U.S. Environmental Protection Agency

Facility Registry System (FRS)

Facility Detail Report

Report Error

FRS

Facility Name:	MORRIS MACHINE CO INC
Location Address:	6480 S BELMONT AVE
Supplemental Address:	
City Name:	INDIANAPOLIS
State	IN
County Name:	MARION
ZIP/Postal Code:	46217
EPA Region:	05
Congressional District Number:	10
Legislative District Number:	
HUC Code:	05120201
Federal Facility:	NO
Tribal Land :	
Latitude:	39.671897
Longitude:	-86.196539
Method:	ADDRESS MATCHING-HOUSE NUMBER
Reference Point Description:	PLANT ENTRANCE (GENERAL)

Report Facility Discrepancy

Map this facility

Environmental Interests

Information System	Information System ID	Environmental Interest Type	Data Source	Last Updated Date
FRS	110003074011	FACILITY	FRS	
RCRAINFO	IND006413637	SQG	NOTIFICATION (RCRA)	03/04/1985

Facility Mailing Addresses

Affiliation Type	Delivery Point	City Name	State	Postal Code	Information System
FACILITY MAILING ADDRESS	6480 S BELMONT AVE	INDIANAPOLIS	IN	46217	RCRAINFO
OPERATOR	ADDRESS NOT REPORTED	CITY NOT REPORTED	AK	99998	RCRAINFO
REGULATORY CONTACT	P O BOX 27344	INDIANAPOLIS	IN	46227	RCRAINFO

NAICS Codes

No NAICS Codes returned.

SIC Codes

No SIC Codes returned.

Contacts

Affiliation Type	Full Name	Office Phone	Information System	Mailing Address	Report Discrepancy
REGULATORY CONTACT	DEBORAH EHRET	3177880371	RCRAINFO	View	Report

Organizations

Affiliation Type	Name	DUNS Number	Information System	Mailing Address	Report Discrepancy
OPERATOR	NAME NOT REPORTED		RCRAINFO	View	Report

Alternative Names

Alternative Name
MORRIS MACHINE CO INC

Query executed on: JUN-17-2002

U.S. Environmental Protection Agency

Facility Registry System (FRS)

FRS

Facility Detail Report

Report Error

Facility Name:	ONKENS AMOCO #556
Location Address:	2025 W SOUTHPORT RD
Supplemental Address:	
City Name:	INDIANAPOLIS
State	IN
County Name:	MARION
ZIP/Postal Code:	46217
EPA Region:	05
Congressional District Number:	06
Legislative District Number:	
HUC Code:	05120201
Federal Facility:	NO
Tribal Land :	
Latitude:	39.663527
Longitude:	-86.194508
Method:	ADDRESS MATCHING-HOUSE NUMBER
Reference Point Description:	PLANT ENTRANCE (GENERAL)

Report Facility Discrepancy

Map this facility

Environmental Interests

Information System	Information System ID	Environmental Interest Type	Data Source	Last Updated Date
FRS	110003112079	FACILITY	FRS	
STATE	CRTK07602	EPCRA	FINDS	10/22/1999
STATE	UST017313	UNDERGROUND STORAGE TANK PROGRAM	FINDS	10/22/1999
STATE	UST001075	UNDERGROUND STORAGE TANK PROGRAM	MANUAL	10/22/1999
STATE	LUST199112508	LEAKING STORAGE TANK	FINDS	10/22/1999
RCRAINFO	IND984909903	NO UNIVERSE SPECIFIED	NOTIFICATION (RCRA)	11/21/2001

Facility Mailing Addresses

Affiliation Type	Delivery Point	City Name	State	Postal Code	Information System
FACILITY MAILING ADDRESS	2025 W SOUTHPORT RD	INDIANAPOLIS	IN	46217	RCRAINFO
OWNER	30230 ORCHARD LAKE RD STE 100	FARMINGTON HILLS	MI	48334	RCRAINFO
REGULATORY CONTACT	2025 W SOUTHPORT RD	INDIANAPOLIS	IN	46217	RCRAINFO

NAICS Codes

No NAICS Codes returned.

SIC Codes

No SIC Codes returned.

Contacts

Affiliation Type	Full Name	Office Phone	Information System	Mailing Address	Report Discrepancy
REGULATORY CONTACT	DALE ONKEN	3178899886	RCRAINFO	View	Report

Organizations

Affiliation Type	Name	DUNS Number	Information System	Mailing Address	Report Discrepancy
OWNER	AMOCO OIL CO		RCRAINFO	View	Report

Alternative Names

Alternative Name
DIV OF INLAND ENERGY
ONKENS AMOCO
ONKENS AMOCO #556

Query executed on: JUN-17-2002

U.S. Environmental Protection Agency

Facility Registry System (FRS)

FRS

Facility Detail Report

Report Error

Facility Name:	WELIEVER OLDS PONTIAC GMC
Location Address:	655 W SOUTHVIEW
Supplemental Address:	
City Name:	MARTINSVILLE
State	IN
County Name:	MORGAN
ZIP/Postal Code:	46151
EPA Region:	05
Congressional District Number:	07
Legislative District Number:	
HUC Code:	05120201
Federal Facility:	NO
Tribal Land :	
Latitude:	39.404823
Longitude:	-86.43707
Method:	ADDRESS MATCHING-HOUSE NUMBER
Reference Point Description:	PLANT ENTRANCE (GENERAL)

Report Facility Discrepancy

Map this facility

Environmental Interests

Information System	Information System ID	Environmental Interest Type	Data Source	Last Updated Date
FRS	110003076849	FACILITY	FRS	
RCRAINFO	IND016512642	CESQG	NOTIFICATION (RCRA)	01/07/1988
STATE	UST015512	UNDERGROUND STORAGE TANK PROGRAM	FINDS	10/08/1992
STATE	LUST199406540	LEAKING STORAGE TANK	STATE	05/26/2000

Facility Mailing Addresses

Affiliation Type	Delivery Point	City Name	State	Postal Code	Information System
FACILITY MAILING ADDRESS	PO BOX 1576	MARTINSVILLE	IN	46151	RCRAINFO
OPERATOR	ADDRESS NOT REPORTED	CITY NOT REPORTED	AK	99998	RCRAINFO
REGULATORY CONTACT	PO BOX 1576	MARTINSVILLE	IN	46151	RCRAINFO

NAICS Codes

No NAICS Codes returned.

SIC Codes

No SIC Codes returned.

