsea Historic Properties bought the tract in 1988. On the property are 15 buildings, as well as construction and a parking garage. In 2002, a Notice of Intent to Remediate was submitted, claiming PCBs in soil, but not groundwater. Soil sampling was done January 3 and 4, March 5, May 15, Aug. 6, and November 13 of 2002. Out of 189 samples, PCBs were present in four, ranging from 140-310 ug/kg. A Final Report was submitted 7/1/2003 for attainment of site specific and statewide health standards.

PADEP

Site Name: Cognis Corporation
Agency Site ID: N/A
Site Location: Lower Gwynedd Township
Site County: Montgomery County
Site Coordinates: **Latitude:** Unknown
Longitude: Unknown
Site Watershed: Unknown
PCBs in groundwater? Unknown
PCB Remediation Complete? Yes
If so, when did it end? March 2006
Remedial standard attained? Statewide health, non-residential



The Cognis Corporation site attained Non-Residential Statewide Health limits for soils upon cleanup completion in March 2006. Eighteen acres of the property were sold to Lower Gwynedd Township in 2002, of which 2 acres known as *Ball Field Area* were targeted for further analysis prior to converting the land into a ball field. Seven PCB Aroclors were tested for using EPA Method 8082. All shallow soil samples met Residential Direct Contact and Residential Soil to Ground Water Statewide Health standards.

PADEP

Site Name: Darby Creek Joint Authority Sewage Treatment Plant
Agency Site ID: N/A
Site Location: Calcon Hook Road, Tinicum, PA
Site County: Delaware
Site Coordinates: **Latitude:** 39.890278
Longitude: -75.264444
Site Watershed: Darby Creek
PCBs in groundwater? No
PCB Remediation Complete? Yes
If so, when did it end? 2006
Standard attained? Statewide Health, Non-residential

The Darby Creek Joint Authority Sewage Treatment Plant (DCJASTP) is part of a highly contaminated area near the John Heinz National Wildlife Refuge between Delaware and Philadelphia Counties. The site has three current uses: a horse farm operated by a tenant farmer, a concrete crushing facility, and a pumping station owned and operated by Delaware County Regional Authority. PCB contamination most likely emerged from PCB-containing transformers on site, which as of the most recent testing (2001) revealed Aroclor-1260 at 6.5 ppm in surface soil, which is considered remediated according to the PA Statewide Health Standard for this facility's use. In addition, a former transformer area onsite contributed to soil contamination, up to 1,400 mg/kg of Aroclor-1260.

PCB remediation was reportedly completed in 2002 with soil excavation and placement of clean infill. A 2004 RI/FS claims that there is no threat of PCBs migrating to groundwater, unlike other contaminants at the site, from former transformer related activities. However, PCB levels have been found at 140 ppb immediately adjacent to Darby Creek, though it is unclear whether this detection was from operations at DCJASTP or from tidal deposition. The entire Lower Darby Creek area is now the subject of an EPA region 3 investigation and cleanup, notably because of the Folcroft and Clearview Landfills, both in close proximity to DCJASTP.

PADEP

Site Name: Dodge Steel Castings
Agency Site ID: N/A
Site Location: 6501 New State Road, Philadelphia, PA
Site County: Philadelphia County
Site Coordinates: **Latitude:** 40.017500
Longitude: -75.044722
Site Watershed: Delaware River
PCBs in groundwater? No
PCB Remediation Complete? N/A
If so, when did it end? N/A
Remedial standard attained? N/A

PCBs have not been found onsite

Dodge Steel Castings has been inactive since the 1980s. It was formerly a metal castings manufacturing plant, but is now abandoned, and much illegal dumping has occurred. Groundwater flow would be expected to go directly toward the Delaware River, in a south-southeast direction. However, flow is actually southeast to east-southeast, due to the effects of large-diameter sewage pipes on the site.

In October of 1988, the BCM Report described the testing of ten shallow soil samples and one round of groundwater samples for PCBs. PCBs were non-detect, and the BCM report focused on TPH and lead as the primary causes of concern. Likewise, the soil around and under the former transformer pad was tested for PCBs in the mid-1990s, but no contamination was identified.

In October 1997, a Notice of Intent to Remediate was submitted, but claimed no PCB contamination. On 8/29/2002, the soil was tested for 8 forms of PCBs, using Method 8082. No PCBs were detected.

EPA Region 3

Site Name:	Dorney Road Landfill	
Agency Site ID:	N/A, EPA Region 3: PAD980508832	
Site Location:	Upper Macungie Township, PA	
Site County:	Lehigh County	
Site Coordinates:	**Latitude:**	40.527778
	Longitude:	-75.654167
Site Watershed:		Unknown
PCBs in groundwater?		Unknown
PCB Remediation Complete?		Yes
If so, when did it end?		9/1999
Remedial standard attained?		Unknown

This landfill site is 27 acres, bounded by Dorney Road to the east and Folk Road to the south. From 1959 - 1978, it accepted household and industrial wastes. Before this, it was an open-pit iron mine. It was placed on the EPA National Priorities List in 1984. In 1986, the EPA took removal actions to ensure that the wastes didn't migrate due to stormwater. Emergency removal actions included a regrading of the site to collect and contain on-site surface water runoff. Then the site was divided into two OUs.

OU1 refers to the landfill. Soils contained the pesticide dieldrin, lead, and chromium. Primary components of the landfill remedy include the construction of a multilayer impermeable cap with runoff controls, the construction of a replacement wetland on top of the property, construction of a fence around the perimeter of the landfill, and groundwater monitoring.

OU2 refers to the groundwater affected by the site contamination. Groundwater/leachate was found to have ketones, vinyl chloride, trichloroethene (TCE), and arsenic. The groundwater remedy is to monitor residential drinking water wells quarterly. The First Five-Year Review showed that no residential well sample has exceeded the risk-based action levels. According to the EPA Superfund Site Progress Profile, construction of the cap was completed by September of 1999. In August 2005, the replacement wetlands were determined to be sufficient, and formal monitoring of their progress ceased. Quarterly groundwater monitoring will continue until the EPA determines that it is unnecessary.

EPA Region 3

Site Name:	Douglassville Disposal	
Agency Site ID:	PAD002384865	
Site Location:	Route 724 Douglassville, PA	
Site County:	Berks	
Site Coordinates:	**Latitude:**	40.257500
	Longitude:	-75.735281
Site Watershed:		Schuylkill River
PCBs in groundwater?		
PCB Remediation Complete?		Yes
If so, when did it end?		March 1, 2003
Remedial standard attained?		Unknown

Following an in situ lime stabilization and soil cap this site was declared remediated for all site-related contaminants in 2003. From 1981 to 1986, an oil recycling business operated on this roughly 50-acre site that resulted in the placement of oil sludge in onsite waste lagoons. Removal of roughly 700 drums containing waste oil, sludge, and other materials preceded the excavation and capping of contaminated onsite soils.

PADEP

Site Name:	Drug Emporium Plaza	
Agency Site ID:	N/A	
Site Location:	3801-3899 Aramingo Avenue, Philadelphia	
Site County:	Philadelphia County	
Site Coordinates:	**Latitude:**	40.101883
	Longitude:	-75.00900
Site Watershed:		Frankford Creek
PCBs in groundwater?		N/A
PCB Remediation Complete?		N/A
If so, when did it end?		N/A
Remedial standard attained?		N/A

PCBs have not been found onsite

This site was formerly used as a parking lot. It is currently developed with commercial buildings and a restaurant complex. The remainder of the site is covered with asphalt and small areas of landscaping. PCBs were never tested for at this site, nor is there any indication that they would have been used or disposed of onsite.

PADEP

Site Name: Eagles Stadium and Parking Areas
Agency Site ID: N/A
Site Location: 3600 South Darien Avenue, Philadelphia, PA
Site County: Philadelphia
Site Coordinates: **Latitude:** 40.245000
Longitude: -75.655833
Site Watershed: Delaware River
PCBs in groundwater? No
PCB Remediation Complete? Yes
If so, when did it end? 2002
Remedial standard attained? Special Industrial Area (SIA)

Constructed on a historically industrial area, the Philadelphia Eagles Stadium site was investigated prior to its construction. It is presently unknown to what extent PCB contamination existed. In 2001, further subsurface soil testing was planned using EPA method 8082, but the only information available from PADEP was a series of groundwater investigations, during which PCBs were identified as a potential contaminant. A large oil plume was present beneath the site, though PCBs were not detected.

Any surface soils would have been excavated given the large volume of soil removed for construction of the 43.2 acre site. An estimated 120,000 cubic yards of soil was removed an placed on a neighboring parcel, on which now sits an elevated parking area. The remaining surface was covered with asphalt and concrete with sporadic landscaping. The site was developed as a special industrial area (SIA).

PADEP

Site Name: Eastern Elec Apparatus Rep
Agency Site ID: N/A
Site Location: Unknown
Site County: Lackawanna
Site Coordinates: **Latitude:** 41.357531
Longitude: -75.74069
Site Watershed: Unknown
PCBs in groundwater? Unknown
PCB Remediation Complete? Unknown
If so, when did it end? Unknown
Remedial standard attained? Unknown

This site is outside the Delaware River basin

PADEP

Site Name: Eastern Electric Property (former)
Agency Site ID: N/A
Site Location: 125 South 30th Street, Philadelphia, PA
Site County: Philadelphia
Site Coordinates: **Latitude:** 39.953056
Longitude: -75.184722
Site Watershed: Schuylkill River
PCBs in groundwater? Unknown
PCB Remediation Complete? Yes
If so, when did it end? 200
Remedial standard attained? Site Specific

NOTE: *Remedial investigations files were not provided by PADEP for this site. However, as of November 16, 2006, the PADEP provided the following update:*

"Site meets Site-Specific Standards based on pathway elimination. Final report approved on 9/26/2003."

