

Concepts for and from the Superfund

RESEARCH DOSSIER

2020-2021

SITE



Site to be Seen has been supported by The Pew Center for Arts & Heritage.

The views expressed are those of the author(s) and do not necessarily reflect the views of The Pew Center for Arts & Heritage or The Pew Charitable Trusts.







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FACILITATING ORGANIZATION

RAIR is an art + industry nonprofit that stages interventions in the Philadelphia-area waste stream to creatively explore waste culture and promote dialogue about sustainability. Offering artists access to over 450 tons of trash per day through its flagship Residency Program, RAIR has been nested within Revolution Recovery's

3.5-acre construction and demolition waste recycling facility in the Tacony neighborhood of Philadelphia since 2010. In late 2016 Revolution Recovery purchased the adjacent 11-acre Superfund Site formerly called the Metal Bank. Pastoral in appearance, this parcel of land located on the Delaware River was once the site of a scrap metal and transformer salvage facility

PROJECT DESCRIPTION

In 2019, RAIR received funding from The Pew Center for Arts & Heritage in support of this project. Site to be Seen: Concepts for and from the Superfund, which is designed to frame the varied ecological, artistic, and social potentials of the Superfund Site adjacent to RAIR. This expository project invites artist Mierle Laderman Ukeles, as a Visioning Artist in Residence, to offer counsel to RAIR while it investigates the feasibility of an organizational transition onto the Site. The project also funds an initiative that invites a group of interdisciplinary artists, curators, and other practitioners to produce printed 'Site Responses.' Addressing concepts of remediation and sustainability inspired by the Metal Bank Superfund site at 7301 Milnor St. these newsprint Site Response broadsides will creatively explore our collective relationship to maintenance, preservation, and remediation of contaminated land.

This Research Dossier includes, but is not limited to: EPA land use documents, Superfund site regulations, maps, articles, photographs, and other archival materials that span historical, social, cultural, geographical, and environmental aspects of the Site. This document will serve to introduce aspects of the Superfund Site to Curatorial Advisors, Site Respondents, and other project participants, as well as creating a These commissioned Site Responses will public living document that begins to catalogue not only serve to make visible the complex histories of the Metal Bank, but will also imagine histories of the Site.

Research Dossier

where for years soils and groundwater were contaminated through the release of residual oils and heavy metals, rendering the land unusable. Since its EPA designation as a Superfund site in the early 1980s, the land has undergone extensive remediation.

While to date RAIR's programming has emphasized the reuse of recycled material, with Revolution Recovery's recent acquisition of the Metal Bank, RAIR is now poised to broaden its focus to encompass sustainable solutions more generally-championing not only the creative reuse of recycled materials, but also of remediated land.

its potential futures. As the project coincides with a major initiative by the non-profit Riverfront North, whose Delaware River Master Plan includes a public bike trail that will run alongside the Superfund site, Site to be Seen: Concepts for and from the Superfund will also introduce the importance, relevance, and timeliness of creative programming to a broad community of local stakeholders (institutions, organizations, businesses, and individuals).

RAIR recognizes that it is situated on Lenapehoking: the ancestral and unceded territories of the Lenni-Lenape people, who, as the first settlers of Philadelphia, occupied this land almost 10,000 years prior to Europeans. RAIR's location on 7333 Milnor Street, along the Delaware River, is just 10 miles north of Penn Treaty Park, where, as historical documents would have it, Lenape Chief Tamanend (of the Turtle Clan of the Unami sect of the Lenape peoples) and colonial founder William Penn negotiated a "peaceful co-existence" in 1683. This "peace" soon gave way to land theft and forceful removal.

RAIR, as an organization, is committed to fostering discussion about sustainability and responsibility around materials, labor, art, industry, and land. Through this project, RAIR has begun to advocate more directly for land remediation and land access. It is a hope that this project will facilitate further dialogue about issues of land management and stewardship, the violence of settler colonialism, erased histories on this site and beyond, and the possibility of restorative land practices (many of which originate in Indigenous knowledges) and remediation as it applies both to land and to history.

The authors of this Land Acknowledgement also acknowledge the complexity of Land Acknowledgement statements themselves: their limitations as well as their urgent necessity. As such, we offer this statement just as a place to begin.

SITE IMAGES

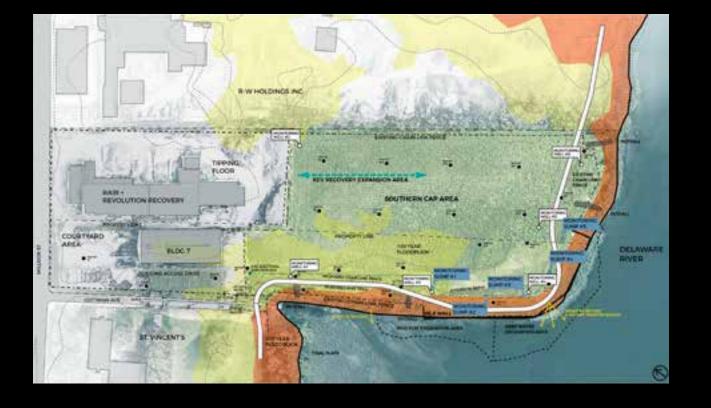
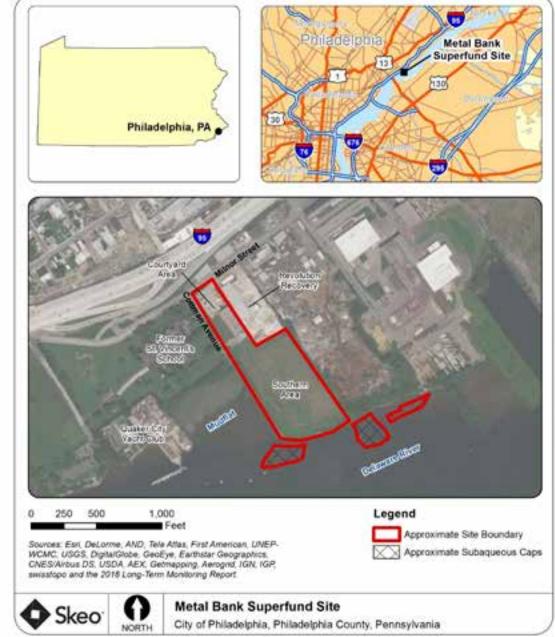


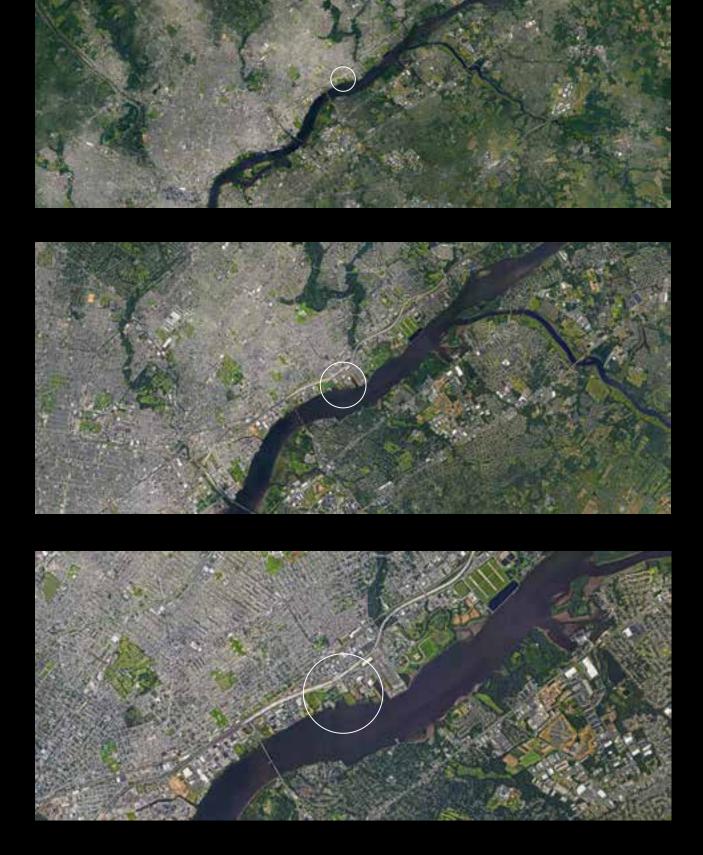
Figure 1: Vicinity Map



swisstopo and the 2016 Long-Term Monitoring Report.



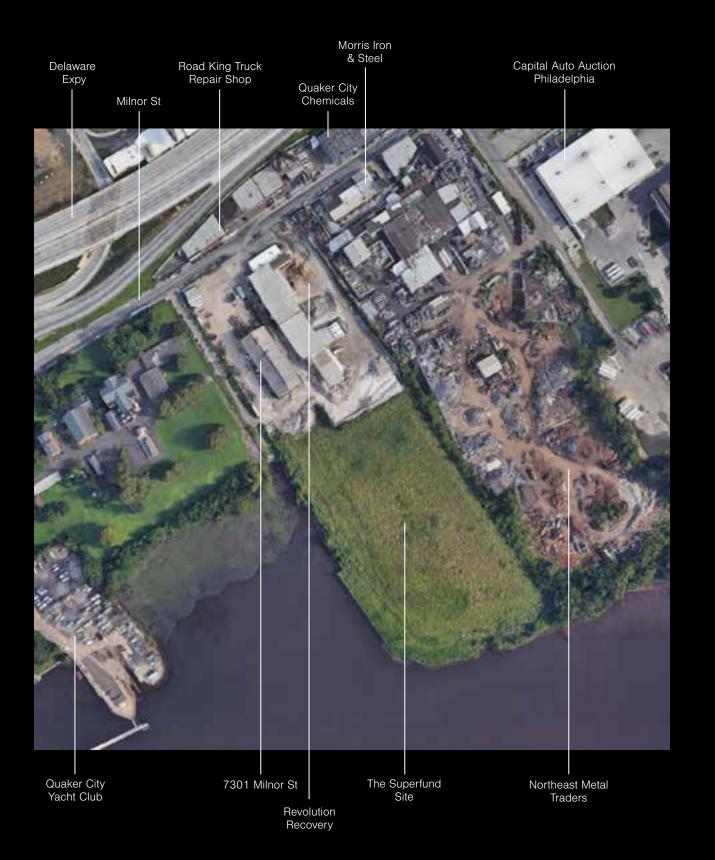
Disclaimer: This map and any boundary lines within the map are approximate and subject to change. The map is not a survey. The map is for informational purposes only regarding EPA's response actions at the Site. -5

































NATURAL HISTORY

Source

Historic Context Statement: Cluster 1: Frankford, Tacony, Wissinoming, Bridesburg; 2009; Works Cited #10

Eco Restoration Assessment Final Report; 2009; Works Cited #25

"The Secret Scourge of Climate Change? More Raw Sewage in Philadelphia's Waterways"; 2019; Works Cited #18

"The Delaware: The River That Made Philadelphia"; 2019; Works Cited #24

- Research Excerpt
- 01 "Wissinoming Creek previously ran through the area, but the creation of an extensive sewer system culverted the creek by 1902. From Frankford Avenue, which runs parallel to the Delaware River, the land slopes gently and evenly down to the river, in sharp contrast to the more topographically varied neighborhoods to the northwest."
- **02** "The gently sloping land and the winding Wissinoming made the area that would become Tacony an attractive place for early subsistence farming settlement and would eventually become an area for country seats for wealthy Philadelphians."
- **03** "In June 2009, the City of Philadelphia passed a bill that establishes a Delaware River Conservation District. The bill establishes special use rules for development along the North Delaware River, requiring a 50-foot shoreline buffer area dedicated to recreational trails, and parks and open space for recreational purposes."
- **04** "Some of the oldest parts of Philadelphia have a long-buried past that is posing a present danger expected to get even worse in the future: an aging sewage system designed to overflow during storms into local waterways, including the Delaware River and the Schuylkill. Decades ago, that system made sense. These so-called combined sewer overflows, or CSOs, might be ground zero for gauging the effects of climate change in Philadelphia. The antiquated system is dealing with more intense rainfalls as more heat and moisture in the air produce stronger, wetter storms. City officials say they are lessening the impact through 'green' programs that reduce runoff. Sewage that does get released is highly diluted, they stress."

05 "To the Leni-Lenape, the Delaware was known as Poutaxat, Mochijirickhickon, and Lenapewihittuck. In the summer of 1609, Henry Hudson sailed the Half Moon into its wide mouth at the bay, and more white men-including William Penn-arrived to name and claim the water. The Dutch called it South River. It was the Swedish River to the Swedes. In 1610, an English captain was blown off course and named the river in honor of Thomas West, 3rd Baron De La Warr and governor of Virginia, a man who may have never even seen it."

06 "Forenoon, crossing the Delaware, I noticed unusual numbers of swallows in flight, circling, darting, graceful beyond description, close to the water,' the poet Walt Whitman wrote in 1879. 'Thick, around the bows of the ferry-boat as she lay tied in her slip, they flew; and as we went out I watch'd beyond the pier-heads, and across the broad stream, their swift-winding loop-ribands of motion, down close to it, cutting and intersecting.' Whitman came to know the river well, traveling between Camden and Philadelphia on that ferryboat."

"The river is cleaner than it has been in centuries thanks to the environmental 07 movement, better federal regulations, and growing public access to and appreciation for the Delaware. Long cut off from the river by concrete and highways, people are returning, some to do yoga on reclaimed piers, others to sip craft beers on riverside hammocks. The river still belongs to us, yes, but we now understand what that responsibility means, and ideally, it's not too late to give back as much as we've taken. The river can never return to what it once was, pristine, because we are here alongside it for the foreseeable future."

"To get the fish to return, the Clean Water Act ushered in an age of biological 08 science to treat wastewater-using microbes and oxygen to eliminate the bacteria in a controlled setting."

"Once the microbes eat the pollutants, any remaining solids settle out and are **09** removed. Instead of going into lagoons, the solids are turned into fertilizer, or used to generate methane, which is used as a power source. After this stage, the remaining liquid waste looks like clear water."

"Add in some chlorine, and the sewage water that typically goes into the Delaware 10 River today is a lot cleaner than the Clean Water Act requires."

"Sewage breeds bacteria in the water, and that bacteria effectively gobbles up **11** all the oxygen, leaving little to none for the fish and other aguatic life in the river."

"Today, the river is far cleaner than when it was heavily polluted from at least 12 the late 1800s through the mid-1900s, when it was choked with dead zones of aquatic life. Now, fish such as American shad and striped bass have made a comeback. Bald eagles, once nearly extinct, now depend on its bounty."

"The river also provides drinking water for more than 13 million people, including 13 those in New York City and Philadelphia."

Images

Shad fishermen loading their half-mile of net (value \$1500) for another haul.

Sewer under construction in Rock Run (a tributary to Tacony Creek) along the line of present-day Ashdale Street.

A FEMA flood map rendering showing areas that are a flood hazard.

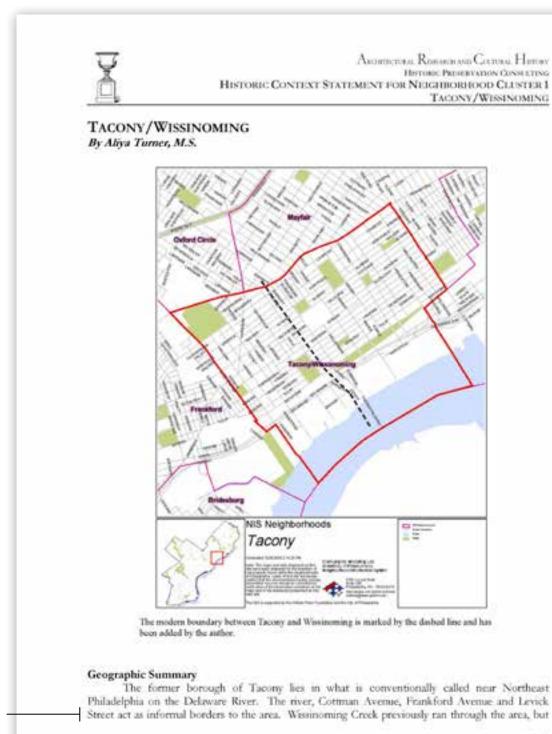
- 14
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"How the Clean Water Act Fixed the Delaware River's Pollution Problem"; 2019; Works Cited #5

- "The Death of the Delware River"; 2019; Works Cited #7
- "Delaware River Named River of the Year by National Environmental Organization"; 2020; Work Cited #17





25

<u>p. 25</u> Historic Context Statement; Cluster 1: Frankford, Tacony, Wissinoming, Bridesburg; 2009; Works Cited #10



the creation of an extensive sewer system culverted the creek by 1902.110 From Frankford Avenue, which runs parallel to the Delaware River, the land slopes gently and evenly down to the river, in sharp contrast to the more topographically varied neighborhoods to the northwest.

Tacony is roughly rectangular in shape, with the slightly longer edge of Cottman Avenue and Levick Street running perpendicular to the Delaware River. Two distinct zones exist within Tacony. The first is an industrial section, starting at the river and ending at the combined boundary of State Road, the railroad, and Interstate 95. Disston Park runs for eight blocks between the railroad and Keystone Street from Levick Street to Princeton Avenue. Continuing inland from the park, Tacony becomes almost entirely residential, with commercial corridors along Torresdale Avenue and Frankford Avenue. Tacony has a wide variety of residential buildings, including one- and two-story rowhouses, twins, and single family dwellings. The neighborhood is also peppered with pocket parks and churches.

Pre-Industrial Tacony (c. 1700 to c. 1870)

Transportation, manufacturing, and a reformist industrial patriarch characterize the history of the neighborhood of Tacony. Changes in transportation continually reshaped Tacony, from the arrival of the first railroad in the mid-1800s to the trolley lines at the beginning of the 1900s and the Tacony-Palmyra Bridge a few decades later. Tacony might have become just another industrial town if not for the direction of Henry Disston (1819-1878), whose paternalistic views shaped the physical and social landscape of the area. Other manufacturers poured into town shortly after Disston set up his saw works in 1871, diluting Disston's control. The interplay of manufacturing - both paternalistic and capitalistic - and transportation molded Tacony from rural farmland into a diverse residential and industrial neighborhood.

The gently sloping land and the winding Wissinoming made the area that would become Tacony an attractive place for early subsistence farming settlement and would eventually become an area for country seats for wealthy Philadelphians. Records for the earliest period are scarce, but by 1679 Tacony was described as a "village of Swedes and Finns."111 Three years later, the Englishman Thomas Holmes arrived in the area on official business of surveying the land for patent by William Penn. At the time, "several purchasers [were] already seated and placed" and the survey served to formalize boundaries in the area. 112 In 1683, William Penn gave authorization to Henry Waldy to set up the first post office in the Philadelphia area in Tacony. Penn also authorized Waldy to supply horses to travelers destined for New Castle (Delaware) or "the falls" (of the Delaware River, or Trenton), suggesting that Tacony was a stopping point on the main route from Philadelphia

p. 26 Historic Context Statement; Cluster 1: Frankford, Tacony, Wissinoming, Bridesburg; 2009; Works Cited #10

01

ARCHITECTURAL RESEARCH AND CULTURAL HISTORY HISTORIC PRESERVATION CONSULTING HISTORIC CONTEXT STATEMENT FOR NEIGHBORHOOD CLUSTER 1 TACONY/WISSINOMING

were at first shared by Europeans. There does not appear to be any literature that indicates that the village of Tacony

112 John Reed, Explanation of the Map of the Gity of Philadelphia (Philadelphia: Charles L. Warner, 1870), 14.

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¹¹⁸ Adam Levine, "Maps I," at Philly H/O, http://www.phillyh2o.org/maps.htm (accessed February 10, 2009). 111 Jasper Danckaerts, Jaarnal of Jasper Danokaerts, 1679-1680 (New York: C. Scribner's Sons, 1913), 100. It should be noted that in early settlement villages, existing Lenni Lenape villages in Philadelphia and its immediate surroundings was a native encampment, but the name Tacony, like Wissinoming, are both from the Lenape. See John L. Cotter, Daniel G. Roberts, and Michael Parrington, The Burried Past: An Archaeological History of Philadelphia (Philadelphia University of Pennsylvania Press, 1993), 29.

Section 2-City of Philadelphia Perspective

PEC has integrated this CZM grant restoration work with City of Philadelphia initiatives and programs. PEC has tracked and promoted City of Philadelphia legislative efforts to create a greenway-zoning overlay. PEC has also worked closely with Philadelphia Water Department efforts to identify restoration opportunities within the City. More recently, we have explored opportunities to match restoration projects with wetland mitigation requirements, such as those associated with proposed Philadelphia International Airport expansions. Summaries of the abovenoted initiatives are as follows:

Greenway Zoning Overlay: In June 2009, the City of Philadelphia passed a bill that establishes a Delaware River Conservation District. The bill establishes special use rules for development along the North Delaware River, requiring a 50-foot shoreline buffer area dedicated to recreational trails, and parks and open space for recreational purposes. The buffer is defined as 50 feet west (inland) either from the designated bulkhead line, or in the case of erosion behind the bulkhead, the top of the bank.

This conservation district provides regulatory control over land development activities along the North Delaware River. The conservation district promotes both the development of the greenway trail and the establishment of park and open space areas. PEC views this conservation district as an opportunity to promote ecological restoration activities that will attract fish and wildlife species and associated recreational uses such as fishing, birding, and environmental education.

Philadelphia Water Department: The Philadelphia Water Department (PWD) is an active participant in this effort to identify ecological restoration opportunities along the North Delaware River. PWD has undertaken its own initiative to identify restoration sites as documented in a 2007 Upper Delaware Estuary Wetland Creation and Enhancement project report (excerpts from this PWD report are included in the following paragraphs).

The goals of PWD's project include (1) wetland creation/enhancement, (2) increased wildlife habitat, (3) community accessibility to the waterfront and (4) water quality improvement. The PWD report identifies the following key issues related to ecological restoration and the importance of wetlands:

- · The Delaware River has designated uses by warm water and migratory fish.
- The upper Delaware Estuary remains threatened by the heavy development and industrialization that surrounds it.
- · Only small remnants of once continuous freshwater tidal wetlands remain on the Pennsylvania side of the river (Kreeger 2005).
- · Wetlands, including small wetlands, play an important role in regional biodiversity. The simulated loss of small wetlands results in a significant increase in the regional extinction rate of small mammals, small birds and turtles (Gibbs 1993).
- In the Delaware River, the decline of available spawning habitat (e.g. wetlands) has been historically linked to changes in the abundance of anadromous fish species (CCMP 1996).
- Wetland creation is necessary to increase the benefits provided by existing wetlands. While extensive wetland restorations have occurred in the Delaware estuary over the past decade, an overwhelming majority of these projects have occurred in the middle or lower Delaware estuary (Kreeger 1995). Wetland creation has been largely absent in the upper Delaware estuary.

Paul Racette | Pennsylvania Environmental Council | e. pracette@pecpa.org | www.pecpa.org | Page 8 of 34

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and the Schuylkill. Decades ago, that system made sense.

E POWERED BY CONCERN

stronger, wetter storms. City officials say they are lessening the impact through "green" programs that reduce runoff. Sewage that does get released is highly diluted, they stress.



Prankford Creak at Anamingo Avenue, Philadelphie, captured during an overflow, Sept. 1, 2016. Drie 5/4dorff

The problem is not unique to Philadelphia but is exacerbated in urban areas because so much of the surface is hard. Stormwater flows quickly over sidewalks, parking lots, streets, and roofs, and directly into storm drains. Almost threequarters of Philadelphia is impervious surface. In more suburban or rural settings, much more water gets absorbed by the ground instead of flowing straight into a waterway, carrying in pollutants.

https://www.inguirer.com/science/climate/delaware-schuytkill-river-combined-sewer-stormwater-sewage-climate-change-20190913... ID 2020 The Philadelphia Inquirer, LLC

p. 2–3

"The Secret Scourge of Climate Change? More Raw Sewage in Philadelphia's Waterways"; 2019; Works Cited #18



JOHN DUCHNESKIE / Staff Artist



Over the next year, inquirer journalists will be exploring the river and the watershed that feeds it from many angles - water quality, environmental challenges, climate change, recreation, history, and how it all converges to define our region and inform life here. Through words, images, videos, and interactive graphics, we will take readers from the place in the Catskills, where one can stand with a foot on each shore of the Delaware; to the Water Gap, where the river is arguably its most picturesque; through muddy, secret fishing holes and Philadelphia's urban heart, to where the river melds with the bay. "From the Source: Stories of the Delaware River," is produced with support from the National Geographic Society, the Lenfest Institute

Fishermon try their luck on the Delawate near the New Hope-Lumbertville Bridge. DAVID MAIALETTI / Staff Photographer

To the Leni-Lenape, the Delaware was known as Poutaxat, Mochijirickhickon, and Lenapewihittuck. In the summer of 1609, Henry Hudson sailed the Half Moon into its wide mouth at the bay, and more white men - including William Penn - arrived to name and claim the water. The Dutch called it South River. It was the Swedish River to the Swedes. In 1610, an English captain was blown off course and named the river in honor of Thomas West, 3rd Baron De La Warr and governor of Virginia, a man who may have never even seen it.