Contacts

Affiliation Type	Full Name	Office Phone	Information System	Mailing Address	Report Discrepancy
REGULATORY CONTACT	BECKY PERKINS	3173423385	RCRAINFO	View	Report

Organizations

Affiliation Type	Name	DUNS Number	Information System	Mailing Address	Report Discrepancy
OPERATOR	NAME NOT REPORTED		RCRAINFO	View	Report

Alternative Names

Alternative Name
WELIEVER OLDS PONTIAC GMC
WELIEVER OLDS-PONTIAC-GMC INC

Query executed on: JUN-17-2002

EPA United States Environmental Protection Agency Region 5

NPL Fact Sheet

PRESTOLITE BATTERY DIVISION

INDIANA

EPA ID# IND006377048

Last Update: November, 2000

EPA REGION 5

Knox County

Northeast of Vincennes

Other Names:

Eltra Corporation -

Prestolite Battery Division

8th Congressional District

Site Description

The Prestolite Battery site is located in Vigo County, Vincennes, Indiana. The Prestolite Battery facility, which occupies approximately 18 acres, operated from 1945 to 1985. In the course of plant operations, lead-containing sludges and waste water were discharged to an on-site sewer system. Leaks and sewer backups resulted in contamination of soils and some sewer lines. Lead dust was also released from the plants ventilation system, contaminating surface soils in the vicinity. Further, accidental spills of process materials added to the on-site soil contamination. U.S. EPA's Remedial Investigation (RI) found lead soil concentrations as high as 405,000 ppm. and low levels of volatile organic compounds (VOCs), trichloroethylene (TCE), and tetrachloroethylene (PCE) in groundwater samples collected from on-site monitoring wells and from an off-site residential well. The ground water plume was fully defined and characterized during the RI and contamination was found to be confined to the shallow aquifer.

Site Responsibility: This site is being addressed through Federal and potentially responsible parties' actions.

NPL Listing History: Proposed Date: 09/18/85
Final Date: 10/04/89

Threats and Contaminants

Air, groundwater, soils, and surface water are contaminated with lead. Soils also are contaminated with polychlorinated biphenyls (PCBs). Soil on site and in the area has been contaminated with lead, mainly from airborne particles. Malfunctions of equipment on site and accidental spills also have contributed to the contamination of soils. People who come into direct contact with or accidentally ingest contaminated groundwater, soil, or surface water may suffer adverse health effects. People also may be exposed to contaminants by inhaling dust particles. The site is fenced, limiting exposure by direct contact.

Cleanup Progress

In the Spring of 1993, Allied-Signal began a removal action which lasted approximately one year and resulted in the removal of approximately 13,000 cubic yards of lead contaminated soil. In addition, surrounding residential wells were closed and residents were hooked up to the municipal water supply. A Record of Decision (ROD) was signed in August, 1994, which allows natural attenuation to reduce the contaminant concentrations in the ground water to established cleanup levels. Deed restrictions will prohibit any future wells from being drilled into the contaminated shallow groundwater. In addition, an extensive monitoring system will be installed to evaluate progress of groundwater natural attentuation and to identify any changing conditions in the nearby wetlands should they occur as a result of no active remediation. The installation of this monitoring system involves replacement of monitoring wells, and this activity was negotiated under a Consent Decree (CD) that was entered August 8, 1997. Installation of the monitoring well system was completed in October 1998.

In November, 1996, U.S. EPA secured a Prospective Purchaser Agreement (PPA) with a Vincennes- area developer to begin razing the existing on-site building and redevelop the property to productive land use. The redevelopment efforts are currently underway.

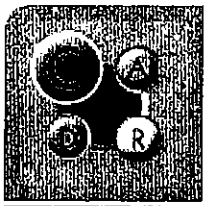
Contact

Remedial Project Manager
Darryl Owens
(312) 886-7089
owens.darryl@epa.gov

State Project Manager-Indiana Department of Environmental Management (IDEM)
Resa Ramsey
(317) 234-0353
rramsey@dem.state.in.us

EPA United States Environmental Protection Agency

Superfund



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CERCLIS Hazardous Waste Sites

INDIANA WOODTREATING

Site Information

Actions | Aliases | Financial | Op Units | RODs

Site Name: INDIANA WOODTREATING
Street: 5700 S ROGER ST
City / State / Zip: BLOOMINGTON, IN 47401

EPA ID: IND082293143
EPA Region: 05
County: MONROE

NPL Status: Not on the NPL
Non-NPL Status: NFRAP
Federal Facility Flag: Not a Federal Facility
Incident Category:

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This page was last updated on: May 15, 2002
Site maintained by: Office of Emergency and Remedial Response
brown.margret@epa.gov

EPA United States Environmental Protection Agency **Region 5**

NPL Fact Sheet

LEMON LANE LANDFILL

INDIANA

EPA ID# IND980794341

Last Update: November, 2000

EPA REGION 5

Monroe County

Bloomington

8th Congressional District

Site Description

The Lemon Lane Landfill site is located on the western edge of the city of Bloomington. The landfill is approximately ten acres in size. The city owns approximately seven acres of the landfill and a private citizen owns three acres of the landfill. From about 1933 until 1964, the landfill, which had no bottom liner or runoff controls, accepted both municipal and industrial wastes. From about 1958 until 1964, a large number of electrical capacitors containing polychorinated biphenyls (PCBs) were dumped at the site. Throughout the late 1950s until 1964, PCBs were released from many of the electrical capacitors when metal scavengers broke open the capacitors to reclaim internal metal capacitor parts. Labels found on the capacitors linked the PCB contamination to the Westinghouse Electric Corporation, now doing business as CBS Corporation, which manufactured capacitors in Bloomington from about 1958 until the mid 1970s.

A residential community of approximately 25 homes is located within one quarter of a mile from the eastern and northern boundaries of the site. A large cemetery exists south of the site, separated from the site by railroad tracks and right-of-way easements. The property east of the site is vacant land owned by Westinghouse. Within one mile of the landfill there are approximately 90 homes that obtain drinking water from private wells. Several drinking water wells have been found to be contaminated with PCBs. The contaminated well owners have been provided with city water service.

In 1985, Westinghouse, U.S. EPA, the city of Bloomington, the county of Monroe, and the Indiana State Board of Health signed a Consent Decree (CD) that required Westinghouse to perform interim control measures and to construct an incinerator and to incinerate PCB-contaminated materials from six sites in and near Bloomington, including the Lemon Lane Landfill. During the early 1990s, the state of Indiana passed a number of laws that initially delayed and ultimately blocked the construction of the incinerator remedy required by the 1985 CD. Beginning in 1994, the parties to the CD began to explore alternative remedies for the PCB sites subject to the CD.