Site Name: Eastern Rotorcraft (former)
Agency Site ID: N/A
Site Location: 320 Swamp Road North, Doylestown, PA
Site County: Bucks
Site Coordinates: **Latitude:** 40.333333
Longitude: -75.140278
Site Watershed: Pine Run
PCBs in groundwater? No
PCB Remediation Complete? N/A
If so, when did it end? N/A
Remedial level attained? N/A

PCBs have not been found onsite

PADEP

Dielectric fluid was tested because of a misplaced "PCB containing" sign on a transformer. The fluid in the transformer was non-PCB containing and as of 1994, the consultant was "in the process of getting new signs".

Site Name: F.P. Woll & Co.
Agency Site ID: N/A
Site Location: Northeast Philadelphia
Site County: Philadelphia
Site Coordinates: **Latitude:** 40.110000
Longitude: -75.035000
Site Watershed: Pennypack Creek
PCBs in groundwater? No
PCB Remediation Complete? Yes
If so, when did it end? 12/1/1999
Remedial standard attained? Statewide Health, non-residential

PADEP

In April 1998, Aroclor-1254 was found at a concentration of 0.039 ppm. A Notice of Intent to Remediate was submitted July 2, 1998. An Act 2 Report was approved 2/5/1999 for soils, especially around the transformer area, which had previously been contaminated with VOCs, PCBs, and BNE. Cleanup was completed 12/1/1999. Additional groundwater monitoring showed no PCBs, and aquifer testing was to continue.

Site Name: Glasgow Property
Agency Site ID: N/A
Site Location: Hartman Road, North Wales, PA
Site County: Montgomery County
Site Coordinates: **Latitude:** 40.768889
Longitude: -75.224500
Site Watershed: Bushkill Creek
PCB Contamination in groundwater? No
PCB Remediation Complete? N/A
If so, when did it end? N/A

PCBs have not been found onsite

PADEP

This site is currently owned by Glasgow, who uses it as a part of their quarry operations, hosting equipment and equipment parts. The bulk of the 63.65 acre property is cultivated farmland. According to the Phase I ESA, two AOCs were identified- a soil pile and housing debris from a former burned drum farmhouse. The Act II Final Report was prepared later for the Cutler Group, after cleanup had been completed in 2004 for lead and arsenic contamination. PCBs were never tested for at this site. There was no historic use that would indicate the presence of PCBs.

PADEP

Site Name: Houston Auto Parts
Agency Site ID: N/A
Site Location: 31 East Post Road, Falls Township, PA
Site County: Bucks
Site Coordinates: **Latitude:** 40.195833
Longitude: -74.766864
Site Watershed: Delaware River
PCBs in groundwater? No
PCB Remediation Complete? Yes
If so, when did it end? 1994
Remediation standard attained? Unknown

In 1990, PADEP responded to an enormous tire fire, involving roughly 20,000 tires. Following the fire's extinguishing, cleanup of the Houston Auto Parts site involved the removal of 30 55-gallon drums, which were sampled at random for PCBs, and many more 5-gallon pails containing unidentified residual and/or hazardous waste. More extensive testing showed PCBs in 2 of the 30 drums at 3.52 ppm. These drums were removed, but no information was available regarding contamination from either historic site activities or the 1990 fire, but PADEP reportedly approved in 1994 whatever cleanup took place on site.

PADEP

Site Name: Hull Corporation (former)
Agency Site ID: N/A
Site Location: 3535 Davisville Road
Site County: Montgomery County
Site Coordinates: **Latitude:** 40.161036
Longitude: -75.091697
Site Watershed: Pennypack Creek
PCBs in groundwater? No
PCB Remediation Complete? Yes
If so, when did it end? 4/2004
Remedial standard attained? Site specific

Hull operated from 1957-1997 producing equipment and systems for manufacturing, including freeze drying systems (mostly for big pharmaceuticals), plastics processing, and continuous emissions monitoring systems. Before 1957, the 4.7 acre site was a chicken farm.

Testing done in 2001 found PCBs to be less than 0.01 ppm. A letter dated 1992 showed one test pit sample at 0.7 ppm. An amended Notice of Intent to Remediate was submitted 5/20/2002 to clean up to statewide health standards. In the transformer area, localized soil excavation and removal took place, but it remains unclear whether there were ever elevated PCBs in this area. There were samples containing PCBs in a TCE remediation area (0.630 ppm of Aroclor-1254 in one sample). PCBs are not present in groundwater. On 4/28/2004, the property reached remediation to site specific standards.

PADEP

Site Name: Industrial Park Development Company Property (Ind Park Dev in 2006 report)
Agency Site ID: N/A
Site Location: 1001 Industrial Highway, Eddystone Borough
Site County: Delaware County
Site Coordinates: **Latitude:** 39.864964
Longitude: -75.345667
Site Watershed: Crum Creek
PCBs in groundwater? Unknown
PCB Remediation Complete? Yes
If so, when did it end? 1996
Remedial standard attained? Site specific

This site was the subject of an EPA action in 1985, when the EPA removed several drums. After drum removal, analysis showed that PCBs exceeded the Non-Residential SHS in three shallow soil samples. Additional sampling conducted in 1996 indicated that PCBs did not exceed the MSC SHS and no further action was required. No PCBs were detected in surface water samples. However, lead was cited as a contaminant of concern on the site. An impervious cap was the recommended remedy and the site then met the Site Specific Standards. The PADEP approved completion of the cleanup on October 3, 1996 and required a deed notice. An audit of courthouse records in 2003 revealed that the required deed notice had not been applied. The PADEP notified the Industrial Park Development Company to correct the default forthwith.

PADEP

Site Name: Industrial Park Development – Air Force Plant No. 45
Agency Site ID: N/A
Site Location: City of Chester
Site County: Delaware County
Site Coordinates: **Latitude:** Unknown
Longitude: Unknown
Site Watershed: Unknown
PCBs in groundwater? No
PCB Remediation Complete? Yes
If so, when did it end? 1998
Remedial standard attained? Special Industrial Area (SIA)

Site submitted in 2007

This site was formerly owned by the Department of Defense but has since been sold to the Industrial Park Development Company. PCB Aroclor 1260 was detected in a 900 square foot concrete floor. Using EPA Method 8082 to analyze wipes of the floor, PCB concentrations ranged from 15 µg/100cm^2 to 690,000 µg/100cm^2. The floor was chemically treated and chip samples were analyzed after the cleanup. The chip samples indicated the remaining concentration to range from 0.223 ppm to 1.05 ppm.

In 2003, the PADEP acknowledged that no releases to soil or groundwater resulted from the military activities at the site. As the post-cleanup samples confirmed that the PCB concentration was below the applicable criteria, the site was added to the List of Resolved Sites under a multi-site agreement between the PADEP and the military dated July 4, 1998.

PADEP

Site Name: Jacob Kline Cooperage
Agency Site ID: N/A
Site Location: 701-725 East Highland Street, Allentown, PA
Site County: Lehigh County
Site Coordinates: **Latitude:** 40.626560
Longitude: -75.448120
Site Watershed: Lehigh River
PCBs in groundwater? Unknown
PCB Remediation Complete? Unknown
If so, when did it end? Unknown
Remedial standard attained? Unknown

This site was a light industrial park. It was used in the past as a drum recycling business. The property is subdivided into 3 parcels; the waste is stored on the east end of the property. There are trailers filled with wastes, which are contained in metal and plastic drums, except for one trailer full of solid waste. PADEP hired a contractor to handle the interim response, which included securing the work area, handling the waste containers, and identification, analysis, removal, and disposal of wastes. Photos taken 12/1999 and 4/2000 show the removal of several drums from different locations oat the site. In a letter dated 11/29/2000, the 4 USTs had reportedly been removed and closed but no closure report had been provided by that date. No sampling or testing results were reported.

EPA Region 3

Site Name: Lehigh Electric & Engineering Co.
Agency Site ID: PAD980712731
Site Location: Bridge and Howards Streets, Old Forge, PA
Site County: Lackawanna
Site Coordinates: **Latitude:** 41.357531
Longitude: -75.740689
Site Watershed: Lackawanna River
PCBs in groundwater? Unknown
PCB Remediation Complete? Yes
If so, when did it end? 1986
Remedial standard attained? Unknown

This site is outside the Delaware River basin

PADEP

Site Name: Kennett Square Junkyard Site (submitted twice by PADEP in 2006 report as Kennett Sq Junkyard)
Agency Site ID: N/A
Site Location: Borough of Kennett Square and Kennett Township
Site County: Chester County
Site Coordinates: **Latitude:** 39.842222
Longitude: -75.721944
Site Watershed: Red Clay Creek
PCBs in groundwater? No
PCB Remediation Complete? Yes
If so, when did it end? 1994
Remedial standard attained? Statewide health, non-residential

This site was the subject of an EPA/CERCLA removal action in 1993 and 1994. Aroclor 1254 was detected in surface soil at concentrations up to 100 mg/kg and in subsurface soil up to 220 mg/kg. Approximately 3,475 tons of soil and debris were removed. According to the COA dated April 10, 2006 the site is planned to be a commercial or industrial development and no immediate threat to public health or to the environment exists. However, if soils will be disturbed they are to be either excavated or capped (after debris is segregated). Furthermore, a Site Management Plan from March 2006 indicated that an additional 17 cubic yards of soil near an area known as *Test Pit 10* may require remediation. If the soil of *Test Pit 10* is disturbed it will be capped or excavated in a similar fashion.