Walt Whitman in 1869.

"Forenoon, crossing the Delaware, I noticed darting, graceful beyond description, close to 1879. "Thick, around the bows of the ferry-bo we went out I watch'd beyond the pier-heads winding loop-ribands of motion, down close to know the river well, traveling between Can

The watershed is a source of income, drinking people. Yet in Philadelphia, where the Delaw

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Natural History

Library of Congress

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boat as she lay tied in her slip, they flew; and as	06
is, and across the broad stream, their swift-	00
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anden and Philadelphia on that ferryboat.	
ing water, and recreation for tens of millions of	
ware River runs deep and wide, it hasn't	

"The Delaware: The River That Made Philadelphia"; 2019; Works Cited #24

father, grandfather, and great-grandfather did.

Lewis Fishery in Lambertville, N.J. DAVID MAIALETTI / Stall Photographer

On a recent spring morning, shad fishermen were anchored beneath the New Hope-

water, and I can almost see the bottom and I'll see a flash of silver. That's a shad."

Lambertville Bridge, jigging for the silvery fish as they swam upstream to spawn. On the

Lambertville side, Steve Meserve readied a wide, sweeping net to haul them in, just as his

"The water is so much clearer today," he said. "Sometimes I'll be out there in 6 to 8 feet of

Volunteers pull a boat up the Delaware River as they prepare to net fish for shad at the

The river is cleaner than it has been in centuries thanks to the environmental movement.

yoga on reclaimed piers, others to sip craft beers on riverside hammocks. The river still belongs to us, yes, but we now understand what that responsibility means, and ideally, it's not too late to give back as much as we've taken. The river can never return to what it

once was, pristine, because we are here alongside it for the foreseeable future.

better federal regulations, and growing public access to and appreciation for the Delaware. Long cut off from the river by concrete and highways, people are returning, some to do



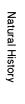
Water commissioner Deb McCarty points t today to monitor flow and other operations To get the fish to return, the Clean Water Act u wastewater - using microbes and oxygen to eli

Once the microbes eat the pollutants, any remain going into lagoons, the solids are turned into fer used as a power source. After this stage, the ren

Add in some chlorine, and the sewage water that a lot cleaner than the Clean Water Act requires.

<u>p.11</u> "How the Clean Water Act Fixed the Delaware River's Pollution Problem"; 2019; Works Cited #5

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to the modern computerized system used at the plant. (Kimberly Paynter/WHYY)		Natural History
ushered in an age of biological science to treat	- 08	
eliminate the bacteria in a controlled setting.	- 08	
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hat typically goes into the Delaware River today is	- 10	



11



A photo from 1966 showing hot, smelly liquid pouring into the Delaware River from a nearby factory. (Temple Archives)

Sewage breeds bacteria in the water, and that bacteria effectively gobbles up all the oxygen, leaving little to none for the fish and other aquatic life in the river.

"With more and more and more people, over time it became an increasing problem," Kreeger said, "until something had to be done because everything was dying because of lack of oxygen."

By 1964, about a million pounds of waste was going into the river every day, and more than 60 percent of that was coming from sewage treatment plants, with cities like Philadelphia, Camden and Wilmington contributing the most. In 1964, the bacteria count at Philadelphia's water intake at Torresdale was 39,300 per 100 mL

But it wasn't just sewage. There was also blood from slaughterhouses, oil from refineries like Gulf Oil and Sun Oil, and toxic waste from chemical companies like Rohm and Haas and Dupont. Acidic industrial waste lowered the pH of the river for several miles above and below the Pa -Del, state line.

Almost none of the waste entering the river was disinfected, so it contained high levels of bacteria --- again, eating up all of the oxygen.

<u>p. 5</u> "The Death of the Delware River": 2019: Works Cited #7

Delaware River gets environmental honor

River in Pennsylvania.

From Trenton to the Del-

aware Bay, the river is tid-

al and is known as the Del-

river's freshwater mixes

with saltwater from the

Today, the river is far

cleaner than when it was

heavily polluted from at least the late 1800s

through the mid-1900s,

dead zenes of aquatic life.

Now, fish such as Ameri-

can shad, striped bass, and Atlantic sturgeon

have made a comeback.

Bald eagles, once nearly

extinct, now depend on its

The river also provides

drinking water for more

than 13 million people, in-cluding those in New York

bounty.

when it was choked with

American Rivers designated it as the river of the year for pollution recovery.

> By Frank Kummer APP WRITER

American Rivers, an enironmental advocacy group, has named the Delware as its river of the ear for 2020, hailing it as "national success story" or its dramatic revitalizaion from the decades it pent polluted by industrid and sewage waste. "The Delaware shows

how a healthy river can be an engine for thriving commities and strong local conomies," William Robert Irvin, president and CEO of American Rivers, said in a news release. At 330 miles long, the Delaware is the largest unfarmmed river in the Unit-

City and Philadelphia. The river's improvement ed States east of the Misis credited to a number of issippi. It runs from Haninitiatives, including the ock, N.Y., to the Delaware federal Clean Water Act, lay, from which it eventuthe policies of four states illy empties into the Atlan-(Pennsylvania, New Jertic Ocean. Along the way, it is fed by 2,000 tributarsey, New York, and Delaware), regulation by the GrankKummer

of 2020. Bummer@inquirer.com \$215-854-2129

and climate change.

cities nationwide."

ned.



the Delaware at Palmyra Cove Nature Park. Towskuske/ taut inc

"Delaware River Named River of the Year by National Environmental Organization"; 2020; Work Cited #17



ies, the largest being the Delaware River Bas Schuylkill and the Lehigh Commission, and, more a Commission, and, more re cently, the Delaware Rive Watershed Initiative, a co ordinated effort of doze of environmental group aware Estuary, where the and research organiz tions. The Delaware h the most extensive Natio al Wild and Scenic Riv protection of arry wate

shed in the country. "Communities along t Delaware River are set ting a national exampl for river stewardship," Ir in said. "We must us these lessons to ensu healthy rivers, equitable access, and clean water in Irvin added that cont

"commitment fro leaders and local comm nities is critical to address growing challenges such as aging water infrast ture, urban developm American Rivers also sed a list of America

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al and is known as the Delaware Estuary, where the river's freshwater mixes with saltwater from the ocean.

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The river also provides drinking water for more than 13 million people, including those in New York City and Philadelphia.

The river's improvement itis credited to a number of isinitiatives, including the nfederal Clean Water Act. re the policies of four states u-(Pennsylvania, New JernSITE TO BE SEEN / Research Dos

Natural History

14

B-2032 -1000 Shad Fishermen Loading Their Half-Mile of Net (Value \$1500) For Another Haul, Delaware River, Philadelphia, Copyright 1905, by E. W. Ketter,

Shad fishermen loading their half-mile of net (value \$1500) for another haul, Delaware River, Philadelphia, PA; Library of Congress, 1905, photo by E.W. Kelley.



15

Sewer under construction in Rock Run (a tributary to Tacony Creek) along the line of present-day Ashdale Street, City Archives of Philadelphia, 1922.

Natural History



A FEMA flood map rendering showing areas that are a flood hazard.

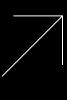
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Natural History



AREA DEVELOPMENT

Source

Research Excerpt

History of St. Vincent's Orphan Asylum of Tacony, Philadelphia: A memoir of its Diamond Jubilee; 1934; Works Cited #26

01 "The present Milnor Street bore the name Orphan Street; Wissinoming Street was known as Liberty Street and State Road as Aramingo Avenue."

02 "Each buyer enjoys, also, the exceptional advantage that the terms do not burden him with any other trouble than a monthly payment of \$2-\$4. You can find there also the most beautiful and most select river-cottage lots, that means building lots for pleasure-gardens and summer homes along the Delaware, each 50 feet wide and 200 feet long. Here one can finally create a second paradise on earth. Far from us be all cheating. Every gain that comes from the sale of these lots, will be used for the erection of an Orphan Asylum, School, etc. Therefore, the buyers have nothing to do with land-speculators, doing rather a good work out of which a great benefit will result for them and their families. The situation of the land is most beautiful, and very healthful. It offers a splendid view of the surrounding territory and the Delaware. This new settlement, with which every advantage is connected, is accessible at each hour of the day, by Railroad and by Steamboat, a depot and wharf being nearby. There is also a plankroad which will run through the streets of the town."

- **03** "Ye workingmen and citizens, go to Tacony on May 13, and the cramps caused by too much sitting will leave you forever. Ye all, who pay high rents in a silly corner of the city and breathe pestiferous air, soon losing dollars and life, come to Tacony!"
- 04 "Ye doctors, who have become the second nature of the present generation, but put the people under the earth many years too early with our sweet and sour quack-pills, go to Tacony! And if you are men of learning, you will soon discover where the salt- and sulphur-fountains are to be found, from which alone people can expect a natural restoration to health."
- 05 "Ye innkeepers, who have failed, go to Tacony likewise! Start gardening, and work that you won't get too fat. The land is very good, and the fruit of the smallest melon is much larger than that of the thickest and highest oak-tree. You need not wrap up sausages for the afternoon; Lagerbeer waits for you with a ready table. And finally, honest people only are invited, for then Tacony will always be free of lawyers. Do not forget May 13!"

"The earliest records relating to land at what is now Tacony show a patent dated **06** March 26, 1676, from Sir Edmund Andros, Swedish governor, to Michael Fredericks of 300 acres between 'Pinnepakta' (now Pennypack) to 'Towacawoninck,' an Indian name meaning 'uninhabited land' or 'wilderness.'"

"A major shift in Tacony's center occurred between 1903 and 1930. In August 07 1903, the No. 58 trolley was completed; it ran from Cottman Avenue to Philadelphia's Frankford section via Torresdale Avenue. Tacony laborers were now less dependent on the Disston Plant for work, and other populations entered Tacony and bolstered the labor force, increasing the community's ethnic diversity. It was during this time that Tacony's Italian population emerged."

"One of the earliest Tacony settlers was Lynford Lardner, a relative of William Penn 08 and a landholder along the Delaware River near what is now Levick Street. Known as 'Old Tacony Place,' this tract featured boating docks and a stone mansion, which stood as late as 1900."

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"Delaney and Company was a glue-manufacturing facility located on the Delaware 10 River near what is now Cottman Avenue; it was known as Township Line Road in 1907 at the time of this photograph. The plant, along with the nearby Martin Lamp-Black Works, offered unskilled labor opportunities, which allowed many Italian immigrants who settled west of the factories a chance at employment during the following decade."

"[Pictured above], the Tacony ferry, along with the Palmyra ferry, provided motorists 11 and pedestrians a means of access across a 4,800-foot span of the Delaware River. The ferries operated from 6:00 am until midnight, with trips every 15 minutes. In 1922, the cost was 5¢ for a passenger trip and 45¢ for cars or trucks. In 1925, the ferries carried over 400,000 cars and trucks, over 115,000 pedestrians, and over 525,000 passengers."

"A big reason why Tacony led the way in technological revolution was Frank 12 Shuman, who came to Tacony in 1891 to assist his Uncle Francis with the task of creating the William Penn Statue. By that time, Shuman had owned the patent for wire glass which, at the time, was a critical invention. He was a pioneer in solar energy work [and resided in this building (seen in the 1980s) at Disston and Ditman Streets.]"

"Frank Shuman started investigating the potential for solar energy c. 1906. He 13 studied three previous models, improving previous designs by reflecting solar rays onto square boxes filled with ether, which has a lower boiling point than water. As a result, Shuman could power a small toy steam engine."

Images of America: Tacony; 2004; Works Cited #14 Historic Context

Wissinoming, Bridesburg; 2009;

Statement: Cluster

Works Cited #10

1: Frankford, Tacony,

- 14 "In the 1600's, present-day Tacony, or 'Towacawoninck,' was inhabited primarily by what had been generations of the Lenni-Lenape tribe of Native Americans. Swedish and Finnish settlers had begun to populate this wooded area along the waterfront before the arrival of William Penn. In 1683, William Penn gave orders to Henry Waldy of 'Tekonay' to establish the first post office, shortening the area's name and directing Waldy 'to supply passengers with horses from Philadelphia to New Castleor to the Falls.' This post office, located on 'tacony Hill,' northwest of the railroad, existed until 1753, when delivery by penny post began."
- **15** "In 1871, seeking to escape the unhealthy conditions of his Front Street and Laurel Street factory, Henry Disston, owner of the Disston Saw Works, was attracted to Tacony for its natural setting, its transportation sources with railroad and wharf already in place, and the fact that the undeveloped area would facilitate profitable building lots for workers."
- 16 "The Disston Company, Dodge Steel, and Gillinder Glass Works are but a sampling of Tacony's influence on the modern world."
- 17 "... a portion of the city that was accessed mainly by boat and a single roadway in the first century of Philadelphia's settlement."
- 18 "Changes in transportation continually reshaped Tacony, from the arrival of the first railroad in the mid-1800s to the trolley lines at the beginning of the 1900s and the Tacony-Palmyra Bridge a few decades later."
- **19** "The interplay of manufacturing—both paternalistic and capitalistic—and transportation molded Tacony from rural farmland into a diverse residential and industrial neighborhood."
- 20 "Tacony might have become just another industrial town if not for the direction of Henry Disston (1819-1878), whose paternalistic views shaped the physical and social landscape of the area."
- 21 "In 1683, William Penn gave authorization to Henry Waldy to set up the first post office in the Philadelphia area in Tacony. Penn also authorized Waldy to supply horses to travelers destined for New Castle (Delaware) or "the falls" (of the Delaware River, or Trenton), suggesting that Tacony was a stopping point on the main route from Philadelphia north."
- **22** "1832 marks the beginning of the story that set Tacony on its course to becoming a remarkably significant company town. In that year the Pennsylvania Legislature passed an act to incorporate the Philadelphia and Trenton Railroad Company, effectively connecting Philadelphia directly to New York City. Residents of Philadelphia reacted negatively to this announcement, and opposed the idea of a railroad terminus near Market and Front Streets. Accounts from 1840 tell of angry mobs harassing rail workers, tearing up tracks as they were laid down, arson, and the ensuing riots preventing fire fighters from extinguishing the blaze so that the building burnt to the ground. The protesters were so vehement in their objections

that plans had to be abandoned to bring the railroad all the way into town. In 1846, Tacony became the terminus for the railroad and passengers had to take a ferry to complete their voyage into Philadelphia. For all the intense protestation, by 1849 the Philadelphia and Trenton Railroad ran all the way into Philadelphia."

"The area remained a small hamlet of farms and country seats and summer 23 homes well into the 1800s."

"Further evidence of Tacony's early life as a place of retreat is evidenced by the 24 formation of the Tacony Cottage Association. Formed in the mid-1800s to support building St. Vincent's Orphan Asylum, the association bought up 49 acres of farmland in Tacony and used half for land for the asylum and sold the other half as speculative lots for summer cottages."

"An 1862 map shows that Tacony grew only slightly in thirteen years, retaining 25 its pastoral setting."

"In 1855, the first member of the Disston family arrived in Tacony, not for work, 26 but for recreation. Thomas Disston bought land for a summer house from the Tacony Cottage Association and often entertained his family at his country seat. He was not alone-many wealthy Philadelphians used the city's outlying areas, including Tacony, as areas to escape from Philadelphia proper. It was not until nearly twenty years later when Thomas's brother Henry purchased land in Tacony for entirely different reasons, the pursuit of industry and the creation of an ideal company town."

"This [company and community of workers] is what I live for. We all ought to live 27 and make each other happy. God knows the greatest desire of my life is to see all that I am connected with happy. And I believe to this day that there is not a happier or more contented family in the world. I say family because I consider you and myself of one and the same family. There has (sic) never been any wants that I could afford to alleviate but that I have endeavored to do so as I would my nearest kin... The object of men and Boss should be mutual, the Boss to give all he can when times will permit, and the men under a close competition to be willing to help meet the market... Whatever money I make is spent in improvements to facilitate us in putting goods into the market at such prices that we will have work as long as any house."

Images

2018 photograph of some remaining Disston Saw Works factory buildings.

Etching from History of Philadelphia. 1609–1884.

Frank Schuman and his 'Sun-boiler,' 1907.

Facade of St. Vincent's Orphan Asylum.

- 28 29 30

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Historic American Buildings Survey; Works Cited #15

Henry Disston speaking on the relationship between him and his workers Area Development

- **32** Map illustrating the boundaries of the land claimed during the 1737 Walking Purchase.
- **33** Etching depicting Tacony waterfront and the Elm Tree Hotel in the early nineteenth century.
- 34 Aerial photograph of Disston Saw Works factory buildings, 1939.

containing thirty-eight acres should be bought near Tacony at a cost averaging between sixteen and seventeen thousand dollars. Of these, twenty acres should be laid out in building lots. "By this speculation the eighteen remaining acres were to cost nothing to the Society and a profit of several thousand dollars made besides".

The land was acquired on October 3, 1855. According to the deeds "22 acres and 30 perches of fast land, 9 acres, 3 roods and 24 perches of the flats" were acquired from Richard Wigfall at a cost of \$8,700.00. Furthermore "17 acres of fast land and about six acres and 72 perches of the flats" were bought from George Knowles for \$6,200.00. An acre of fast land cost \$137.50, the mudflats being free. In January, 1856, an additional 10 acres adjoining the mentioned 39, were purchased from Wm. H. Gatzmer at the rate of \$450.00 per acre. The total cost for the 40 acres was \$10,400.00. The buyers were Bernhard Huelsemann, the soul of the entire undertaking, John Knoll and Francis Bierbreuer. The acquired property of the Association comprised all the land between the Pennsylvania Railroad (at that time the New York Trenton R. R.) on the west and the Delaware River on the east; Cottman Street (then Township-line Road) formed the northern boundary and Princeton Avenue (originally Monroe Street) the southern. The present Milnor Street bore the name Orphan Street: Wissinoming Street was known as Liberty Street and State Road as Aramingo Avenue. In July, 1930, St. Vincent's Street was changed to Wellington Street. Union and Friendship Streets retained their old names.

For the purpose of re-selling, the Tacony Cottage Association was established on November 1, 1855. It was in fact, merely a subcommittee of the Board of Managers, with its own cash and bookkeeping. On November 5, 1855, the society received the deed to the property from Mr. Wigfall for \$1.007.00 in cash and a mortgage. The next day the first public sale of lots took place. 81 lots were sold for \$11,723,00, "Everybody was highly pleased", we read in St. Peter's House Chronicle. On the following Monday, November 12, the second public sale was held. "Though it was raining all day, \$8,593.00 were realized". After the third auction on Thanksgiving Day, November 22, the total number of lots sold was 200 leaving 75 lots. The total sum cleared amounted to \$29,000.00. On May 13 and July 4, 1856 two more auctions were held. The one in May netted \$2,126.00 for 12 lots. Mr. Behlen was the auctioneer. This public sale is of special interest because of its long and unique advertisement in the "Philadelphia Democrat" of May 10, 1856. Not only on account of the many new facts it reveals, but mostly because of its humorous character, we give a full translation:

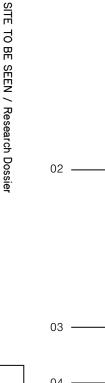
"A large piece of land of 48 acres, was recently bought at Tacony, 23rd Ward, with the intention of using part of it as the site for a German Orphan Asylno, The remainder was divided into building lots, 20 feet broad, and 120 to 200 feet long; these shall be auctioned on Tuesday morning, March 13th, at 11 o'clock, on the place itself to the highest hidder. The land is to be had for a cheap price ranging from not more than \$90 to \$170; and after a year or two, it will be worth more than \$300 to \$200.

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<u>p. 20</u>

History of St. Vincent's Orphan Asylum of Tacony, Philadelphia: A memoir of its Diamond Jubilee; 1934; Works Cited #26

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Area Development

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"Each buyer enjoys, also, the exceptional advantage that the terms do not burden him with any other trouble than a monthly payment of \$2 - \$4. You can find there also the most brautiful and most select river-cottage lots, that means building lots for pleasure-gardens and summer homes along the Delaware, each 50 feet wide and 200 feet long. Here one can finally create a second paradise on earth. Far from us be all cheating. Every gain that comes from the sale of these lots, will be used for the erection of an Orphan Asylum, School, etc. Therefore, the buyers have nothing to do with land-speculators, doing rather a good work out of which a great benefit will result for them and their families. The situation of the land is most beautiful, and very healthful. It offers a splendid view of the surrounding territory and the Delawate. This new settlement, with which every advantage is con-nected, is accessible at each hour of the day, by Railroad and by Steamboat, a depot and wharf being nearby. There is also a plankroad which will run through the streets of the town.

"PAY ATTENTION! The proprietor will be his own landlord, a very great advantage for the merchants and businessmen, whose health is worth thousands of dollars. They will do well to bring their whole family to this fine country town."

"Ye workingmen and citizens, go to Tacony on May 13, and the cramps caused by too much sitting will leave you forever. Ye all, who pay high rents in a silly corter of the city and breathe pestiferons air, soon losing dollars and life, come to Tacony?"

"Ye doctors, who have become the second nature of the present generation, but put the people under the earth many years too early with your sweet and sour quack-pills, go to Tacony? And if you are men of learning, you will soon discover where the salt and sulphur-fouritains are to be found, from which alone people can expect a natural restoration to health."

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This advertisement lets us clearly see the reasons for the strong participation. They were: cooperation in a great and necessary work of charity: quiet, healthful country life; good connections with the city; prospects of Church and School which would guarantee the education of the children; and finally the conviction that the lots bought could be resold in a short time with a considerable profit.

The buyers were, of course, chiefly members of the two German Parishes, since they were especially interested in the success of the undertaking. We see this from the fact that ninety-eight of the buyers of the first year, with the exception of nine, were Germans. This easily explains the old stock of German Catholic settlers in Tacony, which was later divided into "Irishtown" and "Dutchtown".

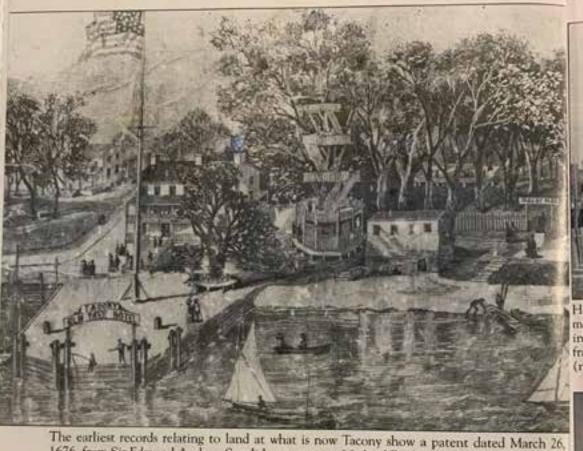
The settlement followed the plan laid out by a Mr. Saver (surveyor) of Frankford, who received \$55.00 for his services. He was ordered to lay out the land in six-cottage lots. A copy of the plan is still in possession of the Orphan Asylum (see page 18). The lots were as a rule 20 x 250 and sold at an average of \$120.00 each.