Site Responsibility: This site is being addressed through Federal and potentially responsible parties' actions.

NPL Listing History: Proposed Date: 12/30/82
Final Date: 09/08/83

Threats and Contaminants

The principal health concern at the site is PCB-contaminated groundwater, used by some residents as a drinking water supply. In addition, several local springs have been contaminated with low levels of PCBs as a result of contaminant migration from the site. Soils are contaminated with PCB; however, capping the landfill has reduced the possibility of exposure to contaminants. The landfill cap also reduces the possibility of additional contaminants reaching the groundwater.

Cleanup Progress

In 1987, as required by the 1985 CD, Westinghouse removed exposed capacitors and stained soils from the site, and capped the site with a synthetic liner. Approximately 400 capacitors were incinerated at a licensed commercial incinerator. In 1987, U.S. EPA installed a locked chain-link security fence around the site. The threat posed by direct contact to the site has been greatly reduced by capping and fencing. Extensive dye tracing of groundwater was conducted from 1989 through the early 1990s. PCB contamination at a local spring and stream have been conclusively linked to the Lemon Lane Landfill. Nearly all of the nearby residents to the east of Lemon Lane Landfill are served with municipal drinking water. During 1995 and 1996, residential water wells within a mile of the site were sampled and analyzed for PCBs and other hazardous chemicals. Drinking water supplies meet safe drinking water standards.

In February, 1996, the parties submitted a schedule to the federal court that identified the specific steps needed to select alternative remedies for each of the six sites subject to the 1985 CD. In February, 1997, the parties submitted an amended schedule to the court. During the Fall, 1996, Westinghouse and U.S. EPA conducted sampling of landfill materials at the site and found areas of high PCB concentrations (up to 200,000 ppm) along the western and southern portions of the landfill.

The federal court has issued a judicial order stating that the Lemon Lane Landfill must be remediated by December 31, 2000. This deadline does not apply to water treatment at the nearby springs or sediment removal in Clear Creek.

The U.S. EPA issued a Record of Decision Amendment for the source control operable unit on May 12, 2000. The site remedy consists of the following:

- A 50 ppm on average hot spot removal estimated to address 38,000 cubic yards. The excavated material will be transported to a permitted landfill capable of accepting PCBs greater than 50 ppm.
- All visible PCB contamination such as capacitors parts and oil stained soil will be excavated and disposed either in an off-site landfill or treated in an off-site incinerator. Capacitors containing PCB oil must be incinerated pursuant to the Toxic Substances

Control Act (TSCA).

- Capping the remaining part of the landfill with a RCRA Subtitle C compliant cap meeting the permeability requirements of 1 x 10-7 centimeters per second.
- Consolidation of the landfill from 9 acres to 6 acres.
- Areas outside the landfill fence will be remediated to 2 ppm PCBs on average and areas within the fence line not covered by the landfill cap will be remediated to a low occupancy standard/industrial standard of 10 ppm PCBs on average with 10-inches of clean soil cover.
- Development of a long-term inspection and maintenance plan for the landfill cap along with groundwater, springs, and surface water monitoring program.

Site mobilization began on May 15, 2000 and the excavation phase was completed in mid October. Approximately 78,000 tons (156,000,000 pounds) of PCB contaminated material was excavated and disposed of off-site in a permitted landfill capable of accepting PCBs greater than 50 ppm. A total of 4,402 capacitors weighing 228.1 tons (456,000 pounds) were also excavated and shipped to a permitted incinerator. The cap is scheduled to be completed by December 2000.

In May 2000, the U.S. EPA funded interim water treatment plant became operational at Illinois Central Spring. The plant treats 1000 gallons per minute of spring water contaminated with PCBs. Storage tanks capable of storing 1.3 million gallons are used during large rainfall events. Treated water has been non-detect for PCBs.

Future decisions by the U.S. EPA for final water treatment and sediment removal in Clear Creek will occur in 2001 and 2002.

Contact

Thomas Alcamo
(312) 886-7278
alcamo.thomas@epa.gov

Community Involvement Coordinator
Name: Dave Novak
Phone Number: (312) 886-9426
E-mail address: novak.dave@epa.gov

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URL: http://www.epa.gov/region5superfund/npl/indiana/IND980794341.htm

This page last updated on Wednesday, December 27, 2000

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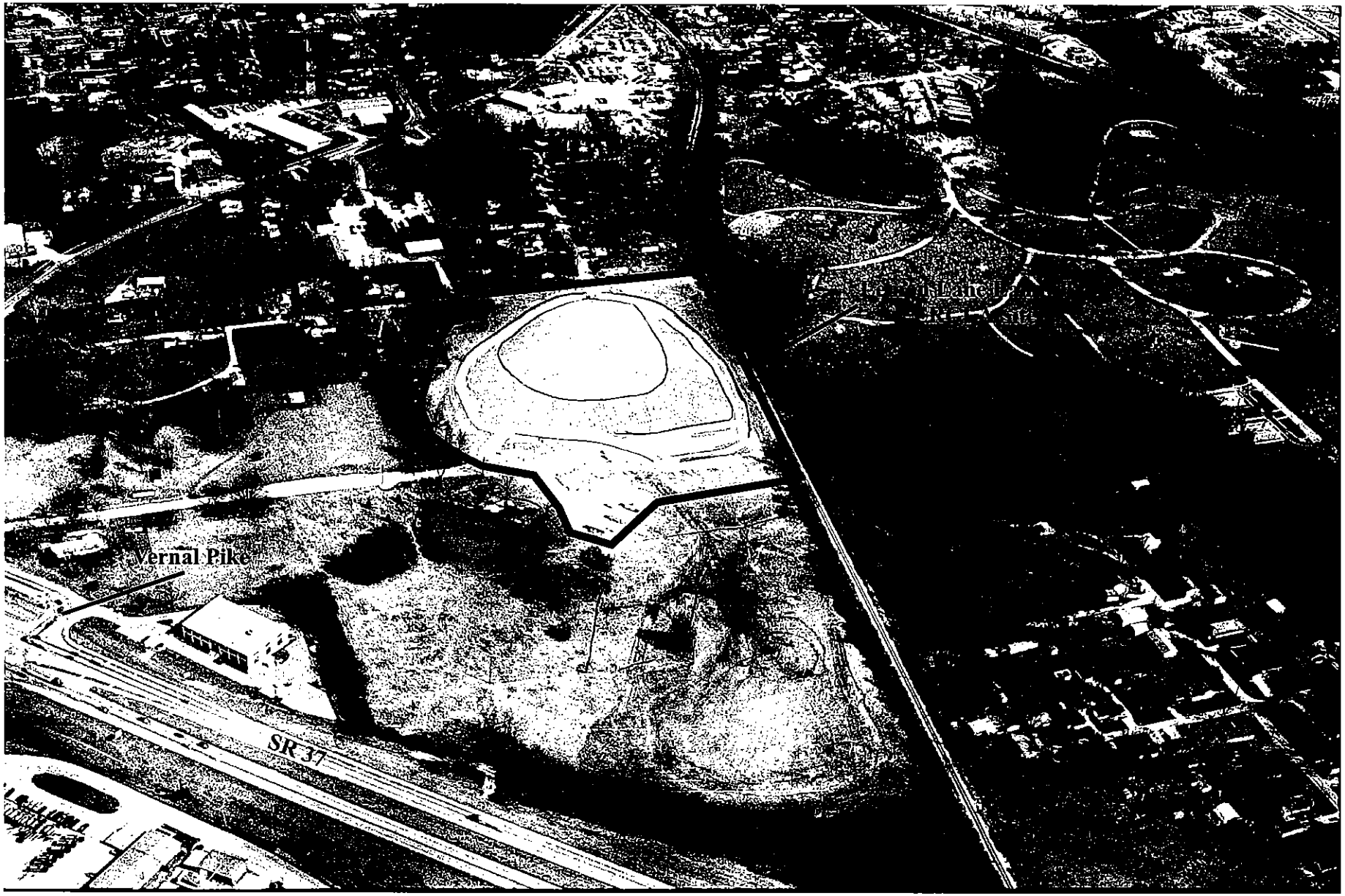
Jim Rittenhouse