PADEP

Site Name: Kvaerner Philadelphia Shipyard, Inc.
Agency Site ID: N/A
Site Location: Bridge and Porter Streets, Philadelphia, PA
Site County: Philadelphia
Site Coordinates: **Latitude:** 39.888611
Longitude: -75.190833
Site Watershed: Delaware River
PCBs in groundwater? Yes
PCB Remediation Complete? Yes
If so, when did it end? Unknown
Remedial standard attained? Special Industrial Area (SIA)

Subject to the Base Realignment and Closure Act (BRAC), the current Kvaerner tract, formerly owned by the US Navy, is being redeveloped to continue ship building/maintenance operations. There have been multiple instances of historic PCB contamination. PCB spills, storage areas that held PCB containing substances, and a transformer substation all contributed to concentrations on site. Beginning in 1989, several areas of concern were evaluated and cleaned up, such as the excavation of soil and asphalt in an area contaminated by a leaking PCB rectifier near one of the buildings and a PCB spill located near another building that released 20-30 gallons of liquid containing PCBs as high as 15,000 mg/L. Again, this latter incident was cleaned up to below 0.5 ppm using kerosene washing and pavement removal. All transformers onsite were tested for the presence of PCBs and where they were found, were removed and/or retrofitted. In total, 10-16 transformers were removed and replaced.

PCB contaminated sludge and its underlying soil was also removed from an area near an onsite building. An outdoor painting area was also suspected to have the presence of PCBs, though the most recent reports available do not indicate any sampling, the area was intended to be demolished and removed prior to redevelopment. In 1998, groundwater testing revealed a maximum PCB concentration of 0.57 µg/L and the highest reported concentration within sampled soil was 12 ppm of Aroclor-1260. Concrete sampling from one large boat slip showed levels greater than 200 ppm, though this facility was also slated for demolition. In summary, the PCBs onsite were either taken away with demolition of the former Navy structures, excavated, or were at levels low enough to allow for industrial redevelopment. Kvaerner has received Act 2 release from liability, though groundwater monitoring must continue, and certain clauses have been placed on the lease that provide for lease nullification if certain hazardous materials are not handled and disposed according to PADEP and EPA guidelines. In addition, the Kvaerner tract is also subject to a pollution minimization plan for PCB along with the neighboring property, Metro Machine Corporation, another United States Navy contractor.

Site Name: McAdoo Associates
Agency Site ID: PAD980712616
Site Location: McAdoo Borough, PA
Site County: Schuylkill
Site Coordinates: **Latitude:** 40.878331
Longitude: -76.001389
Site Watershed: Little Schuylkill River
PCBs in groundwater? No
PCB Remediation Complete? Yes
If so, when did it end? 2001
Remediation level attained? Unknown

PCBs have not been found onsite

EPA Region 3

PCBs were never identified as a site related contaminant, though a variety of other organic substances were present in both site soils and groundwater. EPA Region 3 managed the removal of soil and the installation and operation of a groundwater pump-and-treat system, until 2001, when the site was declared remediated. An impervious cap placed onsite eliminated the possibility of exposure to any contaminants still onsite.

Site Name: Merit Metals
Site Location: 242 Valley Road, Warrington, PA
Site County: Bucks
Site Coordinates: **Latitude:** N/A
Longitude: N/A
Site Watershed: Little Neshaminy Creek
PCBs in groundwater? N/A
PCB Remediation Complete? N/A
If so, when did it end? N/A
Remediation level attained? N/A

PCBs have not been found onsite

PADEP

There is no evidence that PCBs ever existed at Merit Metal Products. 143 cubic yards of soil were removed in 2001 that contained a variety of metals but PCBs, thought they were tested for in both 1999 and 2001, were never detected.

Site Name: Milito Property
Agency Site ID: N/A
Site Location: 49 Buttonwood Street, Norristown, PA
Site County: Montgomery
Site Coordinates: **Latitude:** 40.123889
Longitude: -75.361667
Site Watershed: Schuylkill River
PCBs in groundwater? No
PCB Remediation Complete? Yes
If so, when did it end? Unknown, last available record 2001
Remedial standard attained? Unknown

PADEP

From 1950 to 1992, Milito operated as a scrap recycling facility. A portion of the site also functioned as a dumping ground for a variety of debris and industrial refuse, such as demolition debris from the reconstruction of the Norristown courthouse and fly ash from a PECO station. In February, 2001, the site's owner submitted a notice to remediate (NIR) for a variety of soil and groundwater contaminants. PCBs (unknown Aroclors) were present only in soil, which were reportedly under the soil to groundwater levels for a used aquifer under PA's Act II. The site's potential developer as of May, 2001 stated his intention of initially building a parking lot on top the site and, in addition, will be responsible for remediating all contaminants found in paragraph S and exhibit A of the 2001 COA, both of which were unavailable. The area was to be remediated to PA Act II SIA levels, but no confirmation was available from PADEP as to what standard was attained or when.

PADEP

Site Name: Mrs. Paul's Kitchen (former)
Site Location: Doylestown Borough
Site County: Bucks County
Site Coordinates: **Latitude:** 40.302222
Longitude: -75.133333
Site Watershed: Neshaminy
PCBs in groundwater? No
PCB Remediation Complete? Yes
If so, when did it end? 2003
Remediation standard attained? Statewide Health, non-residential

Buildings and structures used for Mrs. Paul's Kitchen, a former frozen food plant, were demolished in 1990. Prior to use as a frozen food plant, the site operated as a textile plant. During contaminant investigations, nine individual areas of concern were identified at the site. Using EPA Method 8082, PCBs were found in fill material in the western and northwest sections of the property. Concentrations of Aroclor 1248 were detected as high as 1,300 mg/kg. In 2003 approximately 17.1 tons of soil were excavated from the property. After excavation no sample exceeded the Act 2 Statewide Health Standard for this aroclor. Remediation under Act 2 was considered complete as of October 28, 2003.

EPA Region 3

Site Name: Naval Air Development Center Waste Areas
Agency Site ID: PA6170024545
Site Location: Warminster, PA
Site County: Bucks County
Site Coordinates: **Latitude:** 40.199600
Longitude: -75.064200
Site Watershed: Little Neshaminy Creek
PCBs in groundwater? No
PCB Remediation Complete? Yes
If so, when did it end? 1999
Remediation standard attained? Unknown

Renamed the Naval Air Warfare Center in 1993, this site has no apparent history of PCB-related contamination, according to EPA Region 3. There were eight storage areas that received wastes from onsite activities such as aircraft maintenance and testing, pest control, fire fighting training, machine and plating shop operations, spray painting, and various lab-based materials testing and research activities. Certain on site soils presented a risk based on their contamination by various heavy metals and VOCs, which were addressed in subsequent BRAC-related investigations and cleanups.

PADEP

Site Name: National Vulcanized Fiber (NVF)
Agency Site ID: N/A, EPA ID# PAD107214116
Site Location: Mulberry and Lafayette Streets, Kennett Square, PA
Site County: Chester
Site Coordinates: **Latitude:** 39.846667
Longitude: -75.711667
Site Watershed: East Branch Red Clay Creek
PCBs in groundwater? No, but monitoring is ongoing
PCB Remediation Complete? Yes
If so, when did it end? 2004
Remedial level attained? Unknown

The National Vulcanized Fiber (NVF) site has been subject to a number of removal actions by either NVF or EPA. The first removal action began in 1988 when NVF removed soils and sediments from a drainage ditch, swale and an unnamed tributary to Red Clay Creek, which leads to the Schuylkill River. A stormwater retention pond on the southwest corner of the site appears to be the principle source of PCB contamination, as well as a press, which used PCB-containing fluid in the 1960s. Fluid from this press leaked into a concrete pit which drained into the stormwater basin, which discharged directly to the unnamed tributary. Effluent leaving the concrete pit held PCBs as high as 6,800 ppm and the detention pond sediments, between 7-28 ppm.

The detention basin was dewatered, then excavated of contaminated soils which totaled roughly 890 tons. Earlier, in 1983, NVF removed 78 tons of soil and another 230 tons from the swale. Follow up sampling completed by the United States Fish and Wildlife Service (USFWS) as late as 1989 showed PCB sediment results as high as 7.8 ppm. Though this site was never placed on the NPL, cleanup was handled primarily by EPA region 3. In 1997, NVF entered into a Consent Order to cap any remaining sediments in the detention pond, which, as of 2004, was the subject of removal actions. Onsite PCB remediation was reportedly completed with the

installation of the impervious cap, though NVF is required to monitor both groundwater and the area of the former pond sediments to detect if the buried PCB contamination is occurring. Quarterly monitoring is ongoing.