In the beginning of 1859, the value of the lots amounted to \$32,339. In addition to the property for the Orphanage, a number of

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<u>p. 21</u>

History of St. Vincent's Orphan Asylum of Tacony, Philadelphia: A memoir of its Diamond Jubilee; 1934; Works Cited #26

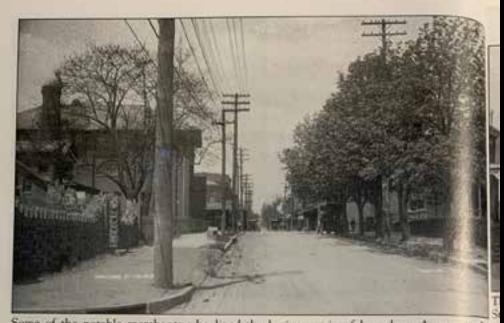


The earliest records relating to land at what is now Tacony show a patent dated March 26, 1676, from Sir Edmund Andros, Swedish governor, to Michael Fredericks of 300 acres between "Pinnepakta" (now Pennypack) to "Towacawoninck," an Indian name meaning "uninhabited land" or "wilderness." The Consolidation Act of 1854, which made Tacony part of the City of Philadelphia, had a positive impact on real estate in the area. William H. Gatzmer secured the charter that made Tacony depot, as it was known by that time, the terminus for trains to and from New York. The Tacony Cottage Association heavily publicized the area in its efforts to sell building lots for the construction of St. Vincent's School and Orphanage. The area caught the attention of Henry Disston, who eventually purchased 390 acres in Tacony. When Disston purchased his tract of land at Tacony, fishing and farming quickly gave way to manufacturing. This photograph depicts the Tacony waterfront in the pre-Disston era, showing why records of William Penn's deeds in the area included privileges "of hawking, fishing and fowling."

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Area Devel

Site Research 43



Some of the notable merchants who lined the business strip of Longshore Avenue at the beginning of the 20th century included Joseph M. Smith's Hardware Store, White and Durke I Shoe Store, J.H. Currier's Real Estate, Lister's Restaurant, Rubin Brothers' Department Store Smithwaite Papers and Periodicals, William Boardman's Hardware Store, Gottlieb Gotthardi J Bakery, and Emma L. Stern's Millinery Shop. This photograph was taken looking west along Longshore Avenue from Keystone Street, c. 1910.



A major shift in Tacony's center occurred between 1903 and 1930. In August 1903, the No 58 trolley was completed; it ran from Cottman Avenue to Philadelphia's Frankford section ve Torresdale Avenue. Tacony laborers were now less dependent on the Disston Plant for work and other populations entered Tacony and bolstered the labor force, increasing the community? ethnic diversity. It was during this time that Tacony's Italian population emerged.

p. 16 Images of America: Tacony; 2004; Works Cited #14

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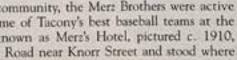
One of the earliest Tacony settlers was Lynford Lardner, a relative of William Penn and a landholder along the Delaware River near what is now Levick Street. Known as "Old Tacony Place," this tract featured boating docks and a stone mansion, which stood as late as 1900. This photograph shows Lardner's Point, the 20th-century name of the structure that coexisted with a city-operated waterworks and the electric light company for a time.



Leaders in the early days of the Tacony business community, the Merz Brothers were active in the business community and also sponsored some of Tacony's best baseball teams at the beginning of the 20th century. Their business, known as Merz's Hotel, pictured c. 1910, was located east of the Disston Estate along State Road near Knorr Street and stood where Interstate 95 is located today.

<u>p. 35</u> Images of America: Tacony; 2004; Works Cited #14

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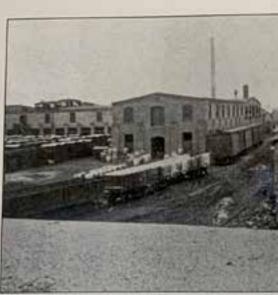


Another leading employer during Tacony's early development was the Erben-Harding Woolen Mill, whose mills largely manufactured knitwear and hosiery. The factory, built in 1892, was located along the waterfront, south of the Disston Saw Works. Later known as Erben, Search, and Company, it gave employment to females, as did Henry Disston and Sons.



Situated along State Road near Magee Avenue was the Tacony Iron and Metal Company. Formed in 1891 by Francis Schumann (uncle of the inventor), this company's claim to fame was having cast the William Penn Statue and decorative iron dome work that adorns the top of the Philadelphia City Hall. Teams of 16 horses hauled single pieces of the statue to the downtown location.





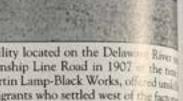
Delaney and Company was a glue-manufacturing facility located on the Delaw what is now Cottman Avenue; it was known as Township Line Road in 1907 this photograph. The plant, along with the nearby Martin Lamp-Black Works, offered unit labor opportunities, which allowed many Italian immigrants who settled west of the factor chance at employment during the following decade.



The Tacony Trust Fund Building and Loan Association was formed on December Shortly thereafter, this building was erected on the southeast corner of Longshore Area Tulip Street. The board of directors was a virtual Who's Who of Tacony civic and business as evidenced by the officers mentioned in the 40th Anniversary Booklet of 1913, and income Thomas W. South, Like H. C. Thomas W. South, John H. Currier, and Frederick Merz.

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<u>p. 60</u> Images of America: Tacony; 2004; Works Cited #14

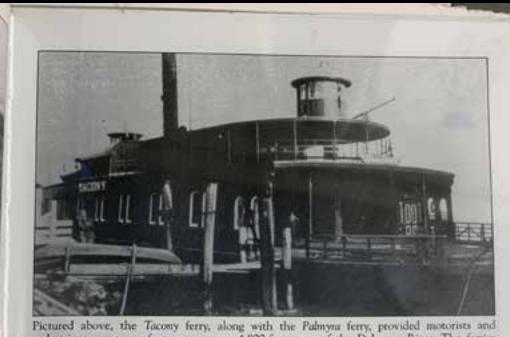


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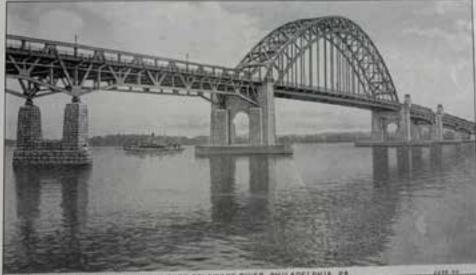
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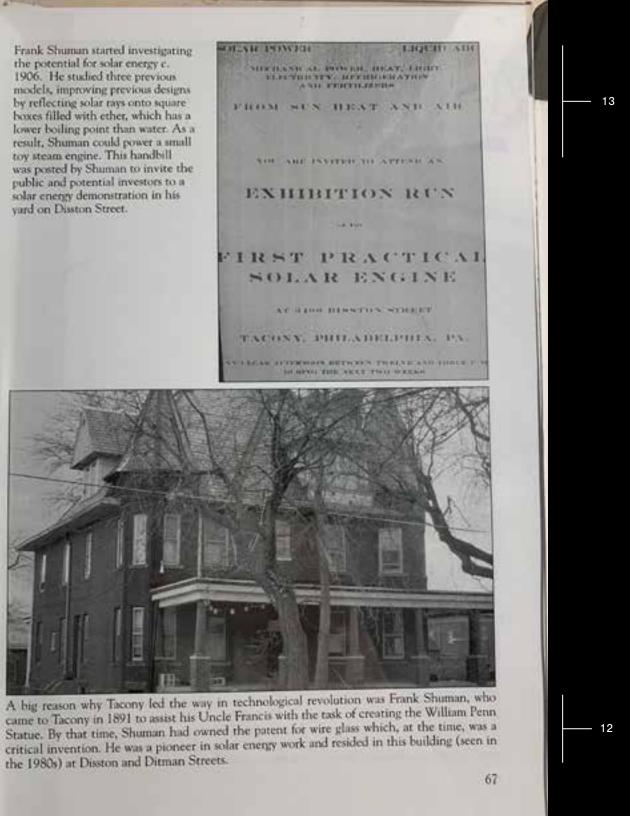
pedestrians a means of access across a 4,800-foot span of the Delaware River. The ferries operated from 6:00 a.m. until midnight, with trips every 15 minutes. In 1922, the cost was 5¢ for a passenger trip and 45¢ for cars or trucks. In 1925, the ferries carried over 400,000 cars and trucks, over 115,000 pedestrians, and over 525,000 bus passengers.



FIGA TACONY - PALWYRA BRIDGE OVER DELAWARE RIVER PHILADELPHIA, PA It was not until this structure was complete that the areas west and northwest of the Disston Estate became ripe for settlement. The community was no longer viewed as a suburb. Along with the Roosevelt Boulevard extension and creation of the Market-Frankford elevated line, the new bridge made access convenient from all points. The Tacony-Palmyra Bridge opened during a torrential rainstorm on August 14, 1929, with a gala ceremony, which included dignitaries and citizens.

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the potential for solar energy c. 1906. He studied three previous models, improving previous designs by reflecting solar rays onto square boxes filled with ether, which has a result, Shuman could power a small toy steam engine. This handbill was posted by Shuman to invite the public and potential investors to a solar energy demonstration in his yard on Disston Street.



the 1980s) at Disston and Ditman Streets.

<u>p. 67</u> Images of America: Tacony; 2004; Works Cited #14

<u>p. 65</u> Images of America: Tacony; 2004; Works Cited #14 Area Develop

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Area Development

INTRODUCTION

In the 1600s, present-day Tacony, or "Towacawoninck," was inhabited primarily by what had been generations of the Lenni-Lenape tribe of Native Americans. Swedish and Finnish settlers had begun to populate this wooded area along the waterfront before the arrival of William Penn. In 1683, William Penn gave orders to Henry Waldy of "Tekonay" to establish the first post office, shortening the area's name and directing Waldy "to supply passengers with horses from Philadelphia to New Castle or to the Falls." This post office, located on "Tacony Hill," northwest of the nailroad, existed until 1753, when delivery by penny post began.

In 1871, seeking to escape the unhealthy conditions of his Front Street and Laurel Street factory, Henry Disston, owner of the Disston Saw Works, was attracted to Tacony for its natural setting, its transportation sources with railroad and wharf already in place, and the fact that the undeveloped area would facilitate profitable building lots for workers. He reserved 40 acres of waterfront land to move his factory to Tacony and set aside monies for streets, sewers, and a school; he visualized an ideal working-class community where workers could own or rent their own homes in close proximity to the factory. Construction of homes began c. 1875, streets were laid out in a westerly direction from the railroad, and other industries became attracted to the waterfront. Homes, mostly twins, were built with attention to light, air, and green space, which contrasted the cramped surroundings of the area near his factory. Henry Disston built a park in the center of the community to provide a natural barrier between the industries and residences. He enacted deed restrictions that would preserve a high quality of life for those who lived in the community of Tacony. These restrictions read: "No tavem or building for the sale or manufacture of Beer or Liquors of any kind or description and no court house, carpentry, blacksmith, currier or machine shop, livery stables, slaughter houses, soap or glue boiling establishment or factory of any kind whatsoever where steam-power shall be used or occupied on the said lots, tracts or piece of land or any part thereof."

These restrictions are still in full force and effect today, having been upheld by the Supreme Court of Pennsylvania in 1938, when four clubs were forced to move outside the original Disston Estate. The restrictions were upheld again in 1999 when the Superior Court of Pennsylvania upheld a previous lower court ruling that a local delicatessen could not sell alcoholic beverages based on Henry Disston's deed restrictions.

Without question, Henry Disston is the single person most responsible for the community of Tacony. The object of this publication, beyond the fascinating images it presents, is to enlighten the community about the many other people, places, and organizations (in addition to the Disstons), who have helped to make the neighborhood such a special place. Although the chapters could be interchanged, with images included in one chapter that could well have been in another, the seven categories chosen were felt to best encapsulate by theme what makes Tacony unique.

Chapters one and two ("The Neighborhood" and "People and Places") present most of the interesting streetscapes, people, and places that have been a part of the Tacony community since its days after the arrival of Henry Disston. Chapter three features what was probably the most photographed event in Tacony's history. On March 27, 1911, a fierce cyclone tore through the Philadelphia area, doing the most extensive damage in modern memory, with most devastation occurring along the Schuylkill and Delaware Rivers. As Chapter three will document, Tacony was not spared by this powerful windstorm. Few people know that Tacony was a center for technological revolution between 1890 and 1920. Chapter four ("Progress") was designed to illustrate not only Tacony's progress but also the great impact Tacony residents.

and manufacturers had worldwide. The Disston Company, Dodge Steel, and Gillinder Glass Works are but a sampling of Tacony's influence on the modern world.

The balance of the book focuses on the facets of Tacony that have made the community such a fine place to live for the past 130 years. Chapter five ("Pride and Patriotism") focuses on not only on the tremendous patriotism displayed by Tacony residents during the war years but also the pride in community and culture, which is so important in keeping traditions alive and neighborhoods strong.

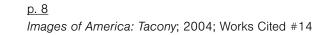
Chapters six and seven ("Religion and Education" and "Sports and Recreation") focus on the people and institutions responsible in so many ways for Tacony's stability. The fabric of Tacony has been woven with the strongest fibers, those created through the dedication, passion, and culture of many people and places that have called Tacony home.

For the first time in a single publication, this book is a visual documentation of the rich history the neighborhood of Tacony possesses. More than 200 images have been compiled by the Historical Society of Tacony; in presenting this visual time capsule, we hope to evoke special memories for Tacony residents and introduce those unfamiliar with Tacony to the historic neighborhood.

These concrete reminders of days gone by (and some not too far gone by) are but a sampling of reasons why Tacony is such a special and unique place to live, work, play, worship, and learn. Indeed, these images show how much Tacony has changed but, at the same time, they show how much has not changed.

While preparing this book, the authors were inspired and fascinated with the many vivid stories and fond recollections these images evoked in those who were kind enough to share them with us. As much as today's Tacony can be credited to some famous and semi-famous entrepreneurs and civic leaders, most credit is owed to the thousands of residents who, throughout the community's history, have helped Tacony stay true to its founder's vision of a well-balanced, proud, working-class community.

Many hours were spent by the authors collecting and analyzing these thought-provoking images that span 116 years of Tacony history. It is our hope that these countless hours will be multiplied many times over as residents, both young and old, peruse this treasured collection of images.



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Area Development

AND THE REPORT OF THE PARTY AND THE PARTY AN HISTORIC PRESERVATION CONSCILUNG HISTORIC CONTEXT STATEMENT FOR NEIGHBORHOOD CLUSTER 1 PHILADELPHIA PRESERVATION PLAN PHASE 1 2008-2009 INTRODUCTION

HISTORIC CONTEXT STATEMENT FOR NEIGHBORHOOD CLUSTER 1 FRANKFORD, TACONY, WISSINOMING AND BRIDESBURG: INDUSTRIAL VILLAGES OF THE UPPER DELAWARE RIVER WATERFRONT

EDITED, WITH AN INTRODUCTION BY EMILY T. COOPERMAN, PH.D.

Cluster 1 consists of a group of neighborhoods closely connected to the Delaware River and the smaller waterways that formerly fed into it (Frankford Creek and its tributaries as well as Wissininoming Creek) in a portion of the city that was accessed mainly by boat and a single roadway in the first century of Philadelphia's settlement. Like many other areas of the city, the neighborhoods of Cluster I were developed to a great extent because of the industries that were founded there, and their fortunes have risen and fallen with the city's industrial growth and subsequent decay. Frankford was one of the earliest settled villages in the former Philadelphia County. Bridesburg was built on flat land made habitable by fill and bulwark along the riverfront. The land in Wissimoming and Tacony was characterized by country seats and farms until past the mid-ninetcenth century when Henry Disston moved his Saw Works from Northern Liberties to land that had not yet been developed except for agriculture use.

In the twentieth century, these neighborhoods became more closely connected to Center City through the completion of the Frankford Elevated subway in 1915. As industry declined by the 1950s, the area lost population along with the rest of Philadelphia.



Houb was with many touch , drouge by Miles Tarent, treated in Linguis (1940)

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the creation of an extensive sewer system culverted the creek by 1902.110 From Frankford Avenue, which runs parallel to the Delaware River, the land slopes gently and evenly down to the river, in sharp contrast to the more topographically varied neighborhoods to the northwest.

Tacony is roughly rectangular in shape, with the slightly longer edge of Cottman Avenue and Levick Street running perpendicular to the Delaware River. Two distinct zones exist within Tacony. The first is an industrial section, starting at the river and ending at the combined boundary of State Road, the railroad, and Interstate 95. Disston Park runs for eight blocks between the railroad and Keystone Street from Levick Street to Princeton Avenue. Continuing inland from the park, Tacony becomes almost entirely residential, with commercial corridors along Torresdale Avenue and Frankford Avenue. Tacony has a wide variety of residential buildings, including one- and two-story rowhouses, twins, and single family dwellings. The neighborhood is also peppered with pocket parks and churches.

Pre-Industrial Tacony (c. 1700 to c. 1870)

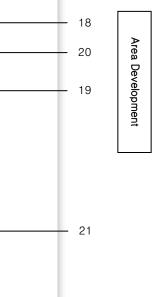
Transportation, manufacturing, and a reformist industrial patriarch characterize the history of the neighborhood of Tacony. Changes in transportation continually reshaped Tacony, from the arrival of the first railroad in the mid-1800s to the trolley lines at the beginning of the 1900s and the Tacony-Palmyra Bridge a few decades later. Tacony might have become just another industrial town if not for the direction of Henry Disston (1819-1878), whose paternalistic views shaped the physical and social landscape of the area. Other manufacturers poured into town shortly after Disston set up his saw works in 1871, diluting Disston's control. The interplay of manufacturing - both paternalistic and capitalistic --- and transportation molded Tacony from rural farmland into a diverse residential and industrial neighborhood.

The gently sloping land and the winding Wissinoming made the area that would become Tacony an attractive place for early subsistence farming settlement and would eventually become an area for country seats for wealthy Philadelphians. Records for the earliest period are scarce, but by 1679 Tacony was described as a "village of Swedes and Finns."111 Three years later, the Englishman Thomas Holmes arrived in the area on official business of surveying the land for patent by William Penn. At the time, "several purchasers [were] already seated and placed" and the survey served to formalize boundaries in the area. 112 In 1683, William Penn gave authorization to Henry Waldy to set up the first post office in the Philadelphia area in Tacony. Penn also authorized Waldy to supply horses to travelers destined for New Castle (Delaware) or "the falls" (of the Delaware River, or Trenton), suggesting that Tacony was a stopping point on the main route from Philadelphia

112 John Reed, Explanation of the Map of the City of Philadelphia (Philadelphia: Charles L. Warner, 1870), 14.

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Archetectural Research and Colitural History HISTORIC PRESERVATION CONSULTING HISTORIC CONTEXT STATEMENT FOR NEIGHBORHOOD CLUSTER 1 TACONY/WISSINOMING



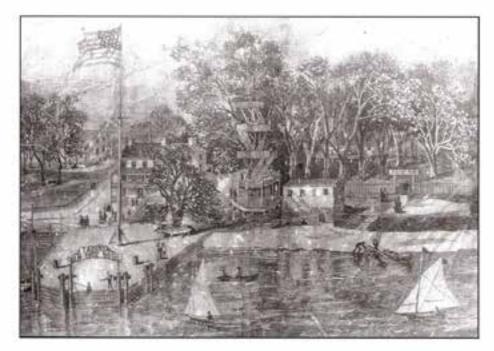
¹¹⁰ Adam Levine, "Maps I," at Phily H/0, http://www.phillyh2o.org/maps.htm (accessed February 10, 2009). 111 Jasper Danckaetts, Journal of Jasper Danckaetts, 1679-1680 (New York: C. Scribner's Sons, 1913), 100. It should be noted that in early settlement villages, existing Lenni Lenape villages in Philadelphia and its immediate surroundings were at first shared by Europeans. There does not appear to be any literature that indicates that the village of Tacony was a native encampment, but the name Tacony, like Wissinoming, are both from the Lenape. See John L. Gotter, Daniel G. Roberts, and Michael Parrington, The Burried Part: An Archaeological History of Philadelphia (Philadelphia University of Pennytlvania Press, 1993), 29.

Area

Development

	ABORTECTURAL RESEARCH AND CULTURAL HISTORY HISTORIC PRESERVATION CONSULTING HISTORIC CONTEXT STATEMENT FOR NEIGHBORHOOD CLUSTER 1 TACONY/WISSINOMING
21 - (cont.)	north. ¹¹³ In 1760, Lynford Lardner, brother-in-law of William Penn, built a Delaware River-front mansion on the north side of the mouth of the Wissinoming Greek, and called his new property Tacony. ¹¹⁴ The Lardner's maintained a summer home at Tacony for many years. Lynford's son John Lardner established Magnolia Hill on river-front property adjacent to his father's on the north. John Lardner fought in the Revolutionary War and crossed the Delaware with George Washington as part of the First Troop Philadelphia City Calvary. ¹¹⁵ From the perspective of the late nineteenth century, a descendant of Magnolia Hall owners recalled the life in the area in the eighteenth century, noting that "You must not judge [the period] by what you see now at Tacony. The state of society then was more like what it now is in our Western States. Land and provisions were plenty and the laborers married young. ^{#116}
23 -	Even the first stagecoach that turned the forest trail known as King's Highway into Frankford Avenue in 1776 seems to have little impact on the growth of the town. ¹⁰⁷ Early histories of Tacony lack substantive information regarding the earliest phases of the town, suggesting little development. The area remained a small hamlet of farms and country seats and summer homes well into the 1800s.
24 -	Further evidence of Tacony's early life as a place of retreat is evidenced by the formation of the Tacony Cottage Association. Formed in the mid-1800s to support building St. Vincent's Orphan Asylum, the association bought up 49 acres of farmland in Tacony and used half for land for the asylum and sold the other half as speculative lots for summer cottages. ¹¹⁸
22 -	1832 marks the beginning of the story that set Tacony on its course to becoming a remarkably significant company town. In that year the Pennsylvania Legislature passed an act to incorporate the Philadelphia and Trenton Railroad Company, effectively connecting Philadelphia directly to New York City. ¹¹⁹ Residents of Philadelphia reacted negatively to this announcement, and opposed the idea of a railroad terminus near Market and Front Streets. Accounts from 1840 tell of angry mobs harassing rail workers, tearing up tracks as they were laid down, arson, and the ensuing riots preventing fire fighters from eximplishing the blaze so that the building burnt to the ground. The protesters were so vehement in their objections that plans had to be abandoned to bring the railroad all the way into town. ¹²⁰ In 1846, Tacony became the terminus for the railroad and passengers had to take a ferry to complete their voyage into Philadelphia. ¹²¹
	 ¹¹⁰ Thomas J. Scharf and Thompson Wescott, <i>History of Philadephia</i>: 1609-1884 (Philadelphia: L.H. Everts and Company: 1884), vol.5, p. 1806 ¹¹⁰ William Bucke Campbell, <i>Old Towns and District of Philadephia</i> (Philadelphia: History Society of Philadelphia: 1942), 50. ¹¹³ Samuel Fitch Hotchkin, <i>The Bristal Phile</i> (Philadelphia: George W. Jacobs and Company, 1893), 54. ¹¹⁴ Mohert van Dervort, <i>Tasoy</i> (Philadelphia: Free Library of Philadelphia: 1982), 54. ¹¹⁵ Nobert van Dervort, <i>Tasoy</i> (Philadelphia: Free Library of Philadelphia: 1982), 54. ¹¹⁶ Mohert van Dervort, <i>Tasoy</i> (Philadelphia: Free Library of Philadelphia: 1982), 54. ¹¹⁸ Harry C. Sikos, "Henry Disston's Model Industrial Community: Nineteenth Century Patenalism in Tacony, Philadelphia," <i>Postphania Magazine of History and Biography</i> (2017), no.4 (October 1990); 496. ¹¹⁹ Thomas J. Scharf and Thompson Wescott, <i>History of Philadelphia</i>: 1009-1884 (Philadelphia: L.H. Everts and Company: 1884), vol.3, 2183. ¹²⁰ Ibid, 2184-2185. ¹³¹ Jeante Downing, "Tacony," in <i>Historical National Philadelphia: Statios and Monories</i>, eds. Alicia Freitag and Harry Sicox (Philadelphia: Brighton Press, 1990), p. 18; van Dervort, 6.