Vernal Pike
SR 37

EPA United States Environmental Protection Agency

Superfund

Record of Decision System (RODS)

BENNETT STONE QUARRY

Site Information | **RODs List**

Site Information:

Site Name: BENNETT STONE QUARRY
Address: ST RTE 37 & ST RTE 46
BLOOMINGTON, IN 47401

EPA ID: IND006418651
EPA Region: 05
County: 105 MONROE

Latitude: +39.190200
Longitude: -086.561200

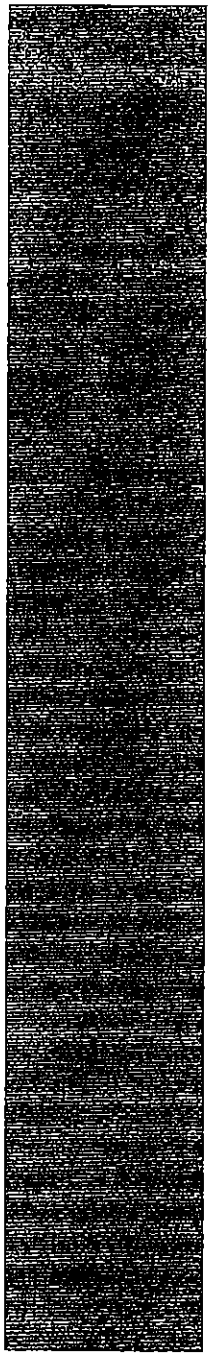
NPL Status: Currently on the Final NPL
Non-NPL Status:
Federal Facility Flag: Not a Federal Facility
Incident Category: Industrial Waste Treatment

Record of Decision (ROD) List:

	ROD ID	ROD Date	OU
1	EPA/541/R-99/144	10/16/1998	01

1) Record of Decision (ROD):

Operable Unit: 01



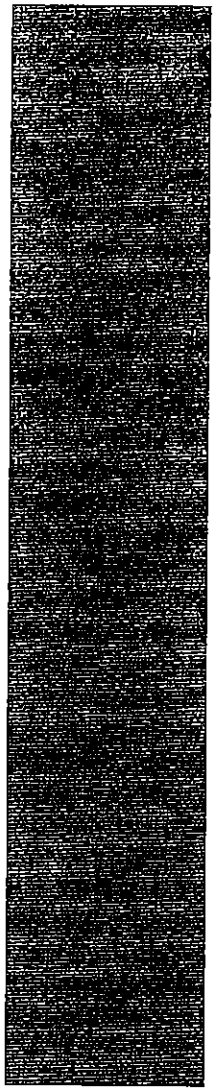
ROD ID: EPA/541/R-99/144
ROD Date: 10/16/1998

Media: Soil

Contaminant: PCBs

Abstract: Please note that the text in this document summarizes the Record of Decision for the purposes of facilitating searching and retrieving key text on the ROD. It is not the officially approved abstract drafted by the EPA Regional offices. Once EPA Headquarters receives the official abstract, this text will be replaced.

Bennett's Dump, sometimes referred to as Bennett's Stone Quarry, is located approximately 2.5 miles northwest of Bloomington , Indiana. After quarrying operations were completed, portions of the site were used for waste disposal. The disposal areas consist of 3.5 acre main stite, an adjacent .5 acre satellite site, and a very small area north of the two main fill areas. Stout's Creek is adjacent to the dumping area and directly west of the main site. The site was discovered in early 1983 after a Monroe County Health Department inspection revealed the dumping of PCB-contaminated electrical parts and PCB contaminated capacitors at the site. The materials were transported, for the most part, to the site by Fell Iron and Metal - a local scrap metal hauler. In May 1983, EPA's Technical Assistance Team completed an inspection and discovered electrical components, including capacitors and capacitor paper, along with stained soil throughout the main dumping area. Nine soil samples were collected and ranged from 380,000 ppm to below 5ppm. Based upon the inspection and sampling data, EPA determined that an emergency action was warranted and the EPA would fund this removal action. The removal action consisted of: removal and disposal in an approved facility of 252 capacitors located on the surface along with 14 cubic yards of adjacent contaminated soils. The extent of contamination studies including aerial photographic survey, a geophysical study, and 63 soil borings and samples. Results showed PCBs up to 24,648



ppm at .5 feet, up to 52,332 ppm at 2.5 feet, and up to 15,947ppm at 5.5 feet. The removal also included placement of a clay cap over the main site to prevent surface runoff of contaminants, and construction of a security fence around the site and the satellite areas.