PADEP

Site Name:	New Jersey Transit Morrisville Railyard	
Agency Site ID:	N/A	
Site Location:	Falls Township, PA	
Site County:	Bucks	
Site Coordinates:	**Latitude:**	40.195278
	Longitude:	-74.792222
Site Watershed:		Rock Run
PCBs in groundwater?		No
PCB Remediation Complete?		Yes
If so, when did it end?		2001
Remediation standard attained?		Statewide Health, Residential

New Jersey Transit purchased this site in 1997 with the intent to redevelop it as a trainyard and construct crew quarters as well. 1991 sampling showed a maximum PCB concentration of 1.3 ppm with two "hot spots" that were reportedly above 5 ppm. Subsequent sampling done in 1995 did not detect any PCBs above 1.1 ppm, but it is unclear whether or not there was a removal of any contaminated soil, but a final remediation report was approved in 2001. Storm drains and areas beneath several manhole covers were found to have the presence of PCBs, but it was not determined to where these drain. In summary, this site has generally low levels of PCBs in soil, below the PA residential standard, but may in fact be contributing to current PCB loadings in nearby surface water

PADEP

Site Name:	One & Olney Square Shopping Center	
Agency Site ID:	N/A	
Site Location:	101 East Olney Ave. Philadelphia, PA	
Site County:	Philadelphia	
Site Coordinates:	**Latitude:**	40.038056
	Longitude:	-75.120556
Site Watershed:		Frankford Creek
PCBs in groundwater?		No
PCB remediation complete?		Yes
If so, when did it end?		2003
Remedial standard attained?		Unknown

Occupying 32 acres in Philadelphia, several rounds of testing using USEPA method 8081 did not reveal the presence of PCBs in soil or groundwater. Nine pad-mounted transformers were onsite in 1993, but the site's electric provider could not provide evidence as to whether or not they were PCB containing. In a January 2003 letter, an impervious cap was proposed an a permanent engineering control for site related contaminants, which did not include PCBs. The site has been deed restricted as well as connected to public water supplies because of contaminated groundwater.

PADEP

Site Name:	Oregon Maint[enance] Shop	
Agency Site ID:	N/A	
Site Location:	2610 Columbus Blvd., Philadelphia, PA	
Site County:	Philadelphia	
Site Coordinates:	**Latitude:**	39.913056
	Longitude:	-75.139444
Site Watershed:		Delaware
PCBs in groundwater?		Unknown
PCB Remediation Complete?		Yes
If so, when did it end?		Unknown
Remedial standard attained?		N/A

NOTE: *Remedial investigations files were not provided by PADEP for this site. However, as of November 16, 2006, the PADEP provided the following update:*

"Pre Act 2. Site remediation completed and closed out."

PADEP

Site Name: Paoli Railyard
Agency Site ID: PAD980692594
Site Location: 110 Central Ave., Paoli, PA
Site County: Chester
Site Coordinates: **Latitude:** 40.043189
Longitude: -75.492919
Site Watershed: Schuylkill River
PCBs in groundwater? No
PCB remediation complete? Yes
If so, when did it end? July 12, 2005
Remedial standard attained? Unknown

This 28-acre railyard began remediation in 1986 when the site was originally fenced off to prevent contact with onsite soils contaminated with PCBs. Routine maintenance by a number of proprietors and lessees such as The Penn Central Corporation, Amtrak, SEPTA, and Conrail involved a variety of PCB-containing equipment. 1985 sampling revealed a "severe PCB problem", according to EPA Region 3. High onsite concentrations of PCBs in site soils contributed to sediment contamination in Valley Creek, its tributaries, and nearby residential properties. These sediments were to be addressed in subsequent operation and maintenance plans following the Preliminary Close-Out Report issued for the site in July 2005.

PADEP

Site Name: Park West Town [Center]
Agency Site ID: N/A
Site Location: 52nd and Jefferson Street, Philadelphia, PA
Site County: Philadelphia
Site Coordinates: **Latitude:** 39.977778
Longitude: -75.219444
Site Watershed: Schuylkill River
PCBs in groundwater? Unknown
PCB Remediation Complete? Yes
If so, when did it end? Unknown
Remedial standard attained? SIA (Enterprise Zone and Keystone Opportunity Zone)

NOTE: *Remedial investigations files were not provided by PADEP for this site. However, as of November 16, 2006, the PADEP provided the following update:*

"PCB impacted soils removed from the site."

PADEP

Site Name: PECO Chester Waterfront Redevelopment Project (Chester Waterfront Redev in 2006 report)
Agency Site ID: N/A
Site Location: City of Chester
Site County: Delaware County
Site Coordinates: **Latitude:** 39.830556
Longitude: -75.382500
Site Watershed: Delaware River
PCBs in groundwater? Unknown
PCB Remediation Complete? Yes
If so, when did it end? 2004
Remedial standard attained? N/A

The PECO Chester Waterfront Redevelopment Project is a 90 acre site, of which 7 acres is to be donated to the City of Chester for a park. The Excelon Corporation completed cleanup actions in 2003. Post-cleanup monitoring is required to complete the remedial obligations but has no impact to any redevelopment of the site. The planned redevelopment project may proceed, as directed by the PADEP in a letter dated August 12, 2003. The PADEP granted Act 2 remediation completion on April 29, 2004.

PADEP

Site Name: PECO Energy West Chester MGP Site (PECO West Chester Svc Fac in 2006 report)
Agency Site ID: N/A
Site Location: NE and SE Corners of Miner and Matlack Streets, Philadelphia, PA
Site County: Philadelphia County
Site Coordinates: **Latitude:** 39.961111
Longitude: -75.601389
Site Watershed: East Branch Chester Creek
PCBs in groundwater? No
PCB Remediation Complete? Yes
If so, when did it end? 1996
Remedial standard attained? Unknown

This site is the location of a former manufactured gas plant (1852-1927) and a utility facility from 1930-1988. In 1988, the facility was closed and the structures were removed. The property is now divided into two sections, the North Yard and the Main Yard. In the North Yard, surface soils were found to have PCBs and TPH. The surface and subsurface soils were sampled and removed, and as of July 1996, the soils in this area met Statewide Health Standards. In the Main Yard, several hundred tons of hazardous and non-hazardous materials were taken to a disposal facility. The Hazard Indices are below 1 for all contaminants except arsenic, and then, only for a child. As of 7/29/1996, soils and groundwater in the Main Yard met the site specific standard. It has been determined that no pathway to groundwater exists. However, there is a deed restriction against groundwater use and residential use, to maintain standards.

PADEP

Site Name: PECO Energy Hanover former MGP
Agency Site ID: N/A
Site Location: College Road, Pottstown, PA
Site County: Philadelphia
Site Coordinates: **Latitude:** 40.245000
Longitude: -75.655833
Site Watershed: Manatawny Creek
PCBs in groundwater? No
PCB Remediation Complete? Yes
If so, when did it end? 1999
Remedial standard attained? Unknown

For over 70 years beginning in 1856, this site operated as a goal gasification plant. Almost a century later in 1991, PECO began evaluating its former disposal areas for contamination and found that this site had been impacted throughout its long operation. Over 2,000 tons of both hazardous and non-hazardous soils were removed in 1999, though there is no available report that details the extent of PCB contamination. Surface soils, where they were contaminated, were removed from the site and subsurface soils, were, if possible treated, or otherwise removed. PCBs were not detected in post excavation sampling, thus the cleanup was approved in 1999, though it will be deed restricted for groundwater use.

PADEP

Site Name: PA Department of Transportation (PennDOT) Aramingo Ave. Project
Agency Site ID: N/A
Site Location: formerly 2300 Adams Ave. Philadelphia 19124
Site County: Philadelphia
Site Coordinates: **Latitude:** 39.987500
Longitude: -75.050000
Site Watershed: Delaware River
PCBs in groundwater? Unknown
PCB remediation complete: Yes
If so, when did it end? Sometime after 1999
Remedial standard attained? Special Industrial Area (SIA)

This Pennsylvania Department of Transportation site (PennDOT) site was acquired for the construction of the I-95/Aramingo Ave. Interchange and Adams Ave. Connector project in the 1990s. One the 14 properties that were acquired in order to build the new ramps and connectors, PCBs were remediated by both excavation and removal of soil. Otherwise any remaining PCBs (which were detected at a maximum of 31 ppm) would have been built over with the piers that support the on-ramp.

PADEP

Site Name: PA Department of Transportation (PennDOT) Paper Products Site
Agency Site ID: N/A
Site Location: Media, PA
Site County: Delaware
Site Coordinates: **Latitude:** Unknown
Longitude: Unknown
Site Watershed: Crum Creek
PCBs in groundwater? No
PCB Remediation Complete? Yes
If so, when did it end? 1999
Remedial level attained? Unknown

PCBs were widespread at this site, which is at present a stretch of I-476 ("The Blue Route"). Manufacturers of corrosives, plastics, foam insulation, office materials, and most recently, a paper manufacturer were all present at some point since 1825. PennDOT bought the site in 1988, and final remediation of the main building and onsite lagoons ended in 1994, with the entire site being remediated in 1995. 3,714 tons of soil containing PCBs as high as 2,500 ppm was disposed offsite, it was then regraded as closely as possible to the area's natural topography.