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Tacony waterfront, early nineteenth century, courtesy Tacony Historical Society

For all the intense protestation, by 1849 the Philadelphia and Trenton Railroad ran all the way into Philadelphia.¹²² Tacony retained the railroad depot, and several hotels were built to accommodate railroad travelers. Despite the railroad, Tacony remained a relatively small hamlet clustered around the depot, although a grid of streets appeared soon after the depot.1D Country seat estates were scattered across the land north of the railroad, but development was slow. An early drawing shows the relatively undeveloped nature of the town even after the railroad. The drawing depicts a hotel with a wharf to accommodate railroad and ferry travel; small boats line the riverbank to the north, and a multi-story tree house, consisting of several levels of wooden decking encircling the tree, can be seen next to the hotel. While the presence of the tree house may seem like artistic license, a photograph from 1870 confirms that the drawing depicted a built condition, including the

122 M. Dripps, "Map of the Toxotship of Oxborough, Boroughs of Frankford and Bridesburg, 1849." Map in the Historical Society of Frankford collection. 12 See Map of the Tannology of Oxford, Barnaylor of Frankfurd C* Bridshing, M. Dripps, 1849, Collection the Free Library of Philadelphia.

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 28

Area Development

22 (cont.)

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sign advertising the hotel and the top level of the tree house. 124 The similarities between the photograph and the drawing are so striking that it seems as if the drawing was made from the photograph. An 1862 map shows that Tacony grew only slightly in thirteen years, retaining its pastoral setting.

In 1855, the first member of the Disston family arrived in Tacony, not for work, but for recreation. Thomas Disston bought land for a summer house from the Tacony Cottage Association and often entertained his family at his country seat. He was not alone-many wealthy Philadelphians used the city's outlying areas, including Tacony, as areas to escape from Philadelphia proper.125 It was not until nearly twenty years later when Thomas's brother Henry purchased land in Tacony for entirely different reasons, the pursuit of industry and the creation of an ideal company town

Area Development

> 124 The location of the original drawing and photograph are unknown. Copies of the drawing and photograph are in the collection of the Historical Society of Tacony,

125 Louis M. Iatorola and Lynn-Carmela T. Iatorola, Lawr Nerthnet Philadelphia, (Grand Rapids: Arcadia Publishing, 2005

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p. 29 Historic Context Statement; Cluster 1: Frankford, Tacony, Wissinoming, Bridesburg; 2009; Works Cited #10

preparation for this move, the Disstons purchased as much Tacony acreage as possible.

In moving Henry Disston & Sons Keystone Saw Works to comparatively remote Tacony, Disston gained room to physically expand his plant as needed, however, he was also able to found and nurture an insulated industrial community. While his motives for this goal are not wholly known, it has been suggested that Henry Disston's familiarity with English utopian experiments as well as the devout Presbyterianism practiced by the family contributed to its development. Regardless of the impetus, Henry Disston might be considered among the most socially conscious of the urban industrial elite coalescing in the last quarter of the nineteenth century. Prior to the move to Tacony, he wrote of the owner-worker relationship:

> This [company and community of workers] is what I live for. We all ought to live and make each other happy. God knows the greatest desire of my life is to see all that I am connected with happy. And I believe to this day that there is not a happier or more contented family in the world. I say family because I consider you and myself of one and the same family. There has (sic) never been any wants that I could afford to alleviate but that I have endeavored to do so as I would my nearest kin...The object of men and Boss should be mutual, the Boss to give all he can when times will permit, and the men under a close competition to be willing to help meet the market...Whatever money I make is spent in improvements to facilitate us in putting goods into the market at such prices that we will have work as long as any house.14

After Henry's 1878 death, the Disstons maintained close associations with their workers as most of the male family members apprenticed in the saw works shops and afterward they frequently visited the town and industrial complex. To reinforce worker loyalty, Disston assured religious freedom-not always the case in remote industrial communities-offered limited benefits in times of sickness and death, and established a system of hereditary apprenticeship and job placement. The Disstons believed that contented workers were better workers and their involvement in bettering the lives of their employees through industrial paternalism moved beyond the walls of the factory and the realm of wages. While labor unrest did crop up from time to time, the relatively healthful and lower-density community and its labor force remained comparatively quiet.

Henry Disston did not move his entire saw works to Tacony in one campaign. He opened an experimental saw factory in 1872 and over the next twenty-seven years moved all of the operation's components-including steel making-to the town. Accordingly, Tacony grew in response to increased industrial capacity. In 1876, virtually all development was contained within the original street grid between the railroad and the river; the population at the time was around 200.13 The blocks west of the railroad were platted by that time, however except

14Henry Disston to his "fellow workers," 13 November 1867, as guoted in Silcox, A Place 15-16.

15 City Atlas of Philadelphia by Wards, Complete in 7 Volumes, vol. 3 (Philadelphia: G. M. Hopkins, 1876); Silcox, "Chapter 1," 4, for population.

TACONY HABS No. PA-6692 (Page 4)

decided to begin moving his entire saw operation to Tacony and began to do so in 1872, a decision expedited by the cramped quarters in center city and a massive fire in 1864. In

SITE TO BE SEEN / Research Dossiel

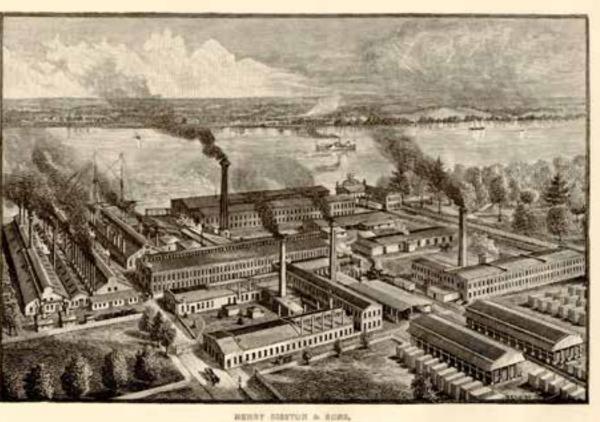
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Area Development Area Development

28 1 1131

2018 photograph of some remaining Disston Saw Works factory buildings.

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Etching from *History of Philadelphia*. 1609–1884.

RENAT DISATOR & SCRE, LETATORE AND, TOOL STEEL AND FILE WOORE, PHILADELPHIA, Pd.





TACONY, PHILADELPHIA, PA., U. S. A.

Frank Schuman and his 'Sun-boiler', 1907.

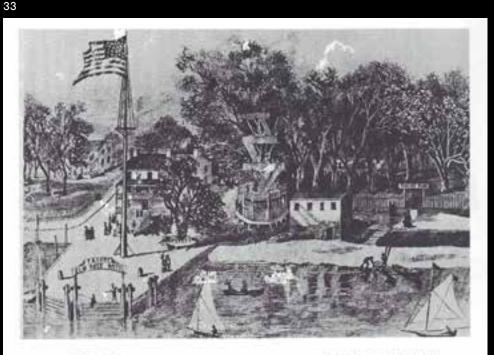
AUX428T, 1907



Facade of St. Vincent's Orphan Asylum.



Map illustrating the boundaries of the land claimed during the 1737 Walking Purchase.



PRIOR TO 1872 TACONY WAS A SLEEPY VILLAGE/RAILROAD TERMINUS SET ON THE DELAWARE.

Etching depicting Tacony waterfront and the Elm Tree Hotel in the early nineteenth century.



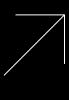
Aerial photograph of Disston Saw Works factory buildings, 1939.

O AREA DEVELOPMENT

MORE RESEARCH DOCUMENTS

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1660s Construction of 'Old Swedes

Mill', a grist mill on the northeast bank of Frankford Creek, marks the beginning of neighboring Frankford's industrial history.

1800 Nearby Frankford village

incorporates as a borough while small farms continue to operate in what is now Taconv.

> **1815** The U.S. Army opens Frankford Arsenal in nearby Frankford.

hair and hide glue.

1882 Disston's efforts are a major contribution to growth and development in Tacony. At this time 1,600 men worked in the factory and most lived within walking distance.

1865 The Civil War ends. Disston

Disston & Son for his son Hamilton

renames his company Henry

who had returned to work after

serving in the war.

1861 The Civil War begins.

money throughout the war.

1850 Henry Disston founds Keystone

area at this time.

Saw Works.

Philadelphia industry, including

Disston's Center City-based Saw Works, are essential to the Union's

cause to which the city provides

troops, medical care, supplies and

1871 Disston moves Keystone Saw

Works to Tacony and industrializes

the area. With money made from the

production of weapons and plate steel

during the Civil War, he purchases six

acres for factory works and 390 acres

1876 Disston constructs his first worker

housing at the intersection of Knorr and

Keystone Sts. The deed restrictions

for the housing include the sale or

production of alcohol, steam powered

businesses, stables, and businesses

that would be physically noxious to the

1881 Tacony Iron Works owned by

1891 Frank Shuman arrives in Taconv

Wire Glass Company and the Simplex

Concrete Piling Company.

for worker housing. Only 75 families

are recorded as living in the Tacony

1885 Erben Search Company Worsted Mill moves to Tacony and builds on the

river south of the Disston works. The Tacony Music Hall is erected with the assistance of Disston, who feared a town hall would lead to worker uprisings. The building includes commercial space, a library, and music hall.

1883 Gillinder & Sons, manufacturers of pressed glass, open a window glass plant in Tacony. The facility is named Franklin Window Glass Works which advertises Franklin window, car, and picture glass.

1887 Franklin Window Glass Works is

sold due to competition with imported glass from Belgium using cheap labor and Western Pennsylvania manufacturers using natural gas.

1893 L. Marten's Black Company

moves to Milnor Street in Tacony after outgrowing their factory in Germantown. One of the oldest and largest lamp black manufacturers in the United States, they produce lamp black, a key ingredient in ink used by Philadelphia's burgeoning print industry.

1894 Frank Shuman builds a large

inventor's compound on Disston St where he constructs the first solarpowered steam engine.

1913 Frank Shuman builds the world's first large-scale solar power station in Maadi, Egypt that powers an irrigation system fed by the Nile.

1914 World War I begins, thwarting Shuman's power station in Egypt.

Industry Pre-1950

Natural History

Area Development

7301 Milnor

Environmental

1878 Henry Disston dies but the business continues to be operated by his sons.

Francis Shumann opens south of the Disston saw works. It is the inaugural year of The Tacony New Era, a paper that served the community for 40 years.

community.

to assist his Uncle Francis at the Tacony Iron Works with the creation of the William Penn Statue that currently sits atop City Hall. Shuman stays on in Tacony and opens both the American

1918 World War I ends. Dodge Steel opens on the former Tacony Iron Works

site.

1895 A major fire at the Delaney & Whitaker glue factory caused by spontaneous combustion from oilv waste forces them from their home at Jefferson and Mascher Sts in Kensington. Here they produced curled

> **1896** Construction begins at 7301 Milnor St for a new glue manufacturing plant for Delaney & Whitaker.

> > 1899 Whitaker & Delaney's glue factory at 7301 Milnor in Tacony is destroyed by fire on April 17 with an estimated loss of \$100,000.

1923 A fire breaks out at Delaney &

Co., Inc. in a shed that houses finished glue ready to ship out. The fire spreads to the adjoining L.K. Martin Company, producers of carbon and lamp black.

1904 The Harding Textile Company at 25th and Spring Garden Streets merges their operation with the Erben mill in Tacony, officially becoming Erben Harding. The new plant becomes the first industry in Tacony to employ large numbers of female workers, mainly Irish women from Bridesburg and Polish women from Tacony.

> 1936 Delaney & Co. still in operation selling glue and fertilizer out of 7301 Milnor St.

1940 Frankford Arsenal is the sole producer of military ammunition in the U.S.

1940 The government finances the construction of an armor plating plant in Tacony where Disston produces armored plates for gun shields, combat vehicles, tanks, naval crafts and planes to name a few. A Time magazine article claimed in 1940 that 75 percent of the hand saws sold in the U.S. were made by Disston.

1939 World War II begins. With a precedent for changing the course of production since the Civil War. Disston makes its money selling armor plate steel during World War II when Germany invades Poland.

1929 The Great Depression and maior economic downturn follow a stock market crash in October that reverberates worldwide. Industry diminishes in the area except for Disston's Saw Works.

1945 World War II ends. During the war and for five years after, Disston makes its money selling steel for the military, not saws.

1950s Industry declines in Tacony and population decline follows.

1955 With mounting cash-flow problems and waning interest on the family's part to run the firm, stockholders of Henry Disston & Sons, Inc. vote to sell their assets to H.K. Porter Co. Inc., a Pittsburgh based company known for locomotive manufacturing.

1963 L. Goldstein's Sons buy a tract of land and five industrial buildings formerly occupied by the Henry Disston Division from H.K. Porter Co. on Unruh Ave east of Milnor St.

1962 L. Goldsteins Sons buy a sevenacre riverfront tract of land containing 60,000 square feet of industrial building, completing the sale of the unused 16 acre industrial site at Cottman and Milnor Sts.

1962-1966 L. Goldstein Sons, a 101 year-old firm co-owned by William and Harry Goldstein, are owners of the Site at 7301 Milnor St where they buy, store, process, and sell scrap metal. Irvin G. Schorsch and John B. Schorsch are L.G.S.'s executive officers and sole shareholders.

> **1964** A 3-alarm fire breaks out at L. Goldstein's scrap metal yard at 6801 Wissinoming St.

> > **1966** L. Goldstein & Sons starts doing business as Metal Bank of America, Inc. They continue to use the Site for scrap metal recycling and storage.

> > > **1967** Metal Bank is given the U.S.

Mint Contract for the reclamation and processing of approximately eight million pounds of new clad-metal used in production of sandwich-type coin.

1968 On December 4 L. Goldstein Sons (Metal Bank of America) sells its business assets to New Jersey-owned Union Corporation. Through the deal the Schorsch brothers become Metal Bank's chief executive officers.

> **1972** Harrison M. Newman is named director of industrial pollution control technology at Union Corp.

1971 Aq-Met Inc. and Union Corp. announce agreement towards Ag-Met's acquisition of two Union subsidiaries, Metal Bank of America, Inc. and Jacobson Metal Co., totalling \$25 million.

1971 Union contracts with Hirtz

Brothers to purchase transformers, as well as a contract to collect and recycle transformers on the Site.

1971 Union negotiates agreement for Metal Bank to acquire the Hirtz Bros. assets.

> 1971 In January, the FBI investigates Metal Bank on suspicion of receiving stolen metal.

> > Jr. is charged in an indictment obtained

Walter M. Phillips. He is charged with allegedly trafficking in stolen metals.

1972–1982 Union Corp leases the Site property from the Schorsch brothers.

> from the Schorsch brothers (title was conveyed in 2001).

1980 The Schorsch's sell the Site

and the New State Road property

and the Schorsch's take back the

mortgage. PAID and Metal Bank enter into a twenty-year Installment Sale Agreement whereby Metal Bank purchases both the Site and the New State Road property, PAID assigns

the rights to payment under this Agreement to the Schorschs. (From

Metal-Bank-Preassessment)

to the Philadelphia Authority for

Industrial Development (PAID),

1984 Metal Bank declares bankruptcy and Union negotiates an asset sale to Illinois-based Versatile Metals. Nicholas Schorsch founds Thermal Reduction Corp., a metal product manufacturing business.

> 1986–1988 The Site is leased to Disposal World, also known as Philadelphia Carting Co., where they run a trash-transfer business.

Industry Post-1950

Natural History Area Development

7301 Milnor

Environmental

1974 In September Irvin G. Schorsch,

by Philadelphia Special Prosecutor

1980 Metal Bank purchases the Site

1985 Metal Bank of America, Inc. changes their name to U.C.O.-M.B.A., Inc. Although PAID continues to hold the title to the Site properties, Metal Bank has full possession of the premises and is the owner of the Site under the Installment Sale Agreement.

1994 The Schorsch's sell Thermal Reduction Corp. to Corrpro Co. based out of Ohio. A Remedial Investigation and Feasability Study (RI/FS) is conducted at the Site.

> 2017 Revolution Recovery, a private recycling center, purchases the Site at 7301 Milnor St. They are in the business of managing construction demolition waste next door at 7333 Milnor Street on 3.5 acres beside the Delaware River.



1600s Tacony, originally known as Towacawoninck meaning "woods" or "uninhabited place," is home to the Lenni-Lenape people.

1638 Swedish and Finnish settlers

1679 Tacony is described as a

"village of Swedes and Finns." Swedish Hans Keen purchases land south of modern day Cottman Ave on the Delaware River.

arrive in Tacony and create settlement farms along the Delaware River.

1687 Enock Keene is shown as one of the landowners of Toaconinck Township or present-day Tacony on Thomas Holme's 1687 survey map.

1676 The earliest land record related

to present-day Tacony is from Swedish Governor Sir Edmund Andros to Michael Fredericks for 300 acres between Pinnepakta, now Pennypack, and Towacawoninck, now Tacony.

1681 William Penn is granted the Pennsylvania Colony by King Charles II of England.

1682 English settlers begin to settle in the Tacony area shortly after Penn establishes the City of Philadelphia.

1683 Penn and Lenape leader

Tamanend sign a treaty that results in several land deeds in Pennsylvania. Penn authorizes Henry Waldy to set up the first post office in Philadelphia in Tacony.

1776 Members of the American Congress draft the Declaration of Independence which is signed by Congress on July 4 in Philadelphia.

1760 Penn's brother-in-law Lynford Lardner builds a mansion on the Delaware River that he names Tacony.

> 1790 On December 6, the first Congress votes to designate Philadelphia as the interim capital of the nation until 1800 when it moves to Washington, D.C.

> > 1793 The Yellow Fever outbreak plagues the city of Philadelphia killing at least 5,000 people, roughly ten percent of the city's population. Portions of the federal government seek refuge in neighboring Frankford Village during the epidemic.

1849 Tacony remains relatively pastoral until the arrival of Henry Disston in 1871.

1849 In spite of public protestation, the railroad eventually extends into Center City Philadelphia.

1840 Many protest the building of

the railroad by harassing rail workers,

tearing up tracks, arson, and rioting.

Ultimately, plans for the railroad to be

brought into the center of town are

halted, making Tacony the last stop.

1855 The Tacony Cottage Association forms and they begin raising funds to build St. Vincent's Orphan Asylum. The newly chartered St. Vincent's Society, made up of two German Catholic parishes in Philadelphia, purchase 49 acres of land in Tacony. These early land transactions expand Taconv's

modest street grid and introduce the

Disston family to the locale.

1857 The Catholic Archdiocese of Philadelphia opens the St. Vincent's Orphan Asylum. The orphanage is situated next door to 7301 Milnor St on 33 acres of land along the Delaware River.

Tacony + Philadelphia

Natural History

Area Development

7301 Milnor

Environmental

1875 Tacony's population is less than 200 people.

1854 The Consolidation Act of 1854 expands Philadelphia's borders from 2 square miles to nearly 130, making Tacony an official part of the city. This has a positive impact on real estate in the Tacony area.

1915 On July 10, the Philadelphia Transit Loan is approved awarding \$6,000,000 to the Department of City Transit to be divided for the construction of both the Broad Street Subway and the Frankford Elevated Railway.

1950

1906 A Carnegie library opens at the geographical center of Tacony, the corner of Torresdale Ave and Knorr St, on land given by the Disston family.

1903 The No. 58 trolley is completed, allowing laborers flexibility to seek employment outside of the Disston Plant. Likewise, people outside of Tacony are able to travel there more easily for work, diversifying the workforce and community.

> **1922** Tacony-Palmyra Ferry Company is formed and later creates a ferry line that runs from Tacony to Palmyra, New Jersey. The Frankford Elevated Railway finally opens, making trips from Center City to the Northeast in as fast as 30 minutes.

7301 MILNOR

Source

"Garbage Pops Up Elsewhere": 1988: Works Cited #21

"Big Fires in Philadelphia"; 1899; Work Cited #1

"Fire in a Glue Factory"; 1899; Works Cited #2

The Philadelphia Inquirer News update; 1962; Works Cited #33

"Name Is Changed After 101 Years"; 1966; Works Cited #3

"Petty Cash Pollution Fines Don't Hurt Industrial Giants"; 1970; Works Cited #9

"Scott Helps Clients with Calls, Letters"; 1976; Works Cited #11

Letter from Philip Levin. to PA Senator H. John Heinz III; 1977; Works Cited #19

Research Excerpt

01 "Inspectors said they believe that trash that once would have been bound for Tacony has wound up instead in Southwest Philadelphia. That, in turn, has upset the people in the neighborhood, off Lindbergh Boulevard."

02 "Whitaker & Delaney's glue factory, at Tacony, a suburb of this city, was destroyed by fire to-day. The loss is estimated at over \$100,000."

03 "It was not by any means the most dangerous blaze that the firefighters of this city have had to contend with, but they agree that it was just about the worst smelling."

04 "The purchase of 3,000,000 pounds of used copper cable for more than half a million dollars was announced by L. Goldstein's Sons Inc., Philadelphia. Irvin G. Schorsch, Jr. president, said it was believed to be the largest single cash purchase of scrap cable reported in the East in over a year."

05 "L. Goldstein's Sons Inc., 101-year Philadelphia firm dealing in secondary nonferrous metals and scrap, changed its name Thursday to Metal Bank of America, Inc. Ivan Schorsch Jr., president, said the new name reflects present operations of the company more accurately... Since then (1951) the company has expanded into smelting, recovery of nonferrous metals from scrap, and consultation on scrap handling and salvage."

06 "Petty Cash Pollution Fines Don't Hurt Industrial Giants ... Metal Bank of America (a subsidiary of the Union Corporation, of New Jersey) Current Net Assets \$10,898,281: Air Pollution Fines \$100."

07 "Another client (of former Sen. Hugh Scott-R. PA), a Philadelphia firm called the Metal Bank of America, came under scrutiny of the Federal Bureau of Investigation on suspicion of receiving stolen metals. When agents showed up at the company in January 1971, to make a search, the FBI received a call from Scott's office asking what was going on."

08 "The Metal Bank cannot afford to be a case study for environmentalists. It is unfair to put that burden on us. After all, we too are citizens. As a company, we provide a livelihood for our employees and perform a vital recycling function. We do, directly, service the cause of conservation, although we do not look upon ourselves as conservationists. The overall remedy to the problem is a careful analysis of all so-called anti-pollution laws and a rewriting of them into something that makes sense."

"Pennsylvania Public Utility Commissioner W. Wilson Goode has instructed the 09 auditors to look into the open-ended sales contracts, under which Philadelphia Electric Co. sells hundreds of thousands of dollars worth of old cables and equipment to two companies, Metal Bank of America and Gold-Met Inc. The companies resell the metals for profit. Other scrap dealers charge that the sales contracts were awarded on the basis of political favoritism."

"In its letter of April 28, Metal Bank asked your (Senator H. John Heinz III) assis- 10 tance in achieving a 'fair and realistic resolution of this matter.' Please be assured that the EPA's goal is to achieve a fair and realistic resolution of this matter. The allegations of Metal Bank in its letter of April 28 are unfounded. EPA has acted appropriately to try and get the Metal Bank hazardous waste site cleaned up."

"Dear Senator Heinz, Your assistance is urgently and desperately needed to 11 right an injustice being levied against the Metal Bank of America by the U.S. Justice Department and the Environmental Protection Agency. You may recall on December 30, 1977 I contacted you to help us with a problem concerning the government's claim we were polluting the Delaware River. The substance of this claim, at the time, appeared to be politically motivated. A review of the background of this case and the near infinitesimal degree of pollution which may be going into the Delaware River makes this case a witch-hunt on the part of the agencies taking action against us. The near hysteria of the City of Philadelphia, brought about by the news media who obtained information on this suit prior to our knowledge it was being instituted against us, has made our position untenable."

"Cleve Goss, a foreman at a Philadelphia scrap-metal firm, requested a temporary 12 transfer after learning he had contracted lead poisoning at his workplace. Instead, his bosses fired him, according to a suit filed in U.S. district Court here Wednesday by the U.S. Department of Labor."

"The federal government has accused Thermal Reduction Corp. in Philadelphia, 13 the parent company of Riverside Metals, of acting in contempt of a court order that gave OSHA permission to conduct a thorough investigation at the Riverside plant. Specifically, OSHA is contending that the company hindered the investigation by hiding machinery, withheld medical records, lied about injuries to workers, and physically intimidated the agency's inspectors."