Remedy: The original remedy action for Bennett's Dump called for the excavation and incineration of an estimated 55,000 cubic yards of PCB contaminated soils and materials at Bennett's Dump. The EPA, in consultation with other government parties, determined that the alternatives to be considered for the two sites should range from complete containment to complete excavation. The modified remedy includes excavation of PCBs to residential and industrial standards. Treatment by incineration of capacitors containing PCB oil is a component of each remedy and solid material greater than or equal to 50 ppm PCBs will be disposed of in an approved chemical waste landfill. PCB material less than 50 ppm will be disposed of off-site in a special waste landfill.

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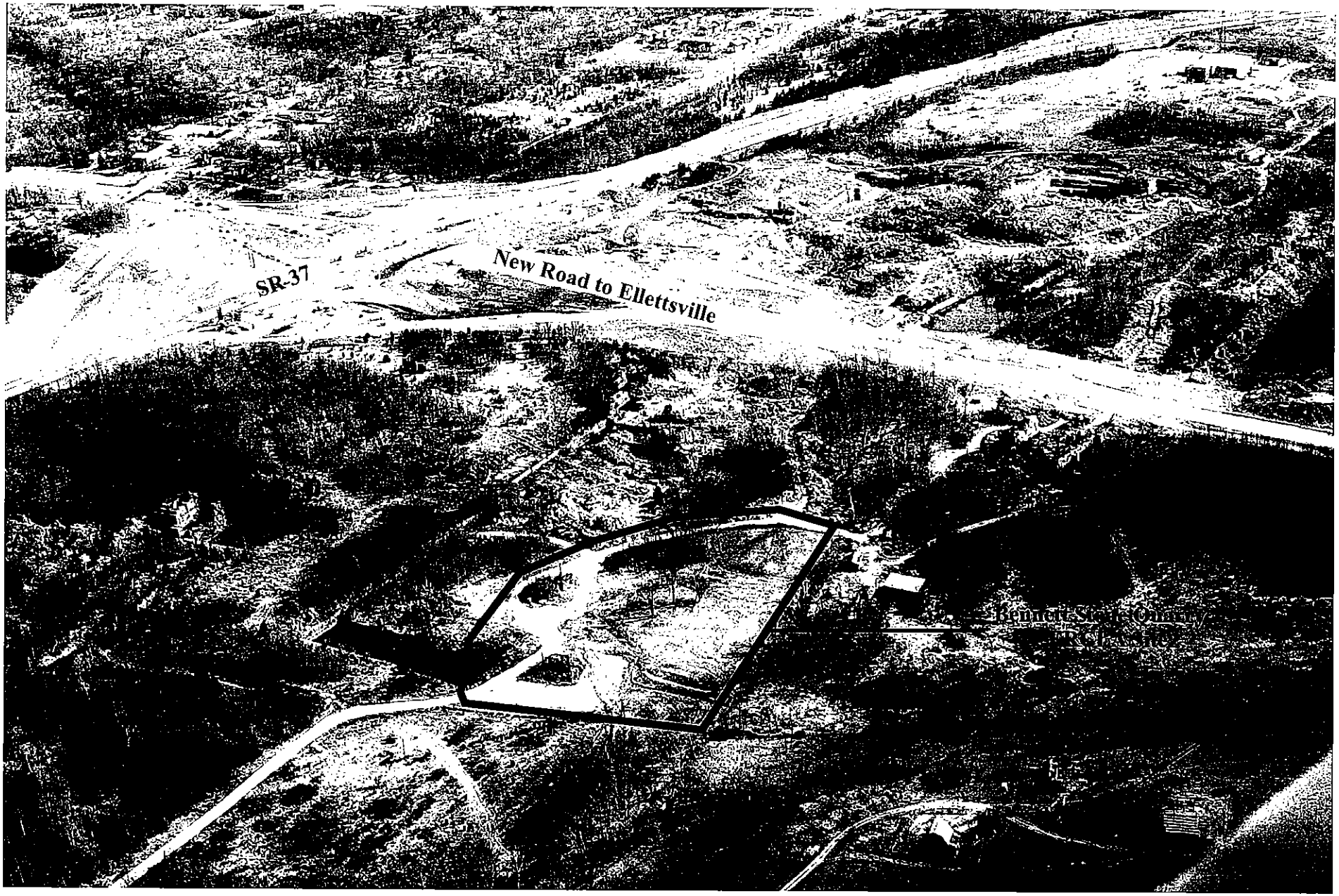
SR-37
New Road to Ellettsville

EPA United States Environmental Protection Agency

Superfund

CERCLIS Hazardous Waste Sites

DAVENPORT DUMP

Site Information

Actions | Aliases | Financial | Op Units | RODs

Site Name: DAVENPORT DUMP
Street: 6965 BEECH GROVE ROAD
City / State / Zip: MARTINSVILLE, IN 46151

EPA ID: IND982072878
EPA Region: 05
County: MORGAN

NPL Status: Not on the NPL
Non-NPL Status: Referred to Removal - NFRAP
Federal Facility Flag: Not a Federal Facility
Incident Category:

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Site maintained by: Office of Emergency and Remedial Response
brown.margret@epa.gov

SITE NAME:	Davenport Dump
SITE NUMBER:	0000017
ADDRESS:	6965 Beech Grove Road
CITY:	Monrovia
COUNTY:	Morgan
SCORE:	28.20
SCORE DATE:	December 1990
CONTAMINANT TYPE:	Solvents
MEDIA AFFECTED:	Surface Water
CONTACT PERSON:	Ryan Groves at (317) 233-2406
LAST REVISED:	December 2001
SITE PHOTO	

STATUS: The two-acre site operated from 1960 until January 1986. An inspection by IDEM personnel determined that the site was an unpermitted open dump containing domestic waste, auto parts, and drums of unknown contents. In 1986, IDEM removed the drums from the site. Samples were collected from the soil, surface water, sediment and residential wells. Of the all the samples taken, only two surface soil samples were found to be above action levels. The surface water appeared to have minimal impact, if any, from the landfill and the residential wells appeared to have no impact from the landfill. During the summer of 2001 additional buried drums were found at the site during a waste tire removal effort. The U.S. EPA conducted a site investigation in October of 2001. Further investigation and removal efforts are scheduled for the spring of 2002.