PADEP

Site Name: Pemberton Site
Agency Site ID: N/A
Site Location: Malvern Borough
Site County: Chester County
Site Coordinates: **Latitude:** Unknown
Longitude: Unknown
Site Watershed: Unknown
PCBs in groundwater? Unknown
PCB Remediation Complete? Yes
If so, when did it end? 2004
Remedial standard attained? Site specific

Known as the Pemberton Site, the site encompasses two parcels spanning 1.7 acres, including undeveloped land belonging to Amtrak. PCBs were first identified in 1992 with concentrations ranging from 0.2 mg/kg to 10.9 mg/kg approximately 4 to 5 feet below ground surface. Additional sampling revealed concentrations ranging from non-detect to 2,000 mg/kg. Aroclor 1248 was detected in the Amtrak portion of the property with a concentration of 225 mg/kg. After 18 cubic yards of soil were excavated, samples were below the Non-Residential SHS MSC. A portion of the site along Pennsylvania Avenue achieved a Site Specific Standard for Aroclor 1248 with an impervious cap on 1,000 square feet of the area.

In 2004 approximately 16.2 pounds of soil was excavated and removed; approximately 303 pounds of soil remained and was managed on-site. An impervious cap was placed over 10,000 square feet of the property to prevent water infiltration. The site's remediation was certified on August 19, 2004; a deed notice was required.

PADEP

Site Name: Penn Beer Dist site (a.k.a. Parker and Umbria Streets)
Agency Site ID: N/A
Site Location: Parker Ave. and Umbria Streets, Philadelphia, PA
Site County: Philadelphia
Site Coordinates: **Latitude:** 40.03528
Longitude: -75.235278
Site Watershed: Schuylkill River
PCBs in groundwater? Unknown
PCB Remediation Complete? Yes
If so, when did it end? 2004
Remedial standard attained? Site specific

NOTE: *Remedial investigations files were not provided by the PADEP for this site. However, as of November 16, 2006, the PADEP provided the following update:*

"Redeveloped into townhouses."

PADEP

Site Name: Philadelphia Phillies Ballpark
Agency Site ID: N/A
Site Location: 10th Street and Pattison Avenue, Philadelphia, PA
Site County: Philadelphia
Site Coordinates: **Latitude:** 39.905800
Longitude: -75.163100
Site Watershed: Delaware River
PCBs in groundwater? No
PCB Remediation Complete? Yes
If so, when did it end? Unknown
Remedial standard attained? Special Industrial Area (SIA)

This site was previously used as the "City of Philadelphia's Sports Complex," also known as Veteran's Stadium. Before this, it was the location of parking areas and multiple warehouses. Originally, the vacant lot had been filled to raise the elevation, for future construction projects. Dewatering has been a major focus for this site, and groundwater withdrawals discharge to the municipal sewer system. It is unlikely that groundwater would migrate from the site.

During initial investigation, groundwater samples were taken. No PCBs were detected. (Groundwater Analytical Results vs. the PADEP Act-2 Non-Residential Used Aquifer Standards, Table 2, 11/21/2002) Out of 100+ surface samples, Aroclor-1260 was detected one time in surface soil above the surface soil standard, at a reading of 160 mg/kg. No subsurface soil samples exceeded the direct contact MSC.

The site was developed for parking areas and structures associated with the ballpark. Though there have been no major spills of releases in this area, remediation to background levels (for any contaminant) will be difficult because most of the area is built on fill material (see MSGS maps 1891, 1945, and 1994), which may have been contaminated at the time it was placed.

PADEP

Site Name: Phoenix Steel (also listed as Phoenix Pipe & Tube LP in 2006 DelTRiP report)
Agency Site ID: N/A
Site Location: Calcon Hook Road, Phoenixville, PA
Site County: Delaware
Site Coordinates: **Latitude:** 39.890278
Longitude: -75.264444
Site Watershed: French Creek
PCBs in groundwater? No
PCB Remediation Completed: Yes
If so, when did it end? 2005
Remedial standard attained? Special Industrial Area (SIA)

PCBs at Phoenix Steel were largely due to transformer operations. In 1988, the 38 transformers onsite were tested for PCBs and assessed for historical leakage. Each of the transformers were either PCB containing (under 500 ppm) or PCB contaminated (greater than 500 ppm). With PCB levels as high as 627,000 ppm, 25 transformers were removed from site. One sample on the adjacent Redwing Property showed PCB levels at 4.5 ppm, below the PA Act II MSC requirement of 5.0 ppm. In addition, surface water and sediments sampled in 1988 revealed PCBs at 0.23 mg/L and 2.1 mg/kg, respectively. No available information exists as to the fate of these areas of French Creek. As of the 2005 Act II Final Report, there were no PCBs within detectable limits from the old transformer area or on the adjacent Redwing or Vanderslice parcels

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PADEP

Site Name: Pennsylvania Power and Light Corporation, or PPL (multiple)
Agency Site ID: N/A
Site Location: Multiple Locations
Site Counties: Northampton, Lehigh, Pike, Monroe, Wayne, Carbon, Schuylkill, Montgomery, Chester, Delaware, Philadelphia, Bucks
Last history update by agency: June, 2006

There were 49 sites listed in the 2006 DelTRiP report, all in various stages of remediation for PCBs. The most current information available reveals that all of the PCB sites within the Delaware River basin have been remediated to various Pennsylvania standards depending on their future use (i.e. site specific, statewide health standard, special industrial area, or background). All were addressed under the Pennsylvania Act II Land Recycling Program and have demonstrated attainment of their proposed remedial level. PPL's 2005 annual report states that "[i]n 1995, PPL Electric and PPL Generation and, in 1996, PPL Gas Utilities entered into consent orders with the Pennsylvania DEP to address a number of sites that were not being addressed under another regulatory program such as Superfund, but for which [these PPL divisions] may be liable for remediation." PPL has succeeded in remediating all but one of the sites that are in the Delaware River basin, Tamaqua MGP. A list of fully remediated sites will follow this summary.

These sites broadly included transformer poles, electric substations, abandoned power plant sites, former generating facilities, former gas manufacturing facilities, and sites where capacitors or transformers have leaked PCB-containing oil. In general, soil and occasionally the structures that housed the transformers were the only PCB-contaminated media. The former Tamaqua Decommissioned Power Plant in Tamaqua, PA is the sole site still undergoing remediation. A former manufactured gas plant (MGP), the Tamaqua plant generated carbureted water gas. In the 1960s it was converted to a distribution center for natural gas and propane-air gas. When natural gas became more widely available and more economical to transport through extensive pipeline networks, these plants were largely abandoned or demolished. PCB contamination at Tamaqua MGP has been remediated through building demolition and the removal of the top two feet of soil. Groundwater monitoring wells have been installed for the eventual abatement of other COCs. This is the proposed site of a Rottet Motors asphalt parking lot and potentially a pedestrian walkway and bridge across the Little Schuylkill River. But whatever its use, it will have several deed restrictions. All sites with a history of capacitor spills have been remediated and granted Act II relief of liability by PADEP. With the PPL-PADEP consent order (COA) set to expire on January 31, 2005, a new agreement was negotiated that combined the sites of PPL Electric and PPL Gas Utilities. Cleanup of all sites is now being dictated by this agreement. As of December 31, 2005, PPL had 144 sites statewide to address under the renegotiated COA, the great majority of which are in western and central Pennsylvania. PPL's cleanup activities included fencing the contaminated areas and soil excavation, followed by site restoration (i.e. replanting, regrading, if necessary).

PPL PCB Sites in the 2006 DelTRiP Report

(NOTE: Many of the PPL sites in the 2006 report appeared more than once and others had names that were unidentifiable. Though these records were provided by PADEP, this reflects the different records maintained by the northeastern and southeastern regions. In other words, different spellings actually refer to the same site. Wherever possible, such redundancies have been corrected and eliminated.)

Each of the below sites, unless they appear **in bold**, has demonstrated attainment of requirements set forth in Pennsylvania's *The Land Recycling and Environmental Remediation Standards Act* (1995). The administration of and general provisions of this legislation can be found in Chapter 250 of the PA Code (effective August 16, 1997). Full text for each of these can be found at:

Act 2 text: http://www.palrb.us/pamphletlaws/19001999/1995/0/act/0002.pdf
Chapter 250 text: http://www.pacode.com/secure/data/025/chapter250/chap250toc.html

PPL S 1st Street Substation
PPL S 4th Street Substation
PPL S 6th Street Substation
PPL Avoca Substation
PPL Beekman Substation
PPL Brockton Substation
PPL Buttonwood Substation
PPL Canal Substation Decommissioned
PPL Cetronia Substation
PPL Clarks Summit Substation
PPL Central City Substation
PPL Didier Decommissioned Substation
PPL Former Oneida Substation
PPL Former Stanton Steam Electric Station
PPL Gilbert Substation
PPL Greenleaf Substation
PPL Harwood 69 Kv Substation PCB Remediation
PPL Harwood Steam Electric Station
PPL Hauto
PPL Honesdale Gas Plant
PPL Horton Substation
PPL Jasper Substation
PPL Jenkins Substation
PPL Jermyn Substation
PPL Madison Ave. Substation
PPL Meadow Substation
PPL Palmerton Substation
PPL Peckville Active Substation (remediated for PCBs, but still operating)
PPL Pembroke Substation Decommissioned
PPL Pittston Substation Decommissioned
PPL Providence Active Substation (remediated for PCBs, but still operating)
PPL Quarry Substation
PPL Shawnee Decommissioned Substation
PPL Siegfried Substation
PPL South Catasauqua Substation
PPL South Side Substation
PPL Spring Substation
PPL Stanton Substation
PPL Sullivan Trail Substation
PPL Tamaqua Decommissioned Gas Plant (PCB remediation completed)
PPL Tatamy Substation
PPL West Pittston Decommissioned Substation
PPL Weissport Substation
PPL Wescoeville Active Substation (remediated for PCBs, but still operating)
PPL Old Forge Substation
PPL North Stroudsburg Substation
PPL Nazareth Switching Yard
PPL Northern Div Service Center

PADEP

Site Name: Progress Lighting
Agency Site ID: N/A
Site Location: G Street & Erie Ave., Philadelphia
Site County: Philadelphia
Site Coordinates: **Latitude:** 40.004444
Longitude: -75.111389
Site Watershed: Lower Delaware
PCBs in groundwater? No
PCB remediation complete? Detected levels were below remedial requirements
If so, when did it end? 1999
Remedial standard attained? Statewide health, residential

The former Progress Lighting site was found to have Aroclors 1254 and 1260 in soil, but their sources were unknown. A NIR was submitted that claimed that PCBs would be remediated in soil, but a 1995 sampling event showed 0.76 mg/kg in 18 samples, which is below the applicable PA statewide health standard. In addition, there was a former transformer area where PCBs were also detected, though no specific concentrations were available, only that they reportedly below PA residential MSC requirements.