"OSHA officials testified earlier that samples had been taken this yeear showed 14 that workers were being overexposed to lead particles that are release when lead-sheathed cables are peeled open and the copper inside is removed for reprocessing. Therman Reduction supplies copper to the U.S. Mint. In October, OSHA fined Thermal Reduction \$43,050 for failing to protect workers at its Philadelphia plant from overexposure to toxic lead dust and other safety hazards"

7301 Milnor

"PUC Auditors To Begin PE Scrap Probe": 1978: Works Cited #8

- Letter from Jack J. Schramm, Regional Administrator of the EPA to PA Senator H. John Heinz III: 1980: Works Cited #28
- Letter from Philip Levin, to PA Senator H. John Heinz III: 1980: Works Cited #20

"Poisoned and Fired, He Says"; 1983; Works Cited #30

"OSHA Inspector Testifies on Access to Burlco Plant"; 1984; Works Cited #27

"Landlord Seeking Eviction of Disposal World": 1988: Works Cited #22

"Rat Invasion Blamed on Trash Company"; 1988: Works Cited #23

Letter from Alan Hunter of Urban Strategies; 2003; Works Cited #13 15 "When it agreed in October 1986 to lease the site to Disposal World, Metal Bank insisted that no digging take place without its permission. In March, however, Brown said he saw a six-man work crew using shovels and jackhammers to drill out about 10 cubic yards of asphalt to install a scale to weigh incoming trash."

- **16** "Metal Bank's action was not related to the city's recent lawsuit seeking to close Disposal World, also known as Philadlephia Carting Co. The city says it wants Disposal World closed unless the premises is properly licensed and wants the place cleared of flies, rats, and debris. State and city inspectors have filed repeated complaints about conditions and odors."
- 17 "The rat invasion is the latest subject in a series of complaints by Malloy (the president of Disston Precision Inc.) and others stemming from the trash business, Disposal World Inc., 6801 State Rd. Among other things, there have been problems with flies, odors, and debris. Disposal World, also known as Philadelphia Carting Co., has had a checkered history since it opened in the fall of 1986. It accepts trash from commercial accounts and ships it to landfills. The company has remained in business even though it does not have a state permit as a trash-transfer station and despite repeated skirishes with city and state agencies. 'It is beyond my comprehension how they can stay open this long,' Malloy said. 'It just seems unfair to the people who live in the Tacony area and the people who work in the area."

18 "In addition, the Mushroom Farm is no longer in the picture. Thus there is no dealing with the general concerns of the neighborhood, such as offensive odors or not fitting into the Delaware River waterfront Vision."

Images

- **19** Photo of copper cable spools on the Metal Bank Site. Date unknown. The water tower photographed still stands.
- 20 1890 photograph of Delaney Glue Works in Tacony, Pa.
- 21 Photo of L. Goldstein's Sons, Inc. smelting operation in Greater Philadelphia Magazine, 1959.
- 22 River bank of 7301. Source unknown. Photograph included within a Metal Bank Superfund Site search at Temple University Urban Archives.



COMMUNITY NEWS

A treah-transfer station in Tacong has been shut down, but business is picking up at the owner's station in Eastwick.

Garbage pops up elsewhere By Bill Miller

Theory's civic and business leaders proclaimed a victory when a trouble some transition training was closed are month in their saighterfload, yoy fully hailing the end of two years of into about odors, dobris, rate

complaints about abort, doirs, reis and other problems. The translackie wavebraue of Dis-part World by, which now was lither day burning with trash, has been empty — sho known as Philadolphia Daring Ca. — called it quits in the wale of presents from the commo-nity and challenges in courts. The end of one mightberhood fuffit might have triggered another, have-ever.

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Northeast gets \$115,300 more in Class 500 deal

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"Garbage Pops Up Elsewhere"; 1988; Works Cited #21

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A truck rumbles down the street outside the ACN Inc. trush-transfer station in the Eastwick area of Southwest Philadelphia.

and opened in July 17 State and city inspectors said they had detected few problems at ACN until Disposal World closed. Inspectors said they believe that trash that once would have been bound for Tacony has wound up instead in Southwest Philadelphia. That, in turn, has upset people in the neighborhood, off Lindbergh Boulevard. and the second states

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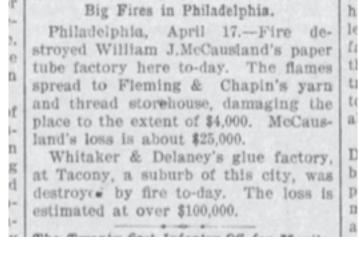
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"Fire in a Glue Factory"; 1899; Works Cited #2

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The Whitaker and Delaney Glue Works, at Cottman street and Township lane, Tacony, were destroyed by fire early yesterday morning. It was not by any means the most dangerous blaze that the fire fighters of this city have had to contend with, but they agree that it was just about the worst smelling. The damage, placed at \$75,000, does not, therefore, include that to the nostrils of the firemen.

The fire was first seen by a watchman employed at the factory. He blew the fire whistle, and before an alarm had been sent in engine No. 38, from Tacony, was hard at work fighting the flames. Before long the chemical and fire engines began to arrive, having been warned of the seriousness of the fire by the two alarms. Half an hour after the blaze broke out an alarm was sounded on the southwest side of the glue factory. It appears that the railroad cars waiting for 1,500 barrels of glue which was to be shipped yesterday had caught fire. An engine was brought, the cars were hauled away and the flames were soon put out.

The fire started in and was confined to the drying and packing room. The cause is supposed to have been the ignition of an electric light fuse. The building was in the shape of an L, and it contained 1,500 barrels and 60,000 pounds of glue. Over 150 hands were employed in the factory, and more than half of these will be thrown out of work,

FIRE IN A GLUE FACTORY

An Evil-Smelling Blaze Damages a Tacony Works to the Extent of \$75,000.

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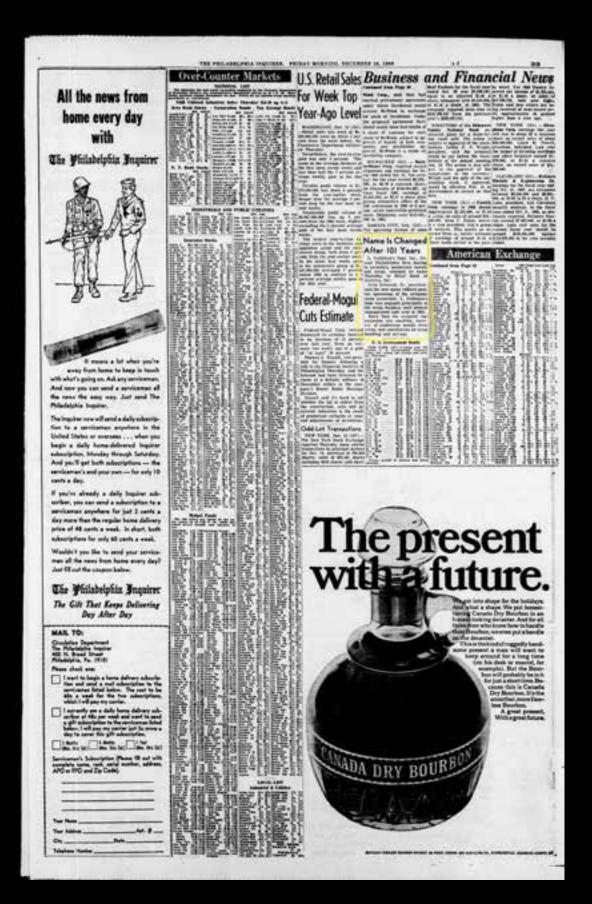


The Philadelphia Inquirer News update; 1962; Works Cited #33

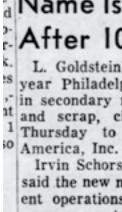
. . . The purchase of 3,000,000 pounds of used copper cable for more than half a million dollars was announced by L. Goldstein's Sons, Inc., Philadelphia. Irvin G. Schorsch, Jr., president, said it was believed to be the largest single cash purchase of scrap cable reported in the East in over a year.

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"Name Is Changed After 101 Years"; 1966; Works Cited #3



Irvin Schorsch, Jr., president, T said the new name reflects pres- Te ent operations of the company Te more accurately. L. Goldstein's T Sons was engaged principally in The the scrap business until present Ti management took over in 1951. Since then the company has To expanded into smelting, recov-vi

ery of nonferrous metals from T ed scrap, and consultation on scrap The st handling and salvage. T

SITE TO BE SEEN / Research Dossie

Name Is Changed st After 101 Years

L. Goldstein's Sons, Inc., 101year Philadelphia firm dealing c in secondary nonferrous metals C and scrap, changed its name ¹ Thursday to Metal Bank of T

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"Petty Cash Pollution Fines Don't Hurt Industrial Giants"; 1970; Works Cited #9



Scott Helps Clients With Calls, Letters

By L. TYLART MITZLS Spatient, Washington Diverse washington - Change his long years in Change Mitt, him Hagh hilds (H-Q) animation has support of the Hi-Q and second has support and on the

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"Scott Helps Clients with Calls, Letters"; 1976; Works Cited #11

The Remedy

Regional Response Team.

Letter from Philip Levin, to PA Senator H. John Heinz III; 1977; Works Cited #19

07

Page Nine - Senator II. John Heintz III

December 30, 1977

if any.

advised.

In addition, there have been repeated inspections by OSHA and EPA (Air Quality) with sample taking in an effort to find something wrong with the company's operations.

It is not clear what the state's involvement at this site is,

The City of Philadelphia has been involved in respect of water and sever operations. It has undertaken various inspections, the result of which are not clear and of which we have not been

As a result of those activities, we have taken a number of steps to chauge our operations to satisfy inspecting personnel although there is serious doubt of their need or efficiency.

The major problem at present is Cottman Avenue and the patently concerted effect by all possible agencies in descanding, like conspirators, on our plant and operations. We have in the recent past had to divert substantial time and energy to these multiple incursions, with what appears to be little or no reason.

We have turned to you in near desperation. A small company is not in a posicion to withstand the rigors of the onslaught of federal, state and local regulators. They act in seeming disregard of the cost in terms of time, man hours and monetary outlay. They act in contradictory ways even when under the umbrells of a so-called

The Metal Bank cannot afford to be a case study for environmentalists. It is unfair to put that burden on us. After all, we too are citizens. As a company, we provide a livelihood for our employees and perform a vital recycling function. We do, directly, service the cause of conservation, although we do not look upon ourselves as conservationists.

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(cont.)

Page Ten - Senator H. John Heintz III December 30, 1977

The overall remedy to the problem is a careful analysis of all so-called anti-pollution laws and a rewriting of them into something that makes sense. From our limited experience, we now know the various laws and regulations of the federal, state and local governments and of their various agencies are numerous, burdensome, contradictory and oft times impossible to reconcile. That is a long range job, but one which should be dong to eliminate the kind of confusion we have seen at work here.

More particularly as to our specific problem, what we really need is some way to avoid the multiplicity of actions taken by different people at the same time. If you will compare the state's PIPP Order and the Work Scopes written by its own geologist and by EPA's geologist, you will see they bear no resemblance one to the other even though they address the exact same problem.

How can we contend with this kind of situation? The state merely makes an Order; it does not disclose the basis for the Order. We then are forced to appeal even though, in a sense, we do not know what or why the appeal needs be taken other than to know we cannot comply with the Order--it doesn't make sense. Parenthetically, it should be noted neither EPA's chemist nor DER'S or EPA's geologist could offer an actual solution, mainly because they said, in effect, existing technology offers none.

In the final analysis, what we ask is for some way to avoid the periodic crisés atmosphere in a specific situation which does not fall into that category.

Very truly yours,

THE METAL BANK OF AMERICA INC.

Philip Levin

PL/mm attachments

AR500022

PUC Auditors To Begin PE Scrap Probe

By THOMAS M. BURTON

Permissivania Public Utility Commission austimistical soon begin to examine Philadelphia Electric Co.'s ocrap metal sales to see whether the public is losing money through the present nonbid contracts.

PEC Commissioner W. Wilson Goode has instructed the auditors to look into the open-ended sales contracts, under which PE sells hundreds of thousands of dollars worth of old cables and oppnormal to the companics, Metal Bank of America and Gold-Met Inc. The Companies resell the metals for profit.

Other scrap dealers charge that the sales contracts were awarded on the basis of political favoritism.

Utility lawyers and electric company officials agree that electric rates would be slightly higher if the company is getting a relatively bad deal on its metal sales. That's because ratepayers would be making up for the lost revenue.

The Bulletin reported in May that former U.S. Sen. Hugh D. Scott (R-Pa) once did legal work for Metal Bank, and that Kenneth Shapiro, who is associated with Gold-Met, once made a payment of \$30,000 to the then chairman of the Philadelphia Democratic City Committee, Peter J. Camjel,

Camiel said that the payment was a loan and that he repaid it. The former political power was an officer of Delta Metals

Several other metal dealers said they feel the contracts are political because they have tried to get PE's business several times but have been turned down Three companies with which Shapirn was associated - Delta Metals, Ken Shapirp Enterprises and Gold-Met - have held the PE contract at different times during the 1970s. Shapiro was indicted for perjury by a Philadelphia grand jury in 1975 in connection with an investigation into possible kickbacks paid by principals of another metal firm, H&L Metals Inc., to Augustine A. Salvitti, then the executive director of the Philadelphia Redevelopment Authority. Shapiro's indictment and a perjury indictment of Salvitti were thrown out on a tech-- nicality. Shivitti subsequently was convicted on federal charges of mail · fraud and extortion in an unrelated

fraud case.

Letter from Philip Levin, to PA Senator H. John Heinz III; 1977; Works Cited #19

SITE TO BE SEEN / Research Dossier

In addition, todote requested that the auditors make "spot chocks on what was sold," to be sure that reistively expensive metals weren't sold by PE for relatively low proces. The auditors' work well be part of a general audit of the effectric company's operations which is intready under way and is expected to last several months.

Goode explained that the commission will not be able to examine whether the contracts were awarded on a political basis, but only whether the prices are proper.

7301 Milnor

PUC Commissioner W. Wilson Goode has instructed the auditors to look into the open-ended sales contracts, under which PE sells hundreds of thousands of dollars worth of old cables and equipment to two companies. Metal Bank of America and Gold-Met Inc. The companies resell the metals for profit. Other scrap dealers charge that the sales contracts were awarded on the

basis of political favoritism.

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88 Site Research

John Heinz III; 1980; Works Cited #28

Honorable H. John Heinz III United States Senator 9456 Federal Building Philadelphia, Pennsylvania 19109

Dear Senator Heinz:

600 Arch Street

Thank you for your inquiry of April 29, 1980 concerning the Metal Bank of America, Inc., of Philadelphia.

As Mr. Philip Levin of Metal Bank indicated in his letter to you, the United States Department of Justice and the Environmental Protection Agency (EPA) have recently sued the Metal Bank of America for pollution of the Delaware River.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION III

61" AND WALNUT STREETS

PHILADELPHIA. PENNSYLVANIA 19106

The lawsuit also names the Union Corporation of New Jersey and the owners of the involved property, Irvin G. Schorsch, Jr. and John B. Schorsch. The lawsuit alleges that polychlorinated biphenyls (PCBs) and oil are leaching from Delaware River waterfront property used by Metal Bank since 1968. A copy of the complaint has been enclosed for your information.

In its letter of April 28, Metal Bank asked your assistance in achieving a "fair and realistic resolution of this matter."

Please be assured that EPA's goal is to achieve a fair and realistic resolution of this matter. The allegations of Metal Bank in its letter of April 28 are unfounded. EPA has acted appropriately to try to get the Metal Bank hazardous waste site cleaned up.

First, the lawsuit against Metal Bank is not politically motivated. As the Wall Street Journal article indicated, over fifteen hazardous waste cases have recently been filed by the Department of Justice on behalf of the EPA. These suits are being filed in order to secure cleanup of hazardous waste situations which endanger the public health and the environment. The motivation behind the cases is to protect the public and not to politically embarrass the defendants. As I am sure you know, in 1976 the United States Congress declared PCBs to be a hazardous substance. In the Toxic Substances Control Act of 1976, Congress banned the manufacture of PCBs and directed the EPA to take effective measures to control the distribution, storage, and disposal of PCBs.

AR500001

認われた

THE METLL

Senator H. John Heinz, III 4327 Dirkson Senate Office Building Washington, DC 20510

Dear Senator Heinz:

Your assistance is urgently and desperately needed to right an injustice being levied against The Metal Bank of America by the U. S. Justice Department and the Environmental Protection Agency.

You may recall on December 30, 1977 I contacted you to help us with a problem concerning the government's claim we were polluting the Delaware River.

The substance of this claim, at that time, appeared to be politically motivated. A review of the background of this case and the near infinitesimal degree of pollution which may be going into the Delaware River makes this case a witchhunt on the part of the agencies taking action against us.

The near hysteria of the City of Philadelphia, brought about by the news media who obtained information on this suit prior to our knowledge it was being instituted against us, has made our position untenable.

As you may well appreciate, it takes a Herculean effort for business to keep its head above water in order to survive in the face of obstacles such as inflation, depressed economy, energy costs, labor problems, foreign competition, everincreasing taxes and a multitude of other hindrances.

If there was an imminent danger of our polluting the Delaware River, certainly we would take every action to cemedy this matter.

The facts, as you may readily ascertain, are exaggerated, distorted, misrepresented and are self-serving for the agencies now involved.

COOL STUTE ROAD

Letter from Philip Levin, to PA Senator H. John Heinz III; 1980; Works Cited #20





April 28, 1980

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PHILADELPHIA, PENNSYLVANIA 10133

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workplace. lations, according to the suit.

"Poisoned and Fired, He Says"; 1983; Works Cited #30

Cleve Goss, a foreman at a Philadelphia scrap-metal firm, requested a temporary transfer after learning he had contracted lead poisoning at his

Instead, his bosses fired him, according to a suit filed in U.S. District Court here Wednesday by the U.S. Department of Labor. The level of lead in Goss' blood was 1.5 times that considered safe under federal regu12



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· Tribudg, hep. 16, 181 To Paladights b **OSHA** inspector testifies workbench on access to Burlco plant In they believe sectors de gesterel de las Cite Peperty sep-ter a la Penetten per trie Manuel periode peters South frank de de las las las in tries anti-Philadelphia, we're growing prior special data wells: Units well-an average data com-pare officials had in an abast for exception of the Structure Josef in a result of the Structure Josef in a special in the right direction. Bernet Museum + 51 atter representing 1988, had atter 1 in the next tenners for an in-Yours. that, N.A. Gollan, an intor that they and not hadness a balan-al warrant trends for Judge Broad-ran total OR one ascannik to Judy. for and, they made hay wait two K-9 squad's problems persist, Pa. panel told persist, Pa. panel told Here's a sample of what's in store for you. Opholes ats \$69 + \$39 -- \$79 -- \$49 Washington Twp. agrees to double school payment Today thru Sunday. The big one! The sale you've been waiting for! For 5 important days you take. ENTIRE STOCK OF NEW FALL "Look what I found COORDINATES at Bailey's!" Con Cub Russ Tops Smith & Jos Compan Cornal Pant-Ber Collegatown Act III Norme Kemali Lisepi Willia Jack Winter Carole Little These an input of the local states of the loca P.S. Shandell Bailey Bankss Biddle PL/MEDUTH METTING MALL Planauth Maning, PA.435-380 + M LANCASTER AVE, Devon, PA 100-3078 + ELEME AAM, EDUARE, EXem Park, PA.0: The new main from invarion.) RE-8031 + VEA & MARTENCARD

"OSHA Inspector Testifies on Access to Burlco Plant"; 1984; Works Cited #27

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tions.

The federal government has accused Thermal Reduction Corp. in Philadelphia, the parent company of Riverside Metals, of acting in contempt of a court order that gave OSHA permission to conduct a thorough investigation at the Riverside plant.

Specifically, OSHA is contending that the company hindered the investigation by hiding machinery, withheld medical records, lied about injuries to workers and physically intimidated the agency's inspectors. OSHA has asked that U.S. marshals be assigned to accompany OSHA inspectors and that company officials be jailed if they try to interfere with the agency's investigation. Divoncide Matel

per processing, was dangerous. OSHA officials testified earlier that samples taken this year showed that workers were being overexposed to lead particles that are released when lead-sheathed cables are peeled open and the copper inside is removed for reprocessing. Thermal Reduction supplies copper to the U.S. Mint. In October, OSHA fined Thermal Reduction \$43,050 for failing to protect workers at its Philadelphia plant from overexposure to toxic lead dust and other safety hazards. OSHA contends that the company later moved

92 Site Research

questions about the tirm's opera-

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24-NE Thursday, Sept. 8, 1968 The Philadelphia Inquires

Holy Family will block drive, at least for now <text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text>

COMMUNITY NEWS

Disposal World seeks to fend off eviction

TRAM, from Page 3

The Bentley subdivision is on the cestern edge of Forest Hills Company, north of Byberry Road.

STOCK BARRIER

Somerton civic group seeks review of developer's permits

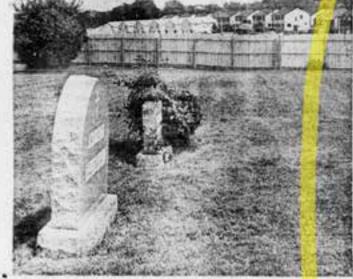
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the street.

"Landlord Seeking Eviction of Disposal World"; 1988; Works Cited #22

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protective asphalt cap. When it agreed in October 1986 to lease the site to Disposal World, Metal Bank insisted that no digging take place without its permission. In March, however, Brown said he saw a six-man work crew using shovels and jackhammers to drill out about 10 cubic yards of asphalt to install a scale to weigh incoming trash. The court papers filed by Metal

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7301 Milnor

Thursday, Sept. 8, 1988 The Philadelphia Inquirer 3-NE

Landlord seeking eviction of Disposal World

Synagogue fire

temple's spirit

fails to extinguish

 By Bill Miller

 memory begins with the first memory begins with the

group calls for review of building By Burr Van Atta

The Somerton Civic Association has asked for a review of building

has assed for a review of beaching permits for function, a blocker subdown subdown as a second to the second secon ing permits for work in progress.

ing permits for work in progress. The Zoning Hoard of Adjustment last November granted the builder, Predavid Builders & Developers of 19809 Rosewell Bird, permission to proceed with the project on the east-ern edge of Forest Hills Cemetery, just north of Byberry Road. The ap-proval was on condition of accup-tance by the Water Department.

"If what he's doing is legal, fine, We've got no gripe," Handl said. "But if it isn't, then something should be Initially, the storm sewers and

streets in the development were de-signed as private facilities, but the Water Department rejected the

Nevertheless, permits were issued for 19 houses on the basis of earlier poning regulations.

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"Landlord Seeking Eviction of Disposal World"; 1988; Works Cited #22

The set on by the last her best her and her TEMPLE SHOLOR eð. 0

<section-header><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text><text> A Sunday service is set in the Temple Shalom sanctuary.

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Metal Bank's action was not related to the city's recent lawsuit seeking to close Disposal World, also known as Philadelphia Carting Co. The city says it wants Disposal World closed unless the premises is properly licensed and wants the place cleared of flies, rats and debris. State and city inspectors have filed repeated complaints about conditions and odors. Co far Disposal World president



plans.

Somerton

16



Malloy arms himself against what he says is an invasion of rats from a nearby company that is operating without a state permit as a trach-transfer station.

Rat invasion blamed on trash company

7301 Milnor

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· Interior and the second second

The people on third shift are scared to death in the shop." The rat invasion is the latest subject in a series of complaints by Malloy and others stemming from the trash business, Disposal World Inc., 6801 State Rd. Among other things, there have been problems with flies, odors and debris. Disposal World, also known as Philadelphia Carting Co., has had a checkered history since it opened in the fall of 1986. It accepts trash from commercial accounts and ships it to landfills. The company has remained in business even though it does not have a state permit as a trash-transfer station and despite repeated skirmishes with city and state agencies.

"It's beyond my comprehension how they can stay open this long," Malloy said. "It just seems very unfair to the people who live in the Tacony area and the people who work in the area." Noarly souon wooks and Council.