EPA United States Environmental Protection Agency **Region 5**

NPL Fact Sheet

NEAL'S LANDFILL (BLOOMINGTON)

INDIANA

EPA ID# IND980614556

Last Update: November, 2000

EPA REGION 5

Monroe County

Bloomington

8th Congressional District

Site Description

The Neal's Landfill site occupies nearly 18 acres of property approximately three miles west of Bloomington. The landfill is surrounded by farm and wooded lands. Several residents are located within a half-mile of the landfill. Residents near the site use private wells for drinking water. The landfill accepted industrial and municipal wastes from 1949 until 1972. Between approximately 1962 until 1970, Westinghouse Electric Corporation, now doing business as CBS Corporation, dumped waste electrical equipment and parts including electrical capacitors containing polychlorinated biphenyls (PCBs), and PCB-contaminated capacitor insulation material, rags and filter clay at the site. Several springs located at the foot of the landfill feed the Conard's Branch stream which had become contaminated with PCBs. Conard's Branch is tributary to Richland Creek. Sediments and fish in Richland Creek had also become contaminated with PCBs. In 1985, Westinghouse, U.S. EPA, the city of Bloomington, the county of Monroe, and the Indiana State Board of Health signed a Consent Decree (CD) that required Westinghouse to perform interim control measures and to construct an incinerator and to incinerate PCB contaminated materials from six sites in and near Bloomington, including Neal's Landfill. During the early 1990s, the state of Indiana passed a number of laws that initially delayed and ultimately blocked the construction of the incinerator remedy required by the 1985 CD. Beginning in 1994, the parties to the CD began to explore alternative remedies for the PCB sites subject to the CD.

Site Responsibility: This site is being addressed through Federal and potentially responsible parties' actions.

NPL Listing History: Proposed Date: 10/22/81
Final Date: 09/08/83

Threats and Contaminants

The principal threats posed by the site are from potentially contaminated groundwater. Residents in the vicinity of the site use groundwater wells for drinking water. In addition, springwater bypassing the treatment plant during rainfall contaminate the surface waters of Conard's Branch and Richland Creek. Sediments in Conard's Branch are contaminated. The fish in Richland Creek are contaminated and they may pose a risk to anglers.

Cleanup Progress

During 1987, interim control measures were implemented by Westinghouse at the site, including; removal of visible capacitors and stained soils, installation of a two foot thick clay cap over primary landfill areas, installation of a locked chain-link security fence around the site, removal of sediments and creek banks along the entire 4,500 feet length of Conard's Branch, and installation of a spring water collection and activated carbon treatment system to treat PCB contamination at springs near the foot of the landfill. Sampling of creek sediment and water, and fish in Richland Creek, demonstrates that the spring water treatment plant has abated the PCB loading to Conard's Branch and Richland Creek. In February, 1996, the parties submitted a schedule to the federal court that identified the specific steps needed to select alternative remedies for each of the six sites subject to the 1985 Consent Decree. In February, 1997, the parties submitted an amended schedule to the court. The court has stated through a judicial order that the landfill must be remediated by December 31, 2000. Future decisions by the U.S. EPA on expansion of the water treatment plant and sediment removal will be completed in 2001 and 2002 and are not included in the judicial order. On March 29, 1999, the U.S. EPA signed a Record of Decision Amendment for Neal's Landfill which addresses the source of the contamination. The remedy consists of the following:

- Excavation and removal to an off-site, permitted landfill of selected areas of contamination (referred to as hot spots) greater than 500 parts per million PCBs. The volume to be removed will be between 7000 cubic yards and 50,000 cubic yards, depending upon sampling analysis.
- The current 18-acre landfill will be reduced to 10-acres by consolidation of excavated soils and materials contaminated with less than 500 parts per million (ppm) PCBs. It is anticipated that through this consolidation the possibility of PCB material becoming wet and migrating from the site will be reduced and perhaps eliminated.
- All visible PCB contamination such as capacitors or capacitor parts and oil stained soil will be excavated and disposed either in an off-site landfill or treated in an off-site incinerator. Capacitors containing PCB oil must be incinerated pursuant to the Toxic Substances Control Act.
- Construction of a RCRA Subtitle C compliant cap meeting the permeability requirements of 1 X 10-7 centimeters per second over the 10-acre landfill to address the low level threat wastes remaining.
- Areas within the site fence but outside the landfill cap will be cleaned up to 25 ppm PCBs on average with a 6-inch soil cover. Areas outside the fence will be cleaned up to 5 ppm PCBs on average with a 6-inch soil cover.
- A long-term inspection and maintenance plan for the cap along with groundwater and surface water monitoring program will be implemented.

On April 19, 1999, the first phase of the cleanup at Neal's Landfill began by CBS Corporation. A total of 41,747.5 tons (83,495,000 pounds) of PCB contaminated material greater than 500 ppm PCBs was excavated and shipped off-site to a landfill capable of accepting PCBs. A total of 4,119 capacitors containing PCBs and weighing 484,624 pounds were excavated and shipped off-site to a commercial, permitted, incinerator. Approximately 90,000 cubic yards of landfill material was consolidated to reduce the landfill size from 18 acres to 10 acres. Approximately 29,000 tires were excavated and shredded on-site and placed under the landfill cap. The final landfill cap met the permeability requirements of less than 1 x 10^{-7} centimeters per second. Areas outside the fence met the cleanup

criteria with an average PCB concentration of 3.3 ppm. The groundwater and surface water monitoring plan for Neal's Landfill is under development.

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Final Report
Neal's Landfill Fish Assessment

Rec'd Feb 19, 2002

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1.0 INTRODUCTION

From August 7-9, 2001 the Response, Engineering, and Analytical Contract (REAC) provided technical support to the United States Environmental Protection Agency/Environmental Response Team Center (U.S. EPA/ERTC) and the U.S. EPA Region V to evaluate the concentration of polychlorinated biphenyls (PCBs) in fish species associated with the Neal's Landfill Site. This document summarizes the results of the chemical analyses of fish tissue samples representing target species commonly found in the watershed surrounding Bloomington, Indiana (IN).

2.0 SITE DESCRIPTION AND HISTORY

The Neal's Landfill site occupies nearly 18 acres of property approximately three miles west of Bloomington, IN, and is surrounded by farms and woodlands. Several residents are located within a half-mile of the landfill and use private wells for drinking water. The landfill accepted industrial and municipal wastes from 1949 until 1972. From 1962 until 1970, Westinghouse Electric Corporation, currently doing business as CBS Corporation, disposed of waste electrical equipment and parts in the landfill, including electrical capacitors containing PCBs, PCB-contaminated capacitor insulation material, rags, and filter clay. Several springs are located at the foot of the landfill and feed Conard's Branch, a tributary to Richland Creek. As a result, sediment and fish in Conard's Branch and Richland Creek were contaminated with PCBs. In 1985, Westinghouse, the U.S. EPA, the city of Bloomington, Monroe County, and the Indiana State Board of Health signed a Consent Decree (CD) that required Westinghouse to perform interim control measures, to construct an incinerator, and to incinerate PCB contaminated materials from six sites in and near Bloomington, including Neal's Landfill. During the early 1990s, the state of Indiana passed a number of laws that initially delayed and ultimately blocked the construction of the incinerator remedy required by the 1985 CD. Beginning in 1994, the parties associated with the CD began to explore alternative remedies for the PCB sites (McLaren/Hart-ChemRisk 1998).