EPA Region 3

Site Name: Publicker Industries, Inc.
Agency Site ID: PAD981939200
Site Location: Delaware and Packer Avenues, Philadelphia, PA
Site County: Philadelphia
Site Coordinates: **Latitude:** 39.908050
Longitude: -75.135281
Site Watershed: Delaware River
PCBs in groundwater? No
PCB Remediation Complete? Yes
If so, when did it end? December 1997
Remedial standard attained? Industrial

The Publicker Industries Superfund Site is located in Philadelphia along the Delaware River near the Walt Whitman Bridge. The Site covers approximately 40 acres. An estimated 3,600 people live within a mile of the site, and 100,000 live within two miles. Currently, the Site is used in conjunction with the adjacent marine terminal to store and transport steel slabs. Publicker Industries produced liquor and industrial alcohols from 1912 to 1985. The Site was also used as a petroleum product and chemical storage facility during the late 1970's and 1980s. Publicker discontinued operations in February 1986 and eventually the Site was abandoned in November 1986. The site included large tanks, storage drums, product stock, chemical laboratories, production buildings, warehouses, a power plant, and several hundred miles of above ground and underground process lines. Solid and liquid gas streams, highly-reactive lab wastes, and gas cylinders combined to create an extreme threat of fire and explosion. Pipes were insulated with asbestos and electrical equipment contained PCBs. Vessels and transfer lines containing hazardous materials were in disrepair and subject to vandalism. In 1987, the portion of the facility using carbon dioxide was destroyed in a multi-alarm fire. Routine air monitoring revealed volatile organic compounds (VOCs) in 1988. Shallow on-site groundwater was slightly contaminated with toluene. The deep groundwater aquifer contained minimal levels of VOCs such as toluene and xylene. VOCs and heavy metal contamination had been detected in on-site soils.

PADEP

Site Name: Recycle Metals Corporation
Agency Site ID: N/A
Site Location: 407 Alan Wood Road, Conshohocken, PA
Site County: Montgomery
Site Coordinates: **Latitude:** 40.096667
Longitude: -75.307500
Site Watershed: Plymouth Creek
PCBs in groundwater? No
PCB Remediation Complete? Yes
If so, when did it end? 2001
Remedial standard attained? Statewide Health, Non-residential

The 6.7 acre site of Recycle Metals Corporation had PCB impacted soils from historic fill from an unknown source. PA Act II release from liability was granted in 2001 for PCBs after 684 tons of contaminated soil and fill were removed, but various Aroclors ranging from 0.39 ppm to 19 ppm still remain. The entire site was then covered with either asphalt or concrete, buildings, and landscaping and currently includes a deed restriction that prevents future owners from disturbing subsurface soils, where remaining contaminants have been immobilized.

PADEP

Site Name: Riverbend site (same location as Andela site)
Agency Site ID: N/A
Site Location: 960 Creek Road, Warwick Township, PA
Site County: Bucks
Site Coordinates: **Latitude:** 40.900833
Longitude: -75.079167
Site Watershed: Delaware River
PCBs in groundwater? No
PCB Remediation Complete? Yes
If so, when did it end? 2000
Remedial standard attained? Statewide Health, Residential

Cleanup at Riverbend's site, which is located next to Andela, was the result of EPA's post excavation follow up. 9,000 tons of PCB and lead impacted soil were removed to bring both sites soil concentrations to below 1 ppm.

PADEP

Site Name: Rosenbergers Dairies
Agency Site ID: N/A
Site Location: 700 South Bradford Ave., West Chester, PA
Site County: Chester
Site Coordinates: **Latitude:** 39.948719
Longitude: -75.610342
Site Watershed: Brandywine Creek
PCBs in groundwater? Unknown
PCB Remediation Complete? Yes
If so, when did it end? Unknown
Remedial standard attained? N/A

NOTE: *Remedial investigations files were not provided by PADEP for this site. However, as of November 16, 2006, the PADEP provided the following update:*

"Pre Act 2. Closed out early [19]90s and is developed."

PADEP

Site Name: Sackville Mills Associates
Agency Site ID: N/A, PA0000198846
Site Location: Sackville Lane, Nether Providence Township and Brookhaven Borough, PA
Site County: Delaware
Site Coordinates: **Latitude:** 39.861111
Longitude: -75.386111
Site Watershed: Little Crum Creek
PCBs in groundwater? No
PCB Remediation Complete? Yes
If so, when did it end? 1996
Remedial standard attained? Unknown

This 42-acre site was formerly used for textile manufacturing operations between 1889-1989. In testing done in the early 1990s, no PCBs were found in the liquid waste or in the Pit 1 sediment. There were 13 electrical transformers on the site. Each was sampled for PCBs, and PCB levels above 50 ppm were only detected in one drum-- 69 ppm of Aroclor-1260. This drum was taken to a disposal facility. In 1996, shallow composite soil samples were taken at the location of old transformer pads, and no PCBs were found. Later in 1996, a Final Report was submitted concerning the remediation of site soils contaminated with PCBs and other constituents.

PADEP

Site Name: Safety Kleen Corporation
Agency Site ID: N/A
Site Location: Malvern Borough
Site County: Montgomery
Site Coordinates: **Latitude:** 39.962222
Longitude: -75.800556
Site Watershed: West Branch Brandywine Creek
PCBs in groundwater? No
PCB Remediation Complete? N/A
If so, when did it end? N/A
Remedial standard attained? N/A

PCBs have not been found onsite

This site was erroneously flagged as containing PCBs in the 2006 DelTRiP report. However, further investigation revealed that PCBs were not a contaminant present on the site. Contaminants of concern at this site include petroleum naphtha, methylene chlorides, orthodichlorobenzene, cresylic acids, and petroleum sulfonate.

PADEP

Site Name: Santey Junkyard
Agency Site ID: N/A
Site Location: West Abington Township, PA
Site County: Lackawanna
Site Coordinates: **Latitude:** 41.525000
Longitude: -75.800000
Site Watershed: Unknown
PCBs in groundwater? Unknown
PCB Remediation Complete? Unknown
If so, when did it end? Unknown
Remedial standard attained? Unknown

This site is outside the Delaware River basin

PADEP

Site Name: Selas Corporation of America
Agency Site ID: N/A
Site Location: 2034 Limekiln Pike, Upper Dublin, PA
Site County: Montgomery
Site Coordinates: **Latitude:** 40.136944
Longitude: -75.168056
Site Watershed: Sandy Run
PCBs in groundwater? No
PCB Remediation Complete? N/A
If so, when did it end? N/A

PCBs have not been found onsite

A 1993 environmental safety audit was completed in 1993, which identified one transformer that formerly contained PCBs. The retrofitted transformer was retested to confirm the absence of PCBs using EPA method 8082. No PCBs were found.

PADEP

Site Name: Sellersville Inactive Landfill
Agency Site ID: N/A
Site Location: Sellersville Borough, PA
Site County: Bucks
Site Coordinates: **Latitude:** 40.368889
Longitude: -75.312500
Site Watershed: East Branch Perkiomen Creek
PCBs in groundwater? No
PCB Remediation Complete? Yes
If so, when did it end? Unknown
Remedial standard attained? Unknown

This site has had a variety of uses since 1915, including the use of radium-based paints and other radioactive materials. During the 1970s, part of the site was leased by an auto mechanic for landfill space, who allegedly dumped waste oil and radiator fluid onsite. PCBs were detected in landfill soils at 6.2 ppm in 1991, which presumably were excavated with the radioactively contaminated soil. In any event, the relatively low levels of PCBs in soils ensured that they did not fall under any regulatory cleanup with quality standards, such as through TSCA or RCRA.

PADEP

Site Name: SEPTA Paoli Car Shop (see also Paoli Rail Yard, EPA Region 3)
Agency Site ID: N/A
Site Location: West Central Ave., Paoli, PA
Site County: Chester
Site Coordinates: **Latitude:** 40.043189
Longitude: -75.492919
Site Watershed: Little Valley Creek
PCBs in groundwater? Unknown
PCB Remediation Complete? Yes
If so, when did it end? Unknown
Remedial standard attained? N/A

NOTE: *Remedial investigations files were not provided by PADEP for this site. However, as of November 16, 2006, the PADEP provided the following update:*

"Site remediation completed. Currently in O&M phase."