"Rat Invasion Blamed on Trash Company"; 1988; Works Cited #23



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244			Alan Hunter, Preside
			300 Christian Str Philadebtau, P.4. 191-
	March 6, 2003		
	Tony Naccarato 111 S. Independence I Philadelphia, PA 1910		the real particular to the real of the rea
	rinaudipina, rA 1910	~	
	Dear Tony,		
	It's been awhile since y	we last spoke and I hope you	and Lou are doing well.
	I had asked for a letter Looking back I can see ask at the time and it's	r of support for an alternative e what a difficult position this r s to you and Lou's enormous o ng. When our communication	omewhat awkward. At that time in regard to the Metal Bank site, request put you in. It was a lot to cradit that you were open at all to his broke down, it also ended the
	which they were worki review Powell-Harpste and release \$5 million	ing on at the time. This was tad suggests a strategy when to create an urban version o een distributed to the Universi	tinue the Environmental Review, i just recently completed. In this reby the land can be cleared up of the Stroud center. The report ity of Penn, as well as the Stroud
-	In addition, the Mushro with the general conce into the Delaware Rive	ims of the neighborhood, such	picture. Thus there is no dealing a as offensive odors or not fitting
	There is no longer a di All of these ideas have	frect connection to Union Con been developed independent	poration or the Mattioni law firm. ly.
	Think about it		
	It is now possible to h Tacony, as well as a se	outhern annex at FDR Park.	troud/Penn Education Center at This center would be created in es/schools along the river.

La de de to fait Photo of copper cable spools on the Metal Bank Site. Date unknown. The water tower photographed still stands.

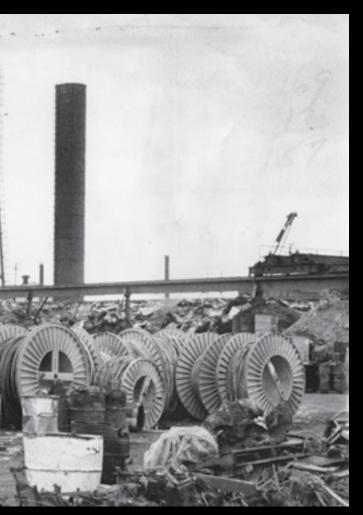
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Letter from Alan Hunter of Urban Strategies; 2003; Works Cited #13

100 Site Research

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7301 Milnor





1890 photograph of Delaney Glue Works in Tacony, Pa.



OVERHEAD CRANE stacks reals of cable which farm is reclaiming for a large copper mill. Goldstein truck, in background, will be unloaded by another crane. Piles of tin ingets, at left, are finished products of smalling process.

L. GOLDSTEIN'S SONS: Inc. Beak Mamerica, Inc A NEW ERA

In what is often a freebooting industry, a local scrap processor and secondary smelter has earned a position of industry leadership by offering customers a gamut of services, a sound cash position and a wide-awake engineering system for stepping up their profits from salvage.

Unt MAIN INFFERENCE, a cynic has said, between dealing the way a manufacturer handles his salvage operations can in the scrap metals marker and playing with professional card sharks is that, once in a while, a gambler will let you mean the difference between red ink and black.) Others learned of it the hard way on the short end of safvage deals have washed their hands of plant scrap recovery plans, left them to be formulated and negotiated by second-string who This, of course, is not true. supervisors, "The manufacturer who neglects to get the most dollars out

But it is true that the scrap metal business is less known for its vital role in the economy (the car you drive is 60% recon-verted scrap) than for the fast shuffles it has spawned.

Yet in this freebooting industry, the local firm of L. Goldstein's Sons, Inc. has dealt itself a position of industry leadership by keeping its cards out of its sleeve and on the table. Part of the reason can be traced to the inherent stability of

an old family business-it is now 94-and part of it to the fresh, vigorous policies of the young men who run it.

But most of the reason is found as the quinter of management tenets the firm rigorously adheres to: Service, integrity, reliability, economic stability and profit. Old hat as these principles may seem to the average executive, they are unosual in the world of server

The red and the black. And addly enough, it's a world few businessmen know as well as they should. Some learned about it last year as the '58 profit squeeze sent them combing their operations for fat to trim. (In many instances, 24



Photo of L. Goldstein's Sons, Inc. smelting operation in Greater Philadelphia Magazine, 1959.

FEB 1959 2/2. Oh. mag

of his plant's salvage operations is often the same man who goes over other operating costs with the sharpest pencil and strongest glass," points out Irvin Schoesch Jr., at 31 one of the most adept minds in the business.

Schorsch, who pilots L. Goldstrin's Sons Inc., bears no more resemblance to the traditional wheeler-dealer than, say, Admiral Halsey bears to Captain Kidd. Yet this firm is a leader in a business so highly competitive that penny differentials can win five figure contracts.

Neither Scheesch nor his brother John, head of the Thermal Reduction Corporation, sare metals affiliate of the company, can afford to ignore the industry's frantic price wars, but they do manage to steer clear of its short-range aspects.

The war itself is an unusual one since it is within a price structure that the scrap dealers have no part in making. The price per pound of metals is set by Anaconda Copper, U.S.

GREATER PHELADELPHEA MAGAZINE



River bank of 7301. Source unknown. Photograph included within a Metal Bank Superfund Site search at Temple University Urban Archives.

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MORE RESEARCH DOCUMENTS

Click through to access

7301 Milnor

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1950s–1960s The southern portion of the Site is created by gradually filling in the Delaware river.

> 1955 The Air Pollution Control Act of 1955 is the first legislation passed to

research the scope and sources of air pollution.

> 1968-1969 Metal Bank begins recycling electrical transformers at the Milnor St property. Used transformers are stripped for copper recycling and the reclaimed oil is then stored in underground tanks. The electrical transformers frequently contain PCBs, polycyclic aromatic hyrdrocarbons ("PAHs") and other semi-volatile organic compounds ("SVOCs"), volatile organic compounds ("VOCs"), metals, and other hazardous substances.

> > **1972** Congress passes the Clean Water Act with broad bipartisan support. President Richard Nixon vetos the bill, but within a day Congress overturns the veto, and the bill becomes law.

1963 The Clean Air Act is

passed to research and address air pollution on a national level.

> **1973–1977** Further sampling and analysis is performed by the EPA at the Site.

1970 Metal Bank is cited five times for air pollution and issued fines by the City of Philadelphia. On December 31. President Richard Nixon signs the Clean Air Act into law, granting the EPA the power to take action against air pollution.

> 1972-1973 USCG collects soil and oil spill samples that at first do not detect PCBs.

1972 On August 3, the U.S. Coast Guard and Pennsylvania Environmental Inspectors respond to an oil leak in the Delaware River near the Quaker City Yacht Club. Four days later an inspection begins that traces the source of the oil to the Site at 7301 Milnor St.

> 1972–1973 Metal Bank ceases reclamation operations on the Site and conducts surficial remediation. They do not make an effort to clean up anything subsurface and do not do anything to prevent oil from reaching the river.

1977 USCG re-analyzes oil samples using new technology and detects

PCBs in concentrations over 800 parts per million while soils and liquids detect PCB levels at 1,579 ppm.

Mid 1970s Metal Bank installs the

lower rip rap in response to USCG request that they armor the shore. The lower riprap is composed of rubble, bricks, and concrete, and is designed to protect the upper riprap and act as a buffer to oil flowing towards the river.

> **1978** Roy F. Weston is hired by the EPA to investigate the extent of contamination at the Site. Weston's report shows that approximately 21,000 gallons of PCB-contaminated oil had

pooled in the subsurface of the Site.

1980 In a letter. Philip Levin seeks

support from Senator John Heinz pleading that the government and EPA have unfairly accused Metal Bank of polluting. The EPA sends Heinz a letter in response.

> 1982 On December 30, Metal Bank, Inc. is proposed to the National Priorities List.

1987 EPA sends letters to

individuals and companies identified through invoices made to Metal Bank notifying them that they are Potentially Responsible Parties (PRP) under CERCLA.

1989 In January, Metal Bank petitions

the court to stop the oil recovery operation because it believes that all the oil has been recovered. However, in March the EPA collects samples from the monitoring wells on the Site and finds that PCB-contaminated oil is still floating on the aquifer.

1989 EPA conducts soil sampling at

adjacent St. Vincent's school revealing no health risks.

1976 Congress passes section 6(e) of the Toxic Substances Control Act which essentially bans the use of PCB's.

> **1980** The EPA files a civil suit against the Union Corporation and two of the property's former owners; Irvin G.

Schorsch, Jr. and his brother John B. Schorsch (also Metal Bank). The government sues under two statutes: the Resource Conservation and Recovery Act ("RCRA"), the Toxic Substances Control Act ("TSCA"). which regulates PCBs, and also sought injunctive relief as well as costs of the suit.

1983 EPA settles the suit with Metal

Bank after they agree to remediate the Site's contamination by constructing an oil recovery system to pump out and remove the oil. The Site is formally listed as an EPA National Priority on September 8

1980-1981 Dr. Edward W. Kleppinger, Metal Bank's environmental consultant, observes scrap capacitors on the mudflat adjacent to the Site. The scrap capacitors contained extremely concentrated mixtures of PCBs.

1985–1986 Metal Bank of America

does its own initial 'clean up.' They hire Dr. Kleppinger to implement a system consisting of three recovery wells, several oil separation units, and several 55-gallon drums containing activated carbon to treat groundwater.

> **1994** The Remedial Investigation (RI) Final Report documents widespread contamination by PCBs, TPH, PAHs, and other hazardous substances at the Site.

> > **1995** Based on the results of the RI Final Report, the EPA prepares a proposed plan for remediation at the Site.



the Site.

2000 Dr. John D. Schell, the Defendants' expert on environmental risk assessment, observes capacitors or parts of capacitors in the lower rip-rap and on the mudflat adjacent to the property during his work at the Site.

by the EPA in February and remedial actions begin in July. Remedial actions included, but were not limited to, the selected excavation and backfilling of soil, the installation of a soil cap on the entire southern portion of the Site, and the selected excavation and capping of approximately 4.6 acres of sediments in the Delaware River.

Environmental

Natural History

Area Development

7301 Milnor

Environmental



2002 Phase One of the CERCLA and RCRA case is tried over the course of seven weeks starting on August 19 to determine whether the defendants are liable. Judge Giles presides over the 16 day Phase One trial, between August 19 and September 24 with the government presenting 12 witnesses and hundreds of trial exhibits on the Site history and defendants' liability. The Utility Group submits a Final Design Report for cleanup of the Site, however, due to new evidence from the RI/FS, a revised Remedial Design was necessary.

2001 In April, the Commonwealth of Pennsylvania advises the public to eat no more than one meal of fish caught in the state's waterways per week. A stricter advisory is issued for the approximately 20 miles north of the Site asking the public to limit or avoid consumption of white perch, striped bass, carp channel catfish, and American eel due to PCB contamination and smallmouth bass due to mercury contamination.

1991 The EPA signs an Administrative Order of Consent with ten utility

companies that sent used transformers or arranged for used transformers to the Site for disposal and/or treatment. These companies became the nucleus of the Cottman Avenue Potentially Responsible Parties (PRP) Group (the "Utility Group"), which was actively involved in litigation related to the selection and implementation of remedial actions for

2003 The EPA approves the utility group design plan. Union Corporation and U.C.C. -Metal Bank file a consolidated bankruptcy. As part of the settlement they establish the Union Trust, a mechanism for managing the Metal Bank Site property and three other properties in order to provide substantial funding for future remedial actions.

2003 On January 21, Judge Giles rules that the defendants are liable for the cleanup and the government incurred response costs in connection with the contamination. The court finds that the reclamation operations at the Metal Bank Site are "very sloppy... the Site operators did not regard the oil as posing any health risks and were not careful about transformer draining and storage procedures," resulting in oil spills and soil contamination.

2008–2010 Remedial construction takes place which includes, but is not limited to, building a sheet pile wall, the excavation and disposal of contaminated soil, and the removal and disposal of the underground storage tank.

2006 The revised remedy for the Site is documented.

2012 Sheet pile wall cracks appear.

2010 Remedial actions wrap up at the Site and the EPA signs preliminary closeout report.

2008 A revised RI/FS is approved

2013 Five-year review construction is completed in accordance with the requirement of revised Remedial Plan and consent decree. Available data suggests that the remedy is protective in the short-term.

2020

2016 Cottman Ave PROP Group sues AMEC Foster Wheeler Environmental Infrastructure Inc. (whose predecessors built the wall) after they were forced to fix the wall themselves.

SITE TO BE SEEN

FNVIRONMFNTAL IMPACT

Source

Research Excerpt

"U.S. Sues Firm in Chemical Leakage Periling City Water"; 1980; Works Cited #29

"Hopes Buried in Fund"; 1983; Works Cited #32

"Toxic Cleanup in Tacony in Danger"; 1995: Works Cited #12

- 01 "The Justice Deparment has sued a Philadelphia waterfront firm to force it to remove highly toxic and cancer-causing chemicals that have been leaking into the Delaware River near Cottman Ave. and 'could contaminate' half the city's water supply."

02 "Their disgust with the program and its administrator, the Environmental Protection Agency, was heightened with each new allegation several months ago that the fund has been used as a political tool by EPA officials and the Republican administration."

03 "For 15 years residents of Tacony have been waiting patiently for the federal government to clean up a piece of their neighborhood that happens to be one of the worst toxic waste sites in the nation."

- 04 "'I'm really upset,' said Jim Labenz, president of the Tacony Civic Association. 'We are exposing city residents to carcinogens.'"
- 05 "Republican-backed bills in the House of Representatives and the Senate would make it difficult to get offenders to pay for cleanups, and also shift more of the cost to federal taxpayers, Borski and McCabe said."

06 "What's happening at the Metal Bank, an industry-turned-Superfund-site in Tacony? 'Not a damn thing,' said Jerry Prior, of the Tacony Civic Association. 'It's been about 18 years now,' Jim Labenz, the association's president... The site, idle since the 1970s, was named to the Environmental Protection Agency's list of priority Superfund sites 15 years ago."

Court notes: USA v Union Corp; 2003; Works Cited #16

"Superfund Update":

1997: Works Cited #31

- 07 "In its May 8, 1979 report, EEA estimated that the extent of the oil spill from the ruptured UST affected an area of approximately 75,000 square feet and contained about 11,700 to 46,750 gallons of oil, and involved 115 to 460 pounds of PCBs."
- **08** "All Government (EPA) witnesses present during the January 2002 sampling event described a strong, oily, petroleum smell coming from the shallow holes dug to gather sediment samples."

"We are unwilling to hold that merely by splitting off the particular part of its 09 operations that resulted in its environmental problems and shifting the remainder of its assets, employees, management, customers accounts and production, methods to another corporation, an otherwise responsible corporation could all but completely wash its hands of its environmental liability."); see also Board of Trustees of Teamsters Local 863 Pension Fund v. Foodtown, Inc., 296 F.3d 164, 171 (3d Cir.2002) (purpose of alter eqo liability doctrine is, inter alia, to prevent an independent corporation from being used 'to defeat the ends of justice' or 'otherwise to evade the law.')"

"The record shows that by the end of 1971, approximately 2516 transformers 10 had been shipped to Metal Bank from PSE & G under the first Hirtz Brothers transaction. Between June of 1972 and October of 1973, 31 transformers were shipped from LILCO and approximately 6,844 transformer were shipped from PSE & G to the Site."

"For the foregoing reasons, the court finds that defendants John B. and Irvin G. 11 Schorsch, Metal Bank, and Union Corporation are responsible parties within the meaning of CERCLA and RCRA for contamination of the Cottman Avenue Site. The court also finds that the Government has incurred response costs in connection with the contamination."

"EPA monitoring in 1989 showed that despite eight years of groundwater pump 12 and treat operations at the Site, a layer of PCB-contaminated oil at least three inches thick was still floating on the groundwater at some portions of the Site. PCB concentrations measured in the oil layer were 1,539 ppm in 1977 prior to the oil recovery operation and almost the same, 1,540 ppm, in 1989 when the oil recovery operation was being terminated."

"On January 21, 2003, in an 84-page opinion Chief Judge James T. Giles ruled 13 on Phase One of the trial that the former and current site owners-Union Corporation, Metal Bank of America Inc., and former Metal Bank owners and officers Irvin G. Schorsch, Jr. and John Schorsch-are liable for EPA's costs related to the cleanup of the Site. He also rejected each and every one of the Defendants' theories and arguments."

"Furthermore, based on a risk analysis of these contaminants, EPA also found 14 that recreational fishermen may be at risk from eating contaminated fish; future construction workers may be at risk from the PCBs in the oil beneath the site; as well as impacts on fish, bivalves, and animals feeding in the mud flats."

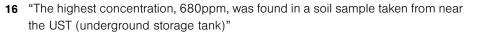
"The consultant's system consisted of three recovery wells, several oil separation 15 units, and several 55-gallon drums containing activated carbon to treat groundwater-which an EPA remediation engineer called a 'Rube Goldbergish' contraption. The system removed most, but not all, of the subsurface oil at the Site. Metal Bank's consultant argued that it was physically impossible to extract any more oil. He analogized the Site to an oil field, where, he asserted, only 33% of the oil was recoverable. However, this analogy is faulty at best. First, in oil fields the

"PCBs in the Delaware: A Thirty-One-Year Technical and Legal Odyssey"; 2005; Works Cited #4

cleanup action level is 25 ppm. See Figure 4: Remedial Investigation test pits (Dossier p. 131 and 145). And see Figure 5: Uncovering the UST during the 1999 Pre-Design Investigation, note the oily (dark) quality of the subsurface soil (Dossier p. 132).

Note that the EPA

porosity is relatively uniform, whereas at the Site the fill's porosity is very heterogeneous. Second, the consultant did not consider that in oil field extraction operations, companies use secondary and tertiary recovery after primary recovery dwindles to a drip."



- locations of soil borings/ 17 "The presence of chunks of concrete, bricks, wire, pipe and other material in the heterogeneous fill may offer preferential pathways for the migration of contaminants... The court finds that the oil has found, and continues to find, pathways from the ground and groundwater through the rip rap, upper and lower and into the beach and mudflat areas. Defendants have failed to show that the pollution in the mudflats was caused exclusively by a source other than the Cottman Avenue Site.' (Court Opinion at 15). The defendants argued that an upgradient lampblack factory was responsible for the TPH, PAHs, and other contaminants."
 - 18 "Historical aerial photos show that most of this area is located in what was once part of the Delaware River and was gradually filled in beginning in approximately 1950. Heterogeneous urban-fill material, most of which was placed before 1968, is about 15 feet thick. Its origin is unknown, but it contains construction debris, including chunks of concrete, brick, lumber, cloth and metal."
 - **19** "The operation called for dismantling the used electrical transformers, emptying them of their oily liquid, and pulling their copper cores. The reclamation operations were very sloppy."
 - 20 "The levels in the tank also rose when the tide was in, even if the tank was capped (Court Opinion)."
 - 21 "The 1978 Report showed that as many as 21,000 gallons of PCB-contaminated oil had pooled in the subsurface of the Metal Bank Site. The report concluded that this oil was releasing PCBs to the underlying groundwater and that PCBs from the Property were contaminating the Delaware River through oil and groundwater discharges. The 1980 report roposed a remediation plan."
 - 22 "In its May 8, 1979 report, EEA estimated that the extent of the oil spill from the ruptured UST (underground storage tank) affected an area of approximately 75,000 square feet and contained about 11,700 to 46,750 gallons of oil, and involved 115 to 469 pounds of PCBs."

"The Death of the Delaware River": 2019: Works Cited #7

- **23** "In 1972, Congress passed the Clean Water Act with broad bipartisan support. President Richard Nixon vetoed the bill, but within a day Congress overturned the veto, and the bill became law."
- 24 "The law made it illegal to dump any pollutant into waterways without a permit from the EPA and set wastewater standards for industry. It also offered up billions of dollars to cities and states to upgrade their sewage treatment plants, requiring

municipalities to use biological science to treat their into the river."

"In 1964, the bacteria count at Philadelphia's water intake at Torresdale was 25 39,300 per 100 mL."

"Once plentiful caviar and sturgeon also disappeared. Combined with losses of 26 shad and other fisheries, that spelled the death of a regional industry once worth hundreds of millions of dollars."

Images

Site image of Metal Bank: 1995, 2001, 2005, 2010; Preassessment Screen Determination.

Site Plan of Metal Bank Site which illustrates areas of 1997 Record of Decision.

Illustration of Soil Boring/Test Pit Locations with Tota EPA 1997 Record of Decision.

Map illustrating Site proximity to Public Water Intakes EPA 1997 Record of Decision.

EPA consultant photograph showing color and cons oil infused soil samples.

Site photos of sheetpile wall repair 2016; from EPA second five-year review of Metal Bank Site.

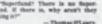
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al PCBs > 25 ppm; from	29
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Hopes Buried In Fund

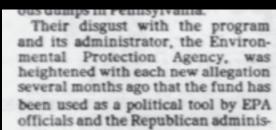
nday, Aug. 16, 1983 Philadelphia Daily N



Must Judges Swim with the Political Current, or Drown?

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"Hopes Buried in Fund"; 1983; Works Cited #32

Enviror mental Impact

> "U.S. Sues Firm in Chemical Leakage Periling City Water"; 1980; Works Cited #29

been leaking into the Delaware River near Cottman Ave. and "could contaminate" half the city's water supply. Environmental Protection Ag



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Environmental Impact

TUESDAY, DECEMBER 12, 1995

Toxic cleanup in Tacony in danger

Residents, congressman cite GOP cutbacks

PAGE 12

PHANTOM RIDER

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Michael McCabe of EPA and Rep. Bob Borski at Metal Banks Inc

Students turn Orange line into Learning Express

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a speeding Broad Street Solway express train. Erilesson and his 14 students had the lead car all to them-solves in a five-car firsts for a full hour to conduct their en-oriments.

full hour to conduct their ex-periments. Phantom Rider, who normally goes along for the ride, this time wort for the edication. Be received a sound one, ion, rom Erikason, 20, a Northeast "baladights resident who rides ha solway to get to the alterna-tive loarning center at 15th and donat Version streets.

Mouth version streets. As do his students Sequicil Bol-den, Friea Moses, William Says-ari and Rahisha Mirnor. Their experiment involved rolling a tennis ball down a liny range to study what effect accel-eration had on the ball's move-ment.

ment. "Upon acceleration, the ball moved down the ramp at 4:18 of a second," Rahinka sold. "But when brakes were applied – do-celeration — at the approach to a station, we proorded a 3.89 sec-ords reading."

onds reading," Two years ago, the idea to use the subway as a laboratory struck Rriksson like that apple struck Rriksson Network, the mathematician who formulated the laws of gravity, motion, and the elements of differential cal-culus. Locum. Eviksion persiaded SEPTA to Eviksion persiaded SEPTA to



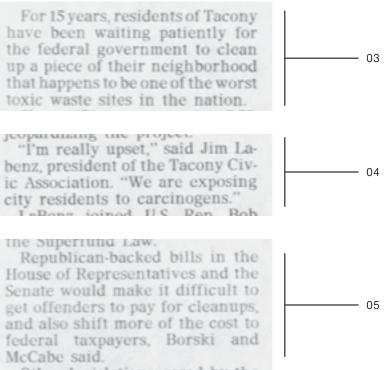
reached a constant rate of speed that the errant hell began to hit on the same coordinates, drop at-ter drop, reported Kim and

protractors to measure the effect acceleration had on the man of swinging weights. While up in front, Stanford Brinkley weak bury with a stop-which and his accelerometer. By combining his accelerometer was able to determine distances between stations from Walson

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Environmental Impact



Environmental Impact

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Update

PHIA DAILY NEWS DECEMBER 12, 1997

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"Superfund Update"; 1997; Works Cited #31

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Environmental Impact

defendants' spills became commingled with all of the other oil, making any responsible defendant responsible for the entire clean up.

During 1972 and 1973, the USCG collected samples from the Site, including samples of the soil and of the oil spill. Initially, the USCG did not detect PCBs in the oil samples. In late 1972 and 1973, in response to recommendations made by the USCG, Metal Bank took limited actions to clean up its property. It performed some surficial clean up of the southern portion of the property where the concrete pad was located, placed "booms" out to contain and collect oil in the river and along the shoreline, installed cylindrical caissons to capture the oil as requested by the USCG, and covered the ground with clean soil. However, Metal Bank did not undertake any efforts at that time to clean up subsurface contamination or to prevent subsurface oil from migrating into the river. (See Gov. Ex. 62 at 4).