During 1987, interim control measures at the site were implemented by Westinghouse which

included: removal of visible capacitors and stained soils, installation of a two foot thick clay cap overprimary landfill areas, installation of a locked chain-link security fence around the site, removal of sediments and creek banks along the entire 4,500 foot length of Conard's Branch, and installation of a collection and activated carbon treatment system to treat PCB-contaminated spring water. Sampling of creek sediment, water, and fish in Richland Creek demonstrated that the spring water treatment plant has abated the PCB loading to Richland Creek. In February 1996, the parties submitted a schedule to the federal court that identified the specific steps needed to select alternative remedies for each of the six sites subject to the 1985 CD. In February 1997, the parties submitted an amended schedule to the court. The court stated through a judicial order that the landfill must be remediated by December 31, 2000. Future decisions by the U.S. EPA on expansion of the water treatment plant and sediment removal will be completed in 2002 and are not included in the judicial order. On March 29,1999, the U.S. EPA signed a Record of Decision (ROD) Amendment for Neal's Landfill which addresses the source of the contamination.

On April 19,1999 the first phase of the cleanup at Neal's Landfill was initiated by CBS Corporation. A total of 41,747 tons (83,495,000 pounds) of contaminated material with greater than 500 parts per million (ppm) PCBs was excavated and shipped offsite to a landfill capable of accepting PCB contaminated material. A total of 4,119 capacitors containing PCBs and weighing 484,624 pounds were excavated and shipped off-site to a commercial, permitted incinerator. Approximately 90,000 cubic yards of landfill material were consolidated to reduce the landfill size from 18 acres to 10 acres. And 29,000 tires were excavated and shredded on-site and placed under the landfill cap. The final landfill cap met the permeability requirements of less than I x 10-7 centimeters per second. Areas outside the fence met the cleanup criteria with an average PCB concentration of 3.3 ppm. The groundwater and surface water monitoring plans for Neal's Landfill are currently under development (McLaren/Hart-ChemRisk 1998).

3.0 METHODS

Fish were sampled in conjunction with the Indiana Department of Environmental Management's (IDEM) annual monitoring program. Fish were collected from a total of six locations: five locations on Richland Creek and one location on Conard's Branch (Figure 1). A total of 8 omnivorous fish and 5 forage fish samples were targeted for collection from each location. Additionally, 6 upper trophic level fish were targeted for collection from the 3 most downstream locations. A total of 87 fish samples were collected, of which 55 were analyzed as whole body, 18 were analyzed as fillet composites, and the remainder were archived in the REAC biology laboratory, Edison, New Jersey (NJ). Table 1 lists the species and number of fish caught at each location. Targeted omnivorous fish included green sunfish (Lepomis cyanellus) and longear sunfish (Lepomis megalotis) while targeted forage species included creek chub (Semotilus atromaculatus), white sucker (Catostomus commersoni), and carp (Cyprinus carpio). The targeted upper-trophic level species were largemouth bass (Micropterus salmoides) and rock bass (Ambloplites rupestris), but spotted bass (Micropterus punctulatus) was substituted if either of the target species was not available.

At each location, field personnel attempted to catch eight omnivorous fish and five forage fish using electro-shocking equipment administered by IDEM personnel. In addition, six upper-trophic level fish (3 fish of 2 species), were collected from the three most downstream locations (i.e. 4,5, and 6). At Locations 6, 5, and 4 a barge electro-shocker was used while a backpack electro-shocker was used to collect the fish at Locations 3, 2, and 1.

3.1 Sampling Locations

The sampling locations were as follows (Figure 1):

Location 1: Downstream of the landfill on Conard's Branch. In the same vicinity as the former CBS #1 sampling location.

Location 2: The most upstream location on Richland Creek. In the same vicinity as the former CBS #2 sampling location.

Location 3: Approximately 3 miles downstream of Location 2 on Richland Creek, north of Hendricksville. IDEM upstream annual monitoring location.

Location 4: Downstream of Location 3 on Richland Creek, south of Hendricksville and upstream of the Route 43 bridge. In the same vicinity as the former CBS #3 sampling location.

Location 5: Downstream of Location 4 on Richland Creek. IDEM midpoint annual monitoring location.

Location 6: Downstream of Location 5 on Richland Creek both upstream and downstream of the Rt 54 bridge. IDEM downstream annual monitoring location.

3.2 Fish Tissue Sampling

Fish were processed according to REAC Standard Operating Procedure (SOP) # 2039 Fish Handling and Processing. Each fish was weighed, measured for total length, and observed both externally and internally for obvious abnormalities (e.g., neoplasms, parasites, etc.). This information was recorded on fish data sheets (Appendix A). Forage fish and omnivorous fish were analyzed using whole bodies. Since the mass of some individual forage and omnivorous fish were not sufficient to meet analytical requirements, several similarly-sized smaller bodied fish of the same species were composited. The required number of samples per location was then comprised of both individual fish and composited fish with no more than 3 composites (of the 13 total samples) per location. Fillet samples were taken from the larger, upper-trophic level species. Due to the small body size of many of these fish, fillets from both sides of the fish were utilized to obtain sufficient tissue mass for analytical requirements. Fish were assigned sample numbers, wrapped in aluminum foil, and placed in plastic bags. The sample number, and requested analyses were recorded on Chain of Custody forms. The samples were shipped on dry ice, via overnight delivery, to the REAC laboratory in Edison, NJ for homogenization.