PADEP

Site Name: Serena, Inc.
Agency Site ID: N/A
Site Location: 100 Green Street Downingtown, PA
Site County: Chester
Site Coordinates: **Latitude:** 40.005556
Longitude: -75.699722
Site Watershed: East Branch Brandywine Creek
PCBs in groundwater? No
PCB Remediation Complete? Yes
If so, when did it end? 1999
Remedial standard attained? Statewide health, Non Residential

Building surfaces and site soils were impacted by historic spillage that resulted from the remanuftacturing and maintenance of electrical equipment. EPA initiated removal of these materials (highest level onsite, 270 ppm), as well as those in a transformer retrofill area, stained exterior soil, then any contaminated surfaces inside. Parke Run, a tributary to the Brandywine Creek, runs through the site but sediments or surface water were not impacted. The final actions at Serena were the demolition of the building, removal of the first foot of soil on the roughly two acre site, removal of concrete floors, and the placement of a soil cap onsite.

PADEP

Site Name: Shez Ray, LLC
Agency Site ID: N/A
Site Location: 625 Beech Street, Norristown, PA
Site County: Montgomery
Site Coordinates: **Latitude:** 40.124444
Longitude: -75.345556
Site Watershed: Stony Creek
PCBs in groundwater? No
PCB Remediation Complete? Yes
If so, when did it end? March 9, 2004
Remedial standard attained? Statewide health, residential

This 41 acre site is in a mixed commercial and residential neighborhood. It is currently being leased to Ceilings, Inc, a wall and ceiling contractor. There was a 86' x 8' x 4' soil pile containing TCA, TCE, and PCBs, source of contamination unknown. This soil pile is to be regraded and used onsite. So, the contaminated soil was distributed as a means of diluting the concentration. On 3/9/2004, the Residential Statewide Health Standard for soils were attained.

PADEP

Site Name: Slish Road
Agency Site ID: N/A
Site Location: New Berlin, PA
Site County: Wayne
Site Coordinates: **Latitude:** Unknown
Longitude: Unknown
Site Watershed: Unknown
PCBs in groundwater? No
PCB Remediation Complete? Yes
If so, when did it end? 1995
Remedial standard attained? Unknown

Emergency cleanup of approximately 3,500 feet along Slish Road, 1,000 feet of Trails End Road, and 4,500 feet of private driveways began at this Berlin Township site in 1994. Upon numerous complaints of nausea, rash, and numerous other symptoms, PADEP tested both road surfaces and adjacent yards and driveways and found PCBs. 383 samples were taken at 228 different locations with one sample being confirmed at 93 percent Aroclor-1260.

Nearly pure PCB-containing oil contained in a 257-gallon heating oil tank had been attached to a backhoe and was then sprayed by a local resident directly onto the road surface near a school bus stop. The resident later plead guilty to charges of "risking catastrophe, one count of criminal mischief, one count of recklessly endangering another person, one count of violating residual waste laws and two counts of unlawful conduct" after being apprehended in Sornora, Mexico and is now responsible for compensating PADEP for the 2 million dollar cleanup. Over 3,600 tons of soil and hardscape were excavated to bring PCB levels below the 5 ppm cleanup standard.

PADEP

Site Name: Sparango Construction Co.
Agency Site ID: N/A
Site Location: 173-175 Wildflower Drive, Whitemarsh, PA
Site County: Montgomery
Site Coordinates: **Latitude:** 40.104444
Longitude: -75.263889
Site Watershed: Plymouth Creek
PCBs in groundwater? No
PCB Remediation Complete? Yes
If so, when did it end? 2002
Remedial standard attained? Statewide Health, residential

During construction of a residential development, a former backfilled quarry was discovered that had various contaminants. All contaminants detected were below PA's residential state health standard, however 3,000 tons of backfill material were removed prior to development. Various Aroclors can still be found in onsite soils ranging from 0.0415 ppm to 0.568 ppm. Stormwater runoff is believed to enter the sewer through a nearby storm drain, which later drains to Plymouth Creek.

PADEP

Site Name: Springfield Auto Outlet
Agency Site ID: N/A
Site Location: Springfield
Site County: Delaware County
Site Coordinates: **Latitude:** 39.925000
Longitude: -75.322222
Site Watershed: Ridley Creek
PCBs in groundwater? No
PCB Remediation Complete? Yes
If so, when did it end? 2002
Remedial standard attained? Statewide health, residential

The Springfield Auto Outlet site was divided into multiple study areas. Aroclor 1260 was found at *AOC7* and 303 pounds of soil was removed, together with soil impacted with other contaminants at *AOC6* and *ACO8*. No contamination was detected in groundwater above the Residential MSC. The PADEP granted Act 2 completion on November 27, 2002 as the soil had achieved Residential SHS. The site has since been redeveloped into a baby superstore.

PADEP

Site Name: Taylor Borough Dump
Agency Site ID: PAD980693907
Site Location: Taylor Borough, PA
Site County: Lackawanna
Site Coordinates: **Latitude:** 41.407219
Longitude: -75.718331
Site Watershed: Unknown
PCBs in groundwater? Unknown
PCB Remediation Complete? Unknown
If so, when did it end? Unknown
Remedial standard attained? Unknown

This site is outside the Delaware River basin

PADEP

Site Name: Texas Eastern Transmission Corporation (two other unique Texas Eastern Pipeline sites appear in this report, neither of whose remedial status could be determined based on a file review.)
Agency Site ID: N/A
Site Location: Uwchlan Township
Site County: Chester County
Site Coordinates: **Latitude:** 40.102500
Longitude: -75.679167
Site Watershed: Pickering Creek
PCBs in groundwater? Unknown
PCB Remediation Complete? Yes
If so, when did it end? 1997
Remedial standard attained? Unknown

This Texas Eastern Transmission Corporation property is part of a multi-site remediation agreement between the corporation and the PADEP. Utilizing EPA Method 8080, concentrations between 4.6 ppm and 60 ppm were found just offsite. Additional PCB contamination was noted in onsite soils, drainage ditches, pipeline liquid pits, and other areas. Approximately 3,085 tons of soil (equivalent to 1,513.4 cubic yards) were excavated in 1996. The PADEP approved the completion of remediation at this site on April 3, 1997.

PADEP

Site Name: Transcontinental Gas Pipeline
Agency Site ID: N/A
Site Location: Frazer, Pennsylvania (Station 200**)**
Site County: Chester County
Site Coordinates: **Latitude:** 40.047778
Longitude: 75.5875
Site Watershed: Valley Creek
PCBs in groundwater? Unknown
PCB Remediation Complete? Yes
If so, when did it end? 2002
Remedial standard attained? Various

The Transcontinental Gas Pipeline operates multiple stations throughout the state. The Mainline facilities, known as Groups 32.27A and 32.27B were found to have soil contaminated with PCBs. Group 32.27B was not remediated though an agreement with the property owner. By April 2002, several areas in Group 3 of District 200 of Group 32.27A underwent soil excavation to remove PCB contaminated soil as follows:

Group 3 Project Area Location	Soil Excavated (tons)
East Norriton Township	106.30
Upper Dublin Township	24.80
Kennett Township	41.18
East Brandywine Township	4.10
Lower Chichester Township	76.51
Warminster Township	25.12
Lower Southampton Township	52.39
West Norriton	19.72

As of November 2002, the PADEP also acknowledged that the Transcontinental Gas Pipeline successfully implemented the work plan for PCB contamination at Group 32.17A Station 200, located in Frazer, Pennsylvania, was also found to contain PCB contaminated soil. Excavation of contaminated soil was completed by May 1994 and the PADEP granted a "release and covenant not to sue" on March 24, 1998.

PADEP

Site Name: Union Hill Road Site
Agency Site ID: N/A
Site Location: 14 Union Hill Road, West Conshohocken, PA
Site County: Montgomery County
Site Coordinates: **Latitude:** 40.069078
Longitude: -75.325058
Site Watershed: Schuylkill River
PCBs in groundwater? No
PCB Remediation Complete? Yes
If so, when did it end? December 28, 1993
Remedial standard attained? N/A (remediated before PA's Act 2 legislation)

PCBs were suspected to have been released from a former electricity transformer, which was removed from the site. A Work Plan, published 7/12/1993, laid out remediation actions, which would include the excavation of PCB-impacted materials from a drainage swale to 6-7 ft bgs (about 50 tons). Cleanup would also include a matrix sampling from the base of excavation walls and backfilling with gravel anything over the target of 50 ppm was removed. PCBs were detected in bedrock post-excavation between 0.43-177.2 ppm. Those areas remain there today. On 12/28/1993, the final report for PCBs in soil and rock was approved. No further action is necessary.

PADEP

Site Name: US Army Tacony Warehouse (listed as Tacony Whse in 2006 report)
Agency Site ID: N/A
Site Location: City of Philadelphia, Pennsylvania
Site County: Philadelphia County
Site Coordinates: **Latitude:** 40.036111
Longitude: -75.037222
Site Watershed: Delaware River
PCBs in groundwater? Unknown
PCB Remediation Complete? Yes
If so, when did it end? 2004
Remedial Standard attained? Statewide Health, Residential

Formerly operated by the Frankford Arsenal, the US Army Tacony Warehouse property saw the completion of demolition of all buildings and structures by July 2004. Using EPA Method 8082, no exceedances of the Residential MSC were found in the soil at the utility tunnel or at the spray pond. That same year, approximately 13.41 acres of the property were auctioned to the public.