In the mid-1970s, in response to a USCG request that Metal Bank armor the shore, Metal Bank installed the lower rip rap, consisting of smaller pieces of rubble, broken bricks and concrete. (T. Tr. at IX-126). The lower rip rap was designed to stabilize the lower portion of the upper rip rap and to act as a buffer both for oil spills coming from the land toward the water and for oil that might come from the River toward the land. Thus, the lower rip rap likely was placed on top of oil that had not been recovered by the methodologies utilized by Metal Bank. At trial, although defense expert Dr. Kirk Brown did not agree that oil or oil residue is currently seeping from the Property through the lower rip rap, he opined that some oil could have been trapped by the lower rip rap installation and that the perceived oil sheens could be extractions of the oil deposit that are coming to the surface rather than seepage of oil trapped in subsurface areas of the Property bordered by the upper rip rap. (T. Tr. at IX-141).

In September 1977, in response to continuing concerns, the USCG and other government agencies re-analyzed the 1972 samples using more sophisticated analytical technology and detected the presence of PCBs in concentrations over 800 parts per million ("ppm"). (See Def. Ex. 53 at 1-4; Gov. Ex. 62 at 5; see also T. Tr. at I67). Analyses of soils and liquids samples at the Site detected the presence of PCBs at levels up to 1579 ppm. (See Def. Ex. 53 at 1-1-1-44). Based on these findings, EPA hired Roy F. Weston, Inc. ("Weston"), to define more fully the nature and extent of PCB contamination at the *371 Site. Weston conducted an investigation and documented its findings in two reports dated October 1978 and March 1980. (Def. Exs. 53 and 63). The 1978 Report showed that as many as 21,000 gallons of PCB-contaminated oil had pooled in the subsurface of the Cottman Avenue Property. The report concluded that this oil was releasing PCBs to the underlying groundwater and that PCBs from the Property were contaminating the Delaware River through oil and groundwater discharges. (See Def. Ex. 53 at 4-1).

At Metal Bank's request, Energy and Environmental Analysis, Inc. ("EEA") also investigated conditions at the Property. In its May 8, 1979 report, EEA estimated that the extent of the oil spill from the ruptured UST affected an area of approximately 75,000 square feet and

contained about 11,700 to 46,750 gallons of oil, and involved 115 to 460 pounds of PCBs. The EEA report also estimated that groundwater transporting oil to the Delaware River moved at the rate of 17,053 gallons per day. (See Gov. Ex. 151 at 6-7, 11, 23). On April 23, 1980, the United States filed suit seeking injunctive relief and costs. Based on a Hazard Ranking System score of 33.23, EPA listed the Site on the Superfund National Priorities List ("NPL") in 1983. See 48 Fed.Reg. 40669, 40673 (Sept. 8,1983).

D. Unsuccessful Remediation Attempt

On December 13, 1983, the court approved a Stipulation between the United States and Defendants that required Metal Bank to install and operate an oil recovery system until all recoverable oil was removed from the subsurface of the Site. Defendants hired Dr. Kleppinger to implement the system. The system consisted of three recovery wells, several oil separation units, and several 55-gallon drums containing activated carbon to treat groundwater. (T. Tr. at IV-40-48). The system removed most, but not all, of the subsurface oil at the Site. (T. Tr. at V-8, 260-261). In the late 1980s, defendants shut down the system and dismantled it, placing approximately one to two feet of clean fill material over the surface of the Southern Area. (T. Tr. at 1-91; IV-109). After eight years of remedial efforts, defendants took the position that all feasible remediation had occurred and that the clean-up had been successful in that all remaining oil was permanently trapped and posed no risk of migration to the Delaware River or to the area of the embayment.

However, the Government did not agree that the Site no longer posed a substantial hazard to human health or the environment. EPA monitoring in 1989 showed that despite eight years of groundwater pump and treat operations at the Site, a layer of PCB-contaminated oil at least three inches thick was still floating on the groundwater at some portions of the Site. (Gov. Ex. 644 at 9; Gov. Ex. 494 at X-XX-XX; Gov. Ex. 488 at 9). PCB concentrations measured in the oil layer were 1,539 ppm in 1977 prior to the oil recovery operation and almost the same, 1,540 ppm, in 1989 when the oil recovery operation was being terminated. (Gov. Ex. 488 at 17). On May 1991, EPA signed an Administrative Order by Consent with ten utilities, which had sent transformers to the Site and organized themselves as the Cottman Avenue PRP Group ("PRP Group"). Pursuant to the Administrative Order, the PRP Group conducted a Remedial Investigation/Feasibility Study ("RI") to define the nature, extent, and sources of contamination at the Site and to estimate the health and environmental risks associated with the contaminants at the Site.

The RI Final Report, dated October 14, 1994, documented widespread contamination by PCBs, TPH, PAHs and other hazardous substances at the Site. (Gov. Ex. *372 494). Pockets or layers of oil beneath the ground surface were found to contain PCBs at concentrations in the range of 520 ppm to 1,090 ppm. Courtyard Area soils at the ground surface and to a depth of approximately two feet were found during the RI to contain PCBs at concentrations

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07 (cont.

they found measurable oil in 10 of the wells and piezometers, with the thickest measurement being 15 inches of oil in one of the piezometers. (Id. at Table 1). Defendants also excavated five trenches using a trackhoe and observed oil in all of the trenches except for Trench # 3, which was not fully excavated due to the presence of a gas line. (Id. at 36-43). A layer of oil approximately four inches thick was found floating on the groundwater in one of the trenches. (Id. at 38). In addition to measuring the oil thickness, Defendants tested for PCBs in the groundwater and oil underneath the property, as well as in a groundwater "seep" discharging at the base of the upper rip-rap into the mudiflat area. (Id. at 6, 34-35). PCBs in groundwater were measured at levels up to 7.2 ppm; PCBs in oil were measured at levels up to 530 ppm; and PCBs in the groundwater seep were measured at a concentration of 0.22 ppb. (Id. at Tables 2 and 3).

In January 2002, EPA's consultants returned to the Site to sample mudflat sediments in the area on the western edge of the Site. Sediment samples yielded PCB concentrations up to 22.1 ppm, and samples of oily liquid that pooled in small holes excavated in the mudflat yielded PCB concentrations up to 360 ppb. (Gov. Ex. 499 at 10 (Table 3), 12 (Table 5)). Both the sediment and groundwater samples also showed significant levels of PAHs. (Id. at 11 (Table 4) and at 13 (Table 6); see also T. Tr. at 1-102-04). All Government (EPA) witnesses present during the January 2002 sampling event described a strong, oily, petroleum smell coming from the shallow holes dug to gather sediment samples. (Gov. Ex. 499 at 6; T. Tr. at I-105, 106-07).

EPA's consultants again sampled mudflat sediments and groundwater on June 19, 2002. Analysis of these samples indicated the presence of dioxin-like PCB congeners, PAHs, volatile organic compounds ("VOCs"), semivolatile organic compounds ("SVOCs"), dioxins, and furans. (Gov. Exs. 688 and 642A; T. Tr. at I-116-24).

E. Nature of the Contamination

The Metal Bank Site is contaminated with PCBs, PAHs, SVOCs, VOCs, petroleum hydrocarbons ("TPH"), metals, dioxins, furans, pesticides and other hazardous substances. (Gov. Ex. 494 at Table 6-1; Gov. Ex. 488 at 14-27; T. Tr. at 163-65). The levels and scope of contamination have been documented in the RI/FS, the ROD, the PDI, the 2000 Trench Study and the mudflat data collected during 2002. (Gov. Ex. 717; T. Tr. at I-52-66).

1. PCBs

PCBs are a group of synthetic organic chemicals which were widely used in the United States because of their chemical stability and low reactivity. (Gov. Ex. 725 *375 at 1: Gov. Ex. 644 at 19). Each PCB molecule consists of a chlorinated biphenyltwo hexagonal rings of carbon atoms connected by a carbon-carbon bondcontaining from one to ten chlorine atoms attached in various locations. (Gov. Ex. 725 at 1). There are 209 different types or

not require that all of the elements be satisfied, but rather, that under a totality of the circumstances, the evidence demonstrate that the parent exercised such pervasive control over the subsidiary that the subsidiary was merely the alter ego of the parent. See Atlantic Richfield, 847 F.Supp. at 1280-81; see also Tonolli 4 F.3d at 1222.

In addition, the test requires an element of "injustice or fundamental unfairness."

DeWitt

Truck Brokers, Inc. v. W. Ray Flemming Fruit Co., 540 F.2d 681, 687 (4th Cir.1976); Atlantic Richfield, 847 F.Supp. at 1280. A number of these factors can be sufficient to show such unfairness. United States v. Pisani 646 F.2d 83, 88 (3d Cir. 1981) (citing DeWitt, 540 F.2d at 687) (holding that "undercapitalization, coupled with disregard of corporate formalities, lack of participation on the part of the other stockholders, and the failure to pay dividends while paying substantial sums, whether by way of salary or otherwise, to the dominant stockholder, all fitting into a picture of basic unfairness, has been regarded fairly uniformly to constitute a basis for an imposition of individual liability under the doctrine.")).

The court finds that the control exercised by Union Corporation over the affairs of its subsidiary, Metal Bank, is sufficiently pervasive to justify piercing the corporate veil. Moreover, it would be fundamentally unfair to allow Union to circumvent liability for the environmental contamination that it helped to create, merely by shutting down its subsidiary. See United States v. Carolina Transformer Co., 978 F.2d 832, 840 (4th Cir, 1992) ("We are unwilling to hold that merely by splitting off the particular part of its operations that resulted in its environmental problems and shifting the remainder of its assets, employees, management, customers accounts and production methods to another corporation, an otherwise responsible corporation could all but completely wash its hands of its environmental liability."); see also Board of Trustees of Teamsters Local 863 Pension Fund v. Foodtown, Inc., 296 F.3d 164, 171 (3d Cir.2002) (purpose of alter ego liability doctrine is, inter alia, to prevent an independent corporation from being used "to defeat the ends of justice" or "otherwise to evade the law.").

When Union bought Metal Bank's nonrealty business assets in 1968, Union knew the nature of Metal Bank's metal recycling operations and business. Union purchased the assets, correctly anticipating that Metal Bank would be a profitable company. Union systematically transferred funds from Metal Bank for the benefit of Union, through corporate charges and asset sale, ultimately weakening the subsidiary to the point where Union shut down its active operations, sold off its valuable assets, and paid off its creditors. In 1970 and 1971, Metal Bank contributed 55:39% and 78:58% respectively of Union's total net income.

Although it was Union's policy to own the properties on which its subsidiaries *390 operated, (Dep. of Robert Sabel, Feb. 15, 2002 at 15 (policy of Union to own properties)), in 09

Environmental Impact

subsidiary's incorporation in 1968, Union's officers were also officers of Metal Bank. In addition, Union officers made weekly visits to the Cottman Site (T. Tr. at XII-38) to assess Metal Bank's operations and make recommendations. (Dep. of Robert Sahel, Feb. 19, 2002 at 23). Thus, Union knew that Metal Bank's operations were dependent upon the reclamation of copper cores from scrap electrical transformers and knew the manner in which this was done.

When, in two separate transactions in 1971 and 1972, Union purchased the assets of Hirtz Brothers, those assets included contracts for the Public Service Electric & Gas Company ("PSE & G") and with the Long Island Lighting Company ("LILCO") for the collection and recycling of scrap transformers and certain inventories at the Hirtz Brothers New Jersey facilities. Throughout the negotiations for the purchase of Hirtz Brothers, Mr. Sabel and Union intended that the Hirtz transformers would be shipped to the Cottman Site, where they would be recycled. (See Robert H. Sabel deposition transcript at 91-92 (June 7, 2002), U.S. Sum, J. Mem. Ex. 55). At trial, defendant Irvin Schorsch testified that obtaining the contracts with the two utilities "was really the heart of why this transaction was entered "392 into, ... [since it gave Metal Bank] access to these two providers of source material that [Metal Bank] didn't already have contracts with " (T. Tr. at XII-79; Dep. of John B. Schorsch (Nov. 15, 2001) at 211).

Some of the transformers acquired from the two utilities contained dielectric fluids when employees of Hirtz Brothers and later, employees of Metal Bank, collected them for processing at the Site. (T. Tr. at IV-52-53). Dr. Edward W. Kleppinger, expert for the defense, admitted that the dielectric fluid would have contained hazardous substances, including chlorinated benzenes. (Expert Report of Edward W. Kleppinger, April 9, 2002, at 5). Chlorinated benzenes and PCBs are hazardous substances under CERCLA. See 40 C.F.R. § 302.4. These substances were released into the environment when Metal Bank employees spilled the contents of the transformers while processing them as previously described. The record shows that by the end of 1971, approximately 2516 transformers had been shipped to Metal Bank from PSE & G under the first Hirtz Brothers transaction. Between June of 1972 and October of 1973, 31 transformers were shipped from LILCO and approximately 6.844 transformer were shipped from PSE & G to the Site.

c-1. Legal Analysis

Section 107(a)(3) of CERCLA imposes liability upon "any person who by contract, agreement, or otherwise, arranged for disposal or treatment ... of hazardous substances owned or possessed by such person " 42 U.S.C. § 9607(a)(3). As with other provisions of the Act, § 107(a)(3) must be construed liberally to effectuate the "overwhelmingly remedial" purpose of the statute. Florida Power & Light Co. v. Allis Chalmers Corp., 893 F.2d 1313 (11th Cir.1990); see United States v. Northeastern Pharmaceutical & Chemical Co.

Fed.Reg. 39646, 39650 (July 30, 1996), T. Tr. at XII122, Federal Register notice introduced by the Government at trial). The "Notice of "406 Availability for Administrative Records of CERCLA Actions" cited the EPA identification number in connection with Metal Bank's Operable Unit 01 RI which began in 1991. See id. The State Road property was never the focus of an EPA-supervised clean-up. Therefore, the reference could only have been to the Cottman Site.

Federal courts have imposed penalties directly against corporate decisionmakers based on broad interpretations of RCRA provisions pertaining to owners or operators, See NEPACCO, 810 F.2d at 745 (reasoning that absolving those who actually make corporate decisions would be inconsistent with Congress intent to impose liability upon persons involved in the handling and disposal of hazardous substances). The court finds that Union, as an entity involved in and directly responsible for the corporate acts of its subsidiary. Metal Bank, is directly liable under RCRA. The court also finds that Union contributed to the endangerment posed by the contamination of the Site both in its capacity as owner and in its capacity as a corporate decisionmaker.

IV. CONCLUSION

For the foregoing reasons, the court finds that defendants John B. and Irvin G. Schorsch, Metal Bank, and Union Corporation are responsible parties within the meaning of CERCLA and RCRA for contamination of the Cottman Avenue Site. The court also finds that the Government has incurred response costs in connection with the contamination.

NOTES

[1] Analysis under Pennsylvania law would be quite similar. See Ashley v. Ashley, 482 Pa. 228, 393 A.2d 637, 641 (1978) ("Th[e] legal fiction of a separate corporate entity was designed to serve convenience and justice ... and will be disregarded whenever justice or public policy demand and where rights of innocent parties are not prejudiced nor the theory of the corporate entity rendered useless We have said that whenever one in control of a corporation uses that control, or uses the corporate assets, to further his or her own personal interests, the fiction of the separate corporate entity may properly be disregarded.").

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PCBS IN THE DELAWARE

At Metal Bank's request, Energy and Environmental Analysis, Inc. ("EEA") also investigated conditions at the Property. In its May 8, 1979 report, EEA estimated that the extent of the oil spill from the ruptured UST affected an area of approximately 75,000 square feet and contained about 11,700 to 46,750 gallons of oil, and involved 115 to 460 pounds of PCBs. The EEA report also estimated that groundwater transporting oil to the Delaware River moved at the rate of 17,053 gallons per day.

"Although these estimates assume that all of the oil came from Metal Bank's operations, even if a substantial portion came from upgradient sources as [the Metal Bank] defendants contend, the defendants' spills became commingled with all of the other oil, making any responsible defendant responsible for the entire clean up [under CERCLA's statutory scheme]." (Court Opinion at p. 8).

4. LEGAL HISTORY

On April 23, 1980, the United States, on behalf of the EPA, filed a civil suit against The Union Corporation, a New York Stock Exchange listed company, and two of the property's former owners, Irvin G. Schorsch, Jr. and his brother John B. Schorsch (collectively hereinafter "Metal Bank"). The Government sued under two statutes. The Resource Conservation and Recovery Act ("RCRA"), the Toxic Substances control Act ("TSCA"), which regulates PCBs, and also sought injunctive relief as well as costs of suit.

The case was assigned to Judge James T. Giles, who has presided over this case ever since. And in the interim has assumed the position of Chief Judge of the Federal District Court for the Eastern District of Pennsylvania.

In 1983, the EPA entered into a consent decree or Stipulation in which Metal Bank agreed to attempt to remediate the Site's contamination by constructing an oil recovery system to pump out and remove the oil.

On January 1989, pursuant to the Stipulation, Metal Bank petitioned the court to stop the oil recovery operation because it believed *that all* the oil had been recovered. In March of 1989 EPA collected samples from the monitoring wells on the Site. That sampling effort apparently showed that PCB-contaminated oil was still floating on the aquifer. (UEPA 1997 at p. 9). However, the Government did not agree that the Site no longer posed a Substantial hazard to human health or the environment. EPA monitoring in 1989 showed that despite eight years of groundwater pump and treat operations at the Site, a layer of PCB-contaminated oil at least three inches thick was still floating on the groundwater at some portions of the Site. (Court Opinion at p. 9). PCB concentrations measured in the oil layer were

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Site.

1,539 ppm in 1977 prior to the oil recovery operation and almost the same, 1,540 ppm, in 1989 when the oil recovery operation was being terminated. On May 1991, EPA signed an Administrative Order by Consent with ten utilities, which had sent transformers to the Site and organized themselves as the Cottman Avenue PRP Group ("PRP Group"). Pursuant to the Administrative Order, the PRP Group conducted a Remedial Investigation/Feasibility Study ("RI") to define the nature, extent, and sources of contamination at the Site and to estimate the health and environmental risks associated with the contaminants at the Site. The RI Final Report, dated October 14, 1994, documented widespread contamination by PCBs, TPH, PAHs and other hazardous substances at the

On June 12, 1989, the United States sought the Court's intervention in preventing a permanent shutdown of the recovery system. The Court denied that motion as moot, especially since the Government agreed with Metal Bank on a proposed order which extended the time in which EPA could conduct a final sampling effort until August 15. Those samples yielded an oil layer some 3 inches thick sitting on the groundwater in some portions of the Site. Curiously, the Government failed to pursue its displeasure with that ruling through the Court. Moreover, EPA ignored its remedies under the administrative process, which by 1989 was in full force, *e.g.*, EPA was initiating negotiations with the PRP group for performance of the RI.

Consequently, Metal Bank, believing that it had fulfilled the terms of the Stipulation and had settled the case, dismantled the oil recovery system, and under the Stipulation's terms negotiated with EPA to cover the Southern Area with fill and vegetated it. Additionally, Metal Bank repaired the fences around the Site and agreed to maintain them. Finally, the case remained on the suspense list until May 1998 when, after 28 years, the matter "was restored to the court's active trial docket in 1998, upon the Government's claim that remediation had failed or had not addressed all contamination concerns." (Court Opinion at 3).

In 1999, following reactivation of the case by its placement on the active trial list, the Government amended its complaint as follows: it dropped the TSCA claim; added a CERCLA count under that statute's §§ 107 and 113(b) to recover its cleanup costs, and under section 7003 of RCRA, 42 U.S.C. § 7003, which alleged that the Site posed an imminent and substantial endangerment to human health and the environment, and requested injunctive relief.

The case began to move. "Following extensive discovery and pre-trial proceedings, trial was phased as follows: Phase One would determine whether [the] defendants were liable and whether response costs were incurred by the Government; Phase Two would determine whether the

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Government's response costs, if any, were reasonable and recoverable, as well as the scope of any further remedial action; and Phase Three would determine the liability of the third party defendants [including the utilities that contracted with MBA to purchase the transformers, capacitors, and other scrap metal and the City of Philadelphia]. Trial of Phase One commenced August 19, 2002" and lasted six weeks. On January 21, 2003, in an 84-page opinion Chief Judge James T. Giles ruled on Phase One of the trial that the former and current site owners - Union Corporation, Metal Bank of America Inc., and former Metal Bank owners and officers Irvin G. Schorsch, Jr. and John Schorsch - are liable for EPA's costs related to the cleanup of the Site. He also rejected each and every one of the Defendants' theories and arguments.

4.1 The Court Action

Notwithstanding, on December 30, 1982, EPA initiated an administrative action under its Superfund authority, proposing for listing on the National Priorities List ("NPL") and a Remedial Project Manager was assigned. The Site was formally added to the list on September 8, 1983, with a Hazard Ranking Score ("HRS") of 33.23. (Federal Register 1983).

To the author's best information this is the first Government CERCLA case where two parallel tracks, an administrative action and a lawsuit, moved forward at the same time.

Under the administrative powers in 1987 EPA identified another 10 potentially responsible parties (PRPs) - in addition to the four defendants all of which were utility companies who supplied transformers to Metal Bank. Under the leadership of one PRP company, the PRPs formed a steering committee, which they named the "Cottman Avenue PRP Group", and signed an agreement with EPA in 1991 on how to investigate the site. Metal Bank declined to join this group. (EPA 2003). Thereafter, beginning in 1991, the PRP group conducted a Remedial Investigation and a Feasibility Study.

NATURE OF THE CONTAMINATION 5.

The Metal Bank Site is contaminated with PCBs, PAHs, SVOCs, VOCs, petroleum hydrocarbons ("TPH"), metals, dioxins, furans, pesticides and other hazardous substances. The contamination extends across the surface and subsurface soils on the Site, in Delaware River sediment and in an adjacent embayment, known as the mud flat. Additionally, PCB-laden oil has been identified in the Site's groundwater, which may be seeping into the

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Delaware River as a result of tidal wave movements underneath the Site. The levels and scope of contamination have been documented in the Remedial Investigation and Feasibility Study ("RI/FS"), the Record of Decision ("ROD"), the pre-design investigation ("PDI"), a Trench Study performed by the Metal Bank defendants in 2000, and mudflat data collected during 2002 by the Government's experts. (Court Opinion and ROD).

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Furthermore, based on a risk analysis of these contaminants, EPA also found that recreational fishermen may be at risk from eating contaminated fish; future construction workers may be at risk from the PCBs in the oil beneath the site; as well as impacts on fish, bivalves and animals feeding in the mud flats.

In 1991, during the RI, a sample was collected from the southernmost closest to the Delaware River - monitoring well, MW-6. Although EPA characterized the sample as located in the oil layer which was floating on the groundwater, that characterization may be incorrect. Nevertheless, the oil sample had a PCB concentration of 1,090 ppm. (ROD at p. 17). This sample, however, could not be replicated in the following years. In fact, EPA admits in the ROD that "[d]uring the 1992 sampling of MW6, the sampling technique used is likely to have disrupted any oil layer that may have been present. Only 7 ppb was detected in the oil layer while EPA's split detected 183 ppb. A bailer rather than a tube and low-yielding pump was used to purge the wells. Use of the bailer is likely to have dispersed any oil layer that may have been present and may have resulted in lowering the PCB levels in the oil. Previous PCB concentrations measured in the oil layer present at the Site are 1,539 ppm in 1977 prior to the oil recovery operation and 1,540 ppm in 1989 when the oil recovery operation was being terminated," (ROD at p. 17).

This author believes that even if the bailer disrupted or dispersed the oil layer, it is inconceivable that an oil sample would yield a result which is millions of percentage points lower, i.e., 1539 ppm (1977) 1540 ppm (1989) 1,090 ppm (1991) 7 ppb and 183 ppb (EPA split) (1992). One inference which may be drawn from the precipitous drop in the concentration of PCBs over the course of the one year from 1991-92 is that the oil layer may have dissipated over the course of that year because the well was allowed to equilibrate. Alternatively, the decrease may be due to a lowering of the water table and the movement of oil through the porous urban fill that MW-6 is drilled through.