All fish samples were homogenizedaccording to REAC SOP #1820 Tissue Homogenization Procedure. Fish targeted for whole body contaminant determinations were homogenized individually or in composites of same species and approximate size, depending upon the mass of the fish relative to sample mass requirements for analyses. The fillet samples were homogenized using the following procedure (Figure 2 is a graphic description of the fillet sample handling). Each individual fillet was homogenized separately. Two aliquots were removed from each fillet homogenate (e.g., Fillet #1 = Aliquot 1 and 2; Fillet #2 = Aliquot 3 and 4; Fillet #3 = Aliquot 5 and 6). Aliquots 1, 3, and 5 were combined and analyzed for PCB and co-planar PCB congeners using a soxhlet extraction. Aliquots 2, 4, and 6 were

combined and analyzed for PCBs and co-planar PCB congeners using a micro-extraction technique, as part of a separate technical evaluation. This yielded a total of 1 composite homogenate sample to be analyzed per species per location, for this effort, (e.g., one for PCBs using a soxhlet extraction and one for co-planar PCB congeners using soxhlet extraction). Once homogenized, the fish tissue samples were prepared for shipping to the subcontract laboratory per REAC SOP #2004, Sample Packaging and Shipment.

The fish sample extracts for Aroclor analysis were cleaned up using a sulfuric acid clean-up procedure. Extracts for the congener analyses were cleaned up using a silica followed by acid followed by florosil sample clean-ups.

Due to an error in the analyses directions given to the analytical laboratory, lipid determinations were not conducted on the initial sample homogenates sent for PCB determinations. Upon realization that the lipid determinations had not been conducted the error was identified. Inventory of homogenized tissue which remained was made; fish samples had sufficient mass remaining were send to the laboratory for total lipid determinations. These samples were stored at -20° Celsius freezer for approximately 12 weeks after homogenization.

3.3 Sampling Equipment Decontamination

Non-dedicated sampling equipment was decontaminated prior and subsequent to sampling each location per REAC SOP #2006, SamplingEquipmentDecontamination. The following numerical sequence was used:

1 physical removal
2 nonphosphate detergent wash (Liquinox)
3 potable water rinse
4 distilled/deionized water rinse
5 10% nitric acid rinse
6 distilled water rinse
7 acetone rinse
8 distilled water rinse
9 air dry

3.4 Standard Operating Procedures

Sample documentation was completed per the following REAC SOPs:

- REAC SOP #2002, Sample Documentation
- REAC SOP #4005, Chain of Custody Procedures
- REAC SOP #4001, Logbook Documentation

Sample packaging and shipment was conducted in accordance with the following REAC SOP:

- REAC SOP #2004, Sample Packaging and Shipment

3.5 Waste Disposal

Investigation derived waste (e.g., personal protective equipment) was disposed of in accordance with all state and federal regulations. All samples were maintained per the work plan.

4.0 RESULTS

Fish tissues (whole body and fillet) were analyzed for PCBs, co-planar PCB congeners, and percent lipids. If a PCB concentration was not detected (ND) for a given sample, it was assumed to be present at one tenth of its method detection limit (MDL) and this value was used to calculate mean concentrations. The justification for the use of one tenth the MDL is as follows: for "clean samples" the analytical procedure would identify a compound as present with a "J-ed" value, estimated concentration, down to one fifth of the MDL. For averaging purposes one half the detection limit is frequently used when non detect values exist in a data set. Therefore, if no signal for the compound was found (non-detect), one half of the value which would have been reported as being present (one fifth of the MDL) was used (one half of one fifth is one tenth). The final validated analytical results can be found in Appendix B.

4.1 Results for PCBs in Fish Tissue

Aroclor 1248 was the only PCB detected in fish tissue and was detected at all locations except Location 6 (Table 2). Concentrations of Aroclor 1248 ranged from below the method detection limit (MDL) for all fish at Location 6 to 9.0 mg/kg in green sunfish at Location 1. Concentrations of Aroclor 1248 decreased from upstream to downstream locations. Fish from Location 1 had the highest concentrations of Aroclor 1248, ranging from 5.9 to 9.0 mg/kg.

Means PCB concentrations were calculated for each location and for each species at every location (Table 3). The mean location concentrations also decreased from upstream to downstream locations (Figure 3). The mean Aroclor 1248 concentrations ranged from 0.01mg/kg (Location 6) to 6.93 (Location 1).

4.2 Results for Co-planar PCB Congeners

Fish tissue collected from Richland Creek and Conard's Branch was analyzed for co-planar PCB congeners. Congener analysis was not performed on the data collected in 1998 and, therefore, no comparisons between sampling events can be made. PCB congener concentrations followed the same trend as the Aroclor 1248 concentrations. Analytical results are summarized in Tables 4a,4b,4c, 4d, & 4e.

4.3 Results for Lipids in Fish Tissue

Due to a technical error, total lipids were analyzed from fish tissue samples stored in a -20ø Celsius freezer approximately 12 weeks after homogenization. Given this lapse in time, (i.e. between homogenization and lipid analysis) total lipid results should be viewed with caution as lipid degradation may have occurred resulting in lower total lipid concentrations (Table 2). These lipid concentrations were also used to calculate lipid normalized data. Lipid normalized data was calculated by dividing the PCB concentration into the percent lipid concentration and dividing by 100. As such, lipid normalized PCB concentrations should be viewed with caution. In addition, lipid normalized data comparisons between locations could not be performed as some samples did not have enough leftover tissue homogenate to

analyze for lipids. 5.0 DISCUSSION A non-statistical comparison was done between mean PCB concentrations from the 2001 sampling event and mean PCB concentrations from the 1998 CBS sampling event (Table 3). Data for the 1998 CBS sampling event can be found in Appendix C. Means were calculated for each location. Data was only available for Locations 1, 2, and 3 from the 1998 sampling event and, therefore only these locations were compared to the 2001 data. For this comparison, it is assumed that Locations 1,2, and 4 from the 2001 sampling event are comparable to Locations 1,2, and 3 from the 1998 sampling event.

A graph was created to visually compare the data from 1998 and 2001 (Figure 4). Apparent differences in the data can be discerned from this graphical representation. For example, mean PCB concentrations from Location 1 appear to be greater in 1998 than in 2001. Mean concentrations of PCBs from Location 2 appear to be slightly greater in 2001 than 1998. Mean PCB concentrations from Location 3 appear to be greater in 1998 than mean PCB concentrations from Location 4 in 2001.

6.0 CONCLUSIONS

Concentrations of PCBs are still present within the Conards's Branch and Richland Creek watershed. Concentrations of PCBs are highest at the location closest to the landfill (Location 1). Using a non- statistical comparison, the concentrations of PCBs appear to decrease from upstream to downstream locations.

7.0 REFERENCES

McLaren/Hart-Chem Risk. 1998. "Neal's Landfill Stream Investigation Field Sampling Plan". Prepared for CBS Corporation. Pittsburgh, PA.

Warning! Eat no fish from Clear Creek, Pleasant Run, Salt or Richland Creeks.

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