PADEP

Site Name: United States Steel, Fairless Works (Listed separately as USX Old Ctrl Maintena and USX Fairless Hills Fac in 2006 report)
Agency Site ID: N/A
Site Location: Falls Township, PA
Site County: Montgomery
Site Coordinates: **Latitude:** 40.104444
Longitude: -75.263889
Site Watershed: Plymouth Creek
PCBs in groundwater? No
PCB Remediation Complete? Yes
If so, when did it end? 2002
Remedial standard attained? Special Industrial Area (SIA)

Eight rounds of sampling were done on United States Steel, Fairless Works, and PCBs were discovered only in very sporadic amounts at different times. The last PCB amount ever detected was 3.1 ppm in 1999, and as of the last testing in 2004, PCBs were not an identified COC. Also in 1999, most of the buildings had been demolished and the property had been reassigned to USX's realty division for future industrial development.

PADEP

Site Name: West Chester Office Plaza (listed as West Chester Ofc Plz in 2006 report)
Agency Site ID: N/A
Site Location: West Goshen Township
Site County: Chester County
Site Coordinates: **Latitude:** 39.963889
Longitude: -75.591667
Site Watershed: Chester Creek
PCBs in groundwater? No
PCB Remediation Complete? Yes
If so, when did it end? 2002
Remedial standard attained? Statewide Health, non-residential

PCBs were detected in shallow soil in a former transformer pad area of this site. Concentrations of Aroclor 1260 ranged from 0.06 mg/kg to 130 mg/kg. As these concentrations were below the Non- Residential Statewide Health Standard, the only implementation control necessary was a property deed notice or acknowledgement. The site was granted Act 2 remediation completion on November 14, 2002.

PADEP

Site Name: William H. Cooper & Sons
Agency Site ID: N/A
Site Location: 320 Brown Street, Philadelphia, PA
Site County: Philadelphia
Site Coordinates: **Latitude:** 39.962778
Longitude: -75.143056
Site Watershed: Delaware River
PCBs in groundwater? Unknown
PCB Remediation Complete? Yes
If so, when did it end? Unknown
Remedial standard attained? N/A

NOTE: *Remedial investigations files were not provided by the PADEP for this site. However, as of November 16, 2006, the PADEP provided the following update:*

"Pre Act 2. Site remediated and closed out."

PADEP

Site Name: Witco Chemical Corporation
Agency Site ID: N/A
Site Location: 3300 West 4th Street, Trainer, PA
Site County: Delaware
Site Coordinates: **Latitude:** 39.822222
Longitude: -75.408611
Site Watershed: Marcus Hook Creek
PCBs in groundwater? Unknown
PCB Remediation Complete? Yes
If so, when did it end? 1999
Remedial standard attained? Statewide Health, non-residential

A Phase I assessment was performed on this site in June 1997. A subsequent remedial investigation in September 1997 divided the site into 29 study areas. Equipment and fluids containing PCBs in *AOC19* was disposed of by June 1986. PCBs in the soil were detected at the following concentration ranges: Aroclor 1260 was detected from 0.13 mg/kg to 1.2 mg/kg and Aroclor 1248 was detected from 0.22 mg/kg to 2.6 mg/kg. The concentrations were below the Industrial Use SHS for soils and non-use aquifers. Attainment of the Industrial Use SHS for soils and non-use aquifers was acknowledged by the PADEP on July 21, 1999.

PADEP

Site Name:	Wood Lane Parcel	
Agency Site ID:	N/A	
Site Location:	Lower Merion Township, Pennsylvania	
Site County:	Montgomery	
Site Coordinates:	**Latitude:**	Unknown
	Longitude:	Unknown
Site Watershed:		Schuylkill River
PCBs in groundwater?		Unknown
PCB Remediation Complete?		N/A
If so, when did it end?		N/A
Remedial standard attained?		Unknown

The Wood Lane Parcel, owned by the Township of Lower Merion, was formerly a rail yard. Soil samples taken within two feet of the surface were tested for PCB Aroclor 1254 and found to have a concentration of less than 0.3 ppm. By letter dated September 22, 1992 the PADER cited no potential for environmental impact and gave approval to conduct leaf composting on the property.

6. GLOSSARY

The terms in the glossary are defined for their intended use and purpose in the DelTRiP report. There may be other definitions for these terms, particularly IF they are used for other planning or regulatory purposes. Additionally, there may be other terms in use to define these or similar concepts.

Acroynms

AST	Above ground storage tank
ATSDR	Agency for Toxic Substances and Disease Registry
Bgs	Below ground surface
CDC	Center for Disease Control
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act (commonly known as Superfund, passed by the United States Congress on December 11, 1980)
COA	Consent order and agreement: a negotiated agreement between a regulatory agency and a potentially responsible party to complete a remedial action.
COC	Contaminant of concern: a site specific contaminant that is found to be a threat to human or ecological health. Chemical properties and concentrations of a contaminant determine its potential to be harmful if absorbed, inhaled, or ingested.
COCR	Certificate of completion of remediation: A letter written by a State environmental agency indicating the successful remediation of a site. **Example:** Types of *closure documents* are: 1) No further action (is required), 2) Certificate of completion (of remediation), 3) Covenants not to sue (no further legal action or remediation is needed once the remediation plan is complete).
CWA	Clean Water Act (33 U.S.C. § 1251)
DELEP	Delaware Estuary Program
DelTRiP	Delaware Toxics Reduction Program
DNREC	Delaware Department of Natural Resources and Environmental Control
DRBC	Delaware River Basin Commission
EPA	United States Environmental Protection Agency
FS	Feasibility Study
GIS	Geographic Information System
HSCA	Hazardous Substance Control Act
MGP	Manufactured Gas Plant: an industrial facility where combustible gas was manufactured from coal, oil, or other materials. Instances of MGPs started to decline in the 1930s due to competition and also the advent of networks of natural gas pipelines. MGPs have left a long legacy of environmental problems due to their byproducts, primarily tars left behind from their production processes.
NJDEP	New Jersey Department of Environmental Protection
NPDES	Non-Point Discharge and Elimination System: the system of both regulating and permitting discharges of harmful substances into water bodies of the United States established by the passage of the Clean Water Act (33 U.S.C. § 1251)
NPL	National Priorities List:
PADEP	Pennsylvania Department of Environmental Protection
PAH	Polycyclic Aromatic Hydrocarbon
PCB	Polychlorinated Biphenyl
PCE	Perchloroethylene
PennDOT	Pennsylvania Department of Transportation

ppb	parts per billion
PPL	Pennsylvania Power and Light Co.
ppm	parts per million
PRP	Potentially Responsible Party
RI	Remedial Investigation
SEPTA	Southeastern Pennsylvania Transit Authority
SVOC	Semivolatile Organic Compound
VCP	Voluntary Cleanup Program

Anthropogenic: Occurring because of or influenced by human activity.

Aquifer: An underground geological formation of rock, sand or gravel, capable of storing water within cracks and pore spaces, and that yields water to springs and wells. The water contained in the aquifer is called groundwater

Assimilative Capacity: The ability of a water body to cleanse itself; its capacity to recieve waste waters or toxic materials without apparent impact aquatic life or humans.

Bioaccumulation: The biological sequestering of a substance at a higher concentration than it occurs in the surrounding environment or medium. Bioaccumulation is also the process whereby a substance enters organisms through the gills, epithelial tissues, dietary, or other sources.

Brownfield: "...real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant." (§ 101 CERCLA, 1980, 42 U.S.C. 9601). This is the general definition of brownfield, though several exceptions follow in paragraph B. For a more exhaustive definition, please see www.epa.gov/brownfields/glossary.htm.

Designated Uses: Those water uses identified in State, federal and DRBC water quality standards that must be achieved and maintained as required by the Clean Water Act. Uses include aquatic life, fish consumption, recreation, agricultural and industrial use and potable water supply.

Floodplain: The relatively level area of land bordering a stream channel and inundated during moderate to severe floods.

Nonpoint Source: A pollution source that cannot be defined as originating from discrete points such as pipe discharge. Areas of fertilizer and pesticide applications, atmospheric deposition, manure, and natural inputs from plants and trees are types of nonpoint source pollution.

Pesticide: A chemical applied to crops, rights of way, or lawns, to control weeds, insects fungi, nematodes, rodents, or other 'pests.'

Point Source: A pollution source that can be defined as originating from discrete points such as pipe discharge, drainage ditch, tunnel, well, concentrated livestock operation, or watercraft.

Polychlorinated Biphenyls (PCBs): Mixtures of synthetic organic chemicals with the same basic chemical structure and similar physical properties. PCBs have been demonstrated to cause a variety of adverse health effects in animals including cancer, and effects on the immune system, reproductive system, nervous system, and endocrine system. Studies in humans provide supportive evidence for potential carcinogenic and non-carcinogenic effects of PCBs.

Sediment: Particles derived from rocks or biological materials that have been transported by a fluid or other natural process, suspended or settled in water

CONTACTS

Questions regarding the information in this report or the DelTRiP can be addressed to Alysa Suero at (609) 883-9500 extension 264 or by email at alysa.suero@drbc.state.nj.us or to any of the lead agencies identified here:

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