During the Remedial Investigation ("RI") in 1991, the PRP group's contractor drilled and installed 15 new monitoring wells as part of a hydrologic investigation. Of the 15 wells 7 were sampled in 1991 and all 15 were sampled in 1992.

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6. UNSUCCESSFUL REMEDIATION ATTEMPT

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As noted previously, on December 13, 1983, the Court approved a Stipulation between the United States and Defendants that required Metal Bank to install and operate an oil recovery system until all recoverable oil was removed from the subsurface of the Site. As part of the consent decree the United States and the defendants agreed that the matter was settled, and that Metal Bank's remaining obligation was to complete the pump and recovery operation. Since the progress and/or completion of the remediation was a technical matter, the Court placed the matter in suspense, i.e., no court action would be taken until the remediation was concluded. (Court Opinion at p. 9).

The Metal Bank Defendants hired an environmental consultant, who has a Ph.D. in chemistry education, to implement the system outlined by Weston in its 1980 report. However, he testified that the Weston plan was too costly and complicated. The consultant's system consisted of three recovery wells, several oil separation units, and several 55-gallon drums containing activated carbon to treat groundwater - which an EPA remediation engineer called a "Rube Goldbergish" contraption. The system removed most, but not all, of the subsurface oil at the Site. (Court Opinion at p. 9). Metal Bank's consultant argued that it was physically impossible to extract any more oil. He analogized the Site to an oil field, where, he asserted, only 33% of the oil was recoverable. However, this analogy is faulty at best. First, in oil fields the porosity is relatively uniform, whereas at the Site the fill's porosity is very heterogeneous. Second, the consultant did not consider that in oil field extraction operations, companies use secondary and tertiary recovery after primary recovery dwindles to a drip.

In the late 1980s, the Metal Bank Defendants shut down the system and dismantled it, placing approximately one to two feet of clean fill material over the surface of the Southern Area. (Court Opinion). After eight years of remedial efforts, the Defendants took the position that all feasible remediation had occurred and that the clean-up had been successful in that all remaining oil was permanently trapped and posed no risk of migration to the Delaware River or to the area of the embayment.

Pockets or layers of oil beneath the ground surface were found to contain PCBs at concentrations in the range of 520 ppm to 1,090 ppm. Courtyard Area soils at the ground surface and to a depth of approximately two feet were found during the RI to contain PCBs at concentrations up to 140 ppm.

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6.1 Samples Collected During the Remedial Investigation, 1991 - 1993

Moreover, surface, subsurface sediments and groundwater were still contaminated. In its Opinion, the Court highlighted contamination that was found both on and off the Site. For example, during the RI, Southern Area surface soils were found to contain metals, PCBs and SVOCs. The levels are shown in Table 1.

Table 1. Southern Area surface soils hazardous substances found during the RI to contain

 arsenic at concentrations up to 6.8 ppm 	
 copper at concentrations up to 149 ppm; 	
 lead at concentrations up to 220 ppm; 	
 PCBs at concentrations up to 4.7 ppm; 	
 total SVOCs at concentrations up to 11.8 ppm. 	

Similarly, during the RI Southern Area subsurface soils were found to contain PCBs, pesticides, VOCs, SVOCs and metals. Table 2 shows the levels of these hazardous substances.

Table 2. Southern area subsurface soils haza rdous substances found during the RI

 PCBs at concentrations up to 42 ppm; *the pesticide 4,4'-DDD at concentrations up to 11 ppm; *total VOCs at concentrations up to 907 ppm; total SVOCs at concentrations up to 2,008 ppm; arsenic at concentrations up to 21.1 ppm; ·lead at concentrations up to 227,000 ppm (or 22.7% of the sample) ·Mercury at concentrations up to 10.5 ppm.

Southern Area subsurface soils were also found to contain PCBs at concentrations up to 680 ppm, during the Pre-Design Investigation ("PDI"). Twenty-one sample locations contained PCBs in excess of 25 ppm; fifteen sample locations contained PCBs in excess of 50 ppm; and seven locations contained PCBs in excess of 100 ppm. A majority of the samples in excess of 100 ppm were located near the UST in the southwest corner of the Site.

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In addition, PCBs, VOCs, SVOCs, metals and other hazardous substances found in Groundwater at the Site during the RI are shown in Table 3.

Table 3. Hazardous substances in Groundwater at the Site found during the RI

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 PCBs at concentrations in water up to 25.6 parts per bil lion ("ppb"), and at a concentration in a floating oil sample of 1,090 ppm 	
 total VOCs at concentrations up to 5.6 ppm 	
 total SVOCs at concentrations up to 22.7 ppm 	
 total pesticides at concentrations up to 61 .3 ppb 	
 arsenic at concentrations up to 369 ppb in unfiltered samples, 	
 arsenic at concentrations up to 67 ppb in filtered samples 	
 chromium at concentrations up to 288 ppb in unfiltered samples 	
 chromium at concentrations up to 102 ppb in filtered samples 	
 lead at concentrations up to 1,382 ppb in unfiltered samples 	
 lead at concentrations up to 7.6 ppb in filtered samples 	
 mercury at concentrations up to 22.2 ppb in unfiltered samples 	
 mercury at concentrations up to 0.9 ppb in filtered samples 	

Table 4 shows the levels of PCBs, SVOCs and lead (Pb), found during the RI in Sediments in the Delaware River adjacent to the Site.

Table 4. Hazardous substances found in Sediments in the Delaware River adjacent to the Site during the RI

 PCBs at concentrations up 1 	to 6.8 ppm;
 total SVOCs at concentration 	ons up to 244 ppm;
·lead at concentrations up to	2,030 ppm.

6.2Samples Collected During the Pre-Design Investigation in 1999

On June 26, 1998, the EPA issued an Administrative Order for Remedial Design and Remedial Action to the Defendants and the members of the PRP Group. In accordance with the Administrative Order, the PRP Group conducted a Pre-Design Investigation ("PDI") to collect engineering data in support of the design for the remedy and to further determine the scope of contamination. (Court Opinion). The PDI final report, issued on January 21, 2000, confirmed the existence of a layer of oil floating on the groundwater



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table beneath the Southern Area and further delineated the extent of PCB contamination at the Site. (Court Opinion). A measurable layer of oil ranging in thickness from 0.125 inches to 5.75 inches was detected in the southwest corner of the property.

Sediments in the mudflat and Delaware River were found to contain PCBs at concentrations of up to 6.1 ppm during the PDL. Out of a total of 45 samples, 11 contained PCBs at concentrations exceeding 1 ppm. Sediments in the mudflat area were also found during a January 2002 sampling event to contain PCBs at concentrations up to 22.1 ppm.

In the Courtyard Area, PCBs were detected in two of eleven samples, one of them at a concentration of 8.2 ppm and the other at 190 ppm. In the three areas of concern delineated within the Southern Area, PCBs at concentrations above the EPA cleanup action level of 25 ppm were detected in 38 out of 231 subsurface borings .(Court Opinion at p. 11). See Figure 4.



Figure 4. Remedial Investigation locations of soil borings/ test pits

The highest concentration, 680 ppm, was found in a soil sample taken from near the UST. Figure 5. shows the uncovered UST. Sediment samples taken from 45 locations in the River Sediments Area, including the mudflats had total PCB concentrations ranging from non-detect to 6.1 ppm.

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Figure 5. Uncovering the UST during the 1999 Pre -Design Investigation, note the oily (dark) quality of the subsurface soil

As part of the PDI, the combined sewer system located underneath Cottman Avenue was inspected and seven sediment samples were collected from inlet pipes leading into the sewer. Only one of them had a PCB concentration higher than the EPA cleanup action level of 1 ppm for sediments, and that concentration was 1.3 ppm.

During the summer of 2000, Defendants conducted a field study to look for the presence of Light Non-Aqueous Phase Liquids ("LNAPL") at the Site, issuing a report in September, 2000, entitled "Data Report, Cottman Site Investigation, July 2000" ("2000 Trench Study"). (Court Opinion at p. 11).

Based on the results obtained in the RI, EPA prepared a Proposed Plan for remediation at the Site, which it circulated for public comment in 1995. Following review of the comments received, EPA issued a Record of Decision ("ROD") in December, 1997. The ROD established PCB cleanup action levels at the Site and documented selection of the remedial action to be implemented. The PCB cleanup levels are shown in Table 5.

Table 5. ROD established PCB cleanup action levels at the Site

10 pps	n in surface soils
25 pp	m in subsurface soils
1 ppm	in mudflat sediments

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is constructed on artificial fill, the specific flow pathways for the groundwater and oil flow are difficult to characterize. "The presence of chunks of concrete, bricks, wire, pipe and other material in the heterogeneous fill may offer preferential pathways for the migration of contaminants . . . The court finds that the oil has found, and continues to find, pathways from the ground and groundwater through the rip rap, upper and lower and into the beach and mudflat areas. Defendants have failed to show that the pollution in the mudflats was caused exclusively by a source other than the Cottman Avenue Site." (Court Opinion at 15). The defendants argued that an upgradient lampblack factory was responsible for the TPH, PAHs, and other contaminants.

The Court addressed this argument in the following way. "A lampblack factory was in operation on a neighboring property from 1849 until 1970. Lampblack is a fine powdery material produced by burning low grade oils, creosote, coal tar, anthracene oil and crude oil. During operations, coal tar and crude oils were stored in tanks on the property. Due to the absence of waste product controls, discharges of lampblack and raw materials used to manufacture it, possibly may have occurred into the area surrounding the factory, although there are no records of spills. However, the court finds that this possibility does not account for the PCBs, PAHs, and petroleum hydrocarbons at the Site and in the adjacent mudflat and river sediments. The topography of the area makes it improbable that contaminants from the lampblack factory migrated to the Site. An historic channel running southeast past the lampblack property would have provided a natural pathway to the Delaware River for any discharges from the factory and would not account for contamination of the southwest portion of the Site or for groundwater contamination there under " (Court Opinion at 15 -16).

With regards to the City of Philadelphia's combined storm and sewage outfall at the foot of Cottman Avenue, the Court made the following finding: "Similarly, the court finds that the CSSO is not a significant source of contamination to the mudflats If it were, the PCBs and other contaminants would be distributed across the mudflats and would not be concentrated in the area adjacent to the southwest corner of the property .. Given the overwhelming evidence tracing the contamination of the Metal Bank Site to its own operations, the court is unpersuaded by Defendants' argument that background chemicals (naturally occurring or other non-site related chemicals) account for the contamination at the Site." (Court Opinion at 16).

Moreover, Judge Giles noted that the Aroclor testing does not account for the likely presence of dioxin-like PCB congeners at the Site. For instance, limited sampling in the mudflat sediments adjacent to the Site in

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2.1 The Courtyard Area

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The Courtyard Area consists of an open area at the northern section of the property near Milnor Street. The buildings near the Courtyard Area were demolished in 1998.

2.2 The Southern Area

The Southern Area is an open area bordering the Delaware River where transformer-processing operations once took place. Historical aerial photos show that most of this area is located in what was once part of the Delaware River and was gradually filled in beginning in approximately 1950. Heterogeneous urban-fill material, most of which was placed before 1968, is about 15 feet thick. Its origin is unknown, but it contains construction debris, including chunks of concrete, brick, lumber, cloth and metal. (Court Opinion, 2003).

The Southern Area sits approximately 10 feet above Mean Sea Level, and most of it is located within the 100-year old floodplain. The outer edge of the Southern Area is steeply sloped, with large concrete blocks of material apparently placed for erosion control along approximately 550 feet of shoreline of the present-day Delaware River. This is the area known as the "upper rip rap." There is also a "lower rip rap" area sometimes referred to as the "beach." It consists of small heterogeneous fill material placed there as part of a clean-up response ordered by the United States Coast Guard following an "oil spill" in that area that occurred in 1972. (USEPA Record of Decision ("ROD"), December 1997).

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Figure 3. Plan View of the Metal bank Site, showing each of the Site's respective areas of concern

2.3 The Mud Flat and River Sediments Area

The River Sediments Area, located adjacent to the southern and western boundaries of the Property, includes both mudflat and river bottom. The Delaware River is tidal in the vicinity of the Site, with six to seven foot tides that reach maximum and minimum water levels every twelve hours. To the immediate west of the Property, the River forms a shallow embayment, which is completely submerged at high tide and which forms an exposed mudflat of five to seven acres in size at low tide. The mudflat consists primarily of fine silts and clays, with some occasional gravel in the subsurface, with the amount of gravel increasing closer to the border with the Metal Bank Site. The river bottom is composed of gravelly and sandy material, and it slopes gradually away from the Property. (Court Opinion, 2003).

The embayment is bordered to the north by St. Vincent's School - a former orphanage currently serving as a day-care center and an emergency shelter for at-risk children from the City of Philadelphia -- and to the west by the Quaker City Yacht Club, which serves as a boat launch for recreational boaters. A municipal combined stormwater/sewer outfall ("CSSO") owned

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by the City of Philadelphia is located at the foot of Cottman Avenue and empties into the northeastern corner of the embayment during and following periods of heavy rain. Groundwater underneath the Site flows into the Delaware River, generally from north to south. Depth of groundwater varies from seven to sixteen feet.

Recreational and subsistence fishing takes place in the Delaware River, approximately 200 yards south of the Site from a public access ramp that was formerly used for boat access but is now open only for fishing. On April 11, 2001, the Commonwealth of Pennsylvania issued a general statewide fish advisory for recreationally caught sport fish which advises the public to eat no more than one meal (approximately one half pound) of sport fish caught in the state's waterways per week. In addition, the Commonwealth has issued a more protective advisory for the Delaware River south of Yardley – approximately 20 miles north of the Site - advising the public to limit or avoid consumption of white perch, striped bass, carp, channel catfish, and American eel due to PCB contamination and to limit consumption of smallmouth bass due to mercury contamination. (Court Opinion, 2003).

3. SITE HISTORY

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From 1968 to 1972, Metal Bank of America, Inc. ("MBA") recycled electrical transformers⁶ purchased from utilities along the eastern seaboard for the reclamation of their copper cores and the recycling of their iron cases. As part of its recycling process Metal Bank drained oil from the used transformers on a concrete pad. The pad was angled towards the center and emptied into a 6,000 gallon underground storage tank ("UST"). The oil was periodically pumped out of the UST by a private contractor and was hauled from the Site and sold for industrial fuel purposes.

The operation called for dismantling the used electrical transformers, emptying them of their oily liquid, and pulling their copper cores. The reclamation operations were very sloppy. Moreover, the Site operators did not regard the oil as posing any health risks and were not careful about the

⁶An electrical transformer generally has an iron or steel casin g, within which a core of wound copper wire is immersed in a dielectric fluid or oil that is used for insulation and cooling purposes. Dielectric fluids used included mineral oil, as well as fluids consisting primarily of polychlorinated biphenyls ("PCBs "). From 1968 or 1969 until 1973, the scrap electrical transformers processed by Metal Bank frequently contained PCBs, polycyclic aromatic hydrocarbons ("PAHs") and other semi-volatile organic compounds ("SVOCs"), volatile organic compounds ("VOCs "), metals and other hazardous substances,

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transformer draining and storage procedures. (Court Opinion). Oil dripped or spilled from leaking transformers as they were first unloaded at the Property. "Clam buckets" used to unload the transformers from the trucks, several at a time, sometimes ruptured transformers filled with oil that splashed onto the ground. The recycling operations led to oil releases in various locations on the property with the majority of the contamination in the vicinity of an underground storage tank which was used by Metal Bank to store the used transformer oil.

On the morning of August 3, 1972, the U. S. Coast Guard ("USCG") and inspectors from the Pennsylvania Department of Environmental Regulation ("PADER") responded to an oil spill in the Delaware River, approximately one-half mile to the west of the Metal Bank Site, in the vicinity of the Quaker City Yacht Club and traced its origin to the Cottman Avenue Property. (USEPA 1997). Numerous dead fish were reported. An inspection four days later revealed that the entire area near the bank of the Delaware River was saturated with oil, and areas were visible where oil had seeped through and poured over the bank of the Site into the river. (Court Opinion).

A Metal Bank employee observed oil floating in the river near the tank. He noticed that the level of oil in the tank would change at times when oil had neither been added nor pumped out. For example, if employees ceased work on Friday and capped the tank, they would return on Monday to find the tank overflowing if it had rained over the weekend.

When they then lowered a pump hose deep into the tank, they would pump water out of the bottom. The levels in the tank also rose when the tide was in, even if the tank was capped. (Court Opinion). The volume of oil observed entering the river at the Property indicated to the United States Coast Guard ("USCG") and to Pennsylvania Environmental inspectors that oil was flowing from the Site into the river, principally as a result of a leaking UST.

Following the Coast Guard's identification of the UST as the source of the oil spill into the Delaware River in August of 1972, Metal Bank had the tank inspected. There is no documentation of a leak being found or repaired. However, Metal Bank admitted in subsequent litigation with its insurance company, that the tank was ruptured and leaking if it had not been convinced by its own investigation that this was so. The Court reasoned that MBA would not have made such an admission if it was not true.

MBA maintained that the spill was composed of bunker "C" oil, and that its source was either from an upstream facility or from an oil barge. (USEAPA 1997 at p. 8). However, in Phase I of the litigation the Court found that "[b]y inference [and] by a preponderance of the evidence ... the

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tank did leak and was repaired during the tank inspection process." (Court Opinion at p. 7).

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Subsequently, the USCG ordered Metal bank to perform numerous remedial measures, including laying booms along the river, cleaning up the spill and improving its housekeeping. Metal Bank also advised the USCG that it discontinued its transformer salvage operations. (USEPA 1997 at p. 8).

Following the oil spill the USCG collected samples from the Site, including samples of the soil and of the oil spill. The Coast Guard tested the oil using the best available technology of the time. Initially, it did not detect PCBs in the oil samples. In late 1972 and 1973, in response to recommendations made by the USCG, Metal Bank took limited actions to clean up its property. (Trial Court Opinion). It performed some surficial clean up of the southern portion of the property where the concrete pad was located, placed "booms" out to contain and collect oil in the river and along the shoreline, installed cylindrical caissons to capture the oil as requested by the USCG, and covered the ground with clean soil. However, Metal Bank did not undertake any efforts at that time to clean up subsurface contamination or to prevent subsurface oil from migrating into the river.

In the mid-1970s, in response to a USCG request that Metal Bank armor the shore, MBA installed the lower rip rap, consisting of smaller pieces of rubble, broken bricks and concrete. The lower rip rap was designed to stabilize the lower portion of the upper rip rap and to act as a buffer both for oil spills coming from the land toward the water and for oil that might come from the River toward the land. Thus, the lower rip rap likely was placed on top of oil that had not been recovered by the methodologies utilized by Metal Bank.

In September 1977, in response to continuing concerns, the USCG and other government agencies re-analyzed the 1972 samples using more recent and innovative analytical technology and detected the presence of PCBs in concentrations over 800 parts per million ("ppm"). Analyses of soils and liquids samples at the Site detected the presence of PCBs at levels up to 1579 ppm. Based on these findings, the USCG and EPA hired Roy F. Weston, Inc. ("Weston"), to define more fully the nature and extent of PCB contamination at the Site. Weston conducted an investigation and documented its findings in two reports dated October 1978 and March 1980. The 1978 Report showed that as many as 21,000 gallons of PCBcontaminated oil had pooled in the subsurface of the Metal Bank Site. The report concluded that this oil was releasing PCBs to the underlying groundwater and that PCBs from the Property were contaminating the Delaware River through oil and groundwater discharges. The 1980 report proposed a remediation plan.

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At Metal Bank's request, Energy and Environmental Analysis, Inc. ("EEA") also investigated conditions at the Property. In its May 8, 1979 report, EEA estimated that the extent of the oil spill from the ruptured UST affected an area of approximately 75,000 square feet and contained about 11,700 to 46,750 gallons of oil, and involved 115 to 460 pounds of PCBs. The EEA report also estimated that groundwater transporting oil to the Delaware River moved at the rate of 17,053 gallons per day.

"Although these estimates assume that all of the oil came from Metal Bank's operations, even if a substantial portion came from upgradient sources as [the Metal Bank] defendants contend, the defendants' spills became commingled with all of the other oil, making any responsible defendant responsible for the entire clean up [under CERCLA's statutory scheme]." (Court Opinion at p. 8).

LEGAL HISTORY 4.

On April 23, 1980, the United States, on behalf of the EPA, filed a civil suit against The Union Corporation, a New York Stock Exchange listed company, and two of the property's former owners, Irvin G. Schorsch, Jr. and his brother John B. Schorsch (collectively hereinafter "Metal Bank"). The Government sued under two statutes. The Resource Conservation and Recovery Act ("RCRA"), the Toxic Substances control Act ("TSCA"), which regulates PCBs, and also sought injunctive relief as well as costs of suit.

The case was assigned to Judge James T. Giles, who has presided over this case ever since. And in the interim has assumed the position of Chief Judge of the Federal District Court for the Eastern District of Pennsylvania.

In 1983, the EPA entered into a consent decree or Stipulation in which Metal Bank agreed to attempt to remediate the Site's contamination by constructing an oil recovery system to pump out and remove the oil.

On January 1989, pursuant to the Stipulation, Metal Bank petitioned the court to stop the oil recovery operation because it believed that all the oil had been recovered. In March of 1989 EPA collected samples from the monitoring wells on the Site. That sampling effort apparently showed that PCB-contaminated oil was still floating on the aquifer. (UEPA 1997 at p. 9). However, the Government did not agree that the Site no longer posed a Substantial hazard to human health or the environment, EPA monitoring in 1989 showed that despite eight years of groundwater pump and treat operations at the Site, a layer of PCB-contaminated oil at least three inches thick was still floating on the groundwater at some portions of the Site. (Court Opinion at p. 9). PCB concentrations measured in the oil layer were

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In 1972, Congress passed the Clean Water Act with broad bipartisan support. President Richard Nixon vetoed the bill, but within a day Congress overturned the veto, and the bill became law.

The law made it illegal to dump any pollutant into waterways without a permit from the EPA and set wastewater standards for industry. It also offered up billions of dollars to cities and states to upgrade their sewage treatment plants, requiring municipalities to use biological science to treat their waste before discharging it into the river.

As an avid fisherman, Joe Newton says even a decade in, he could see a change.

"By '80, '82, there was a huge difference," he said. "Absolute huge difference."



Today the Delaware is popular for recreation. Here a member of the Delaware River Fishermen's Association fishes for catfish in Bucks County. (Kimberly Paynter/WHYY)

The water started looking cleaner, and the fish slowly started to return - shad, herring, all sorts of bass. These days, you can catch striped bass that are nearly 40 pounds.

"In this river, that's amazing," he said. "In the ocean? Common. But not out here. We had the best shad run I think I've ever seen this past season on the Delaware River."

But the law wasn't an overnight success. It took decades of work, more than a trillion dollars, and lots of trial and error before the Clean Water Act lived up to its name.



A photo from 1966 showing hot, smelly liquid pouring into the Delaware River from a nearby factory. (Temple Archives)

Sewage breeds bacteria in the water, and that bacteria effectively gobbles up all the oxygen, leaving little to none for the fish and other aquatic life in the river.

"With more and more and more people, over time it became an increasing problem," Kreeger said, "until something had to be done because everything was dying because of lack of oxygen."

By 1964, about a million pounds of waste was going into the river every day, and more than 60 percent of that was coming from sewage treatment plants, with cities like Philadelphia, Camden and Wilmington contributing the most. In 1964, the bacteria count at Philadelphia's water intake at Torresdale was 39,300 per 100 mL

But it wasn't just sewage. There was also blood from slaughterhouses, oil from refineries like Gulf Oil and Sun Oil, and toxic waste from chemical companies like Rohm and Haas and Dupont. Acidic industrial waste lowered the pH of the river for several miles above and below the Pa -Del, state line.

Almost none of the waste entering the river was disinfected, so it contained high levels of bacteria --- again, eating up all of the oxygen.

<u>p. 5</u>



Figure 4. Site Images of the Metal Bank Upper Left - 03/24/1995 Upper Right - 12/31/2001 Lower Left - 08/24/2005 Lower Right - 04/11/2010

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Site image of Metal Bank: 1995, 2001, 2005, 2010; from 2014 EPA Preassessment Screen Determination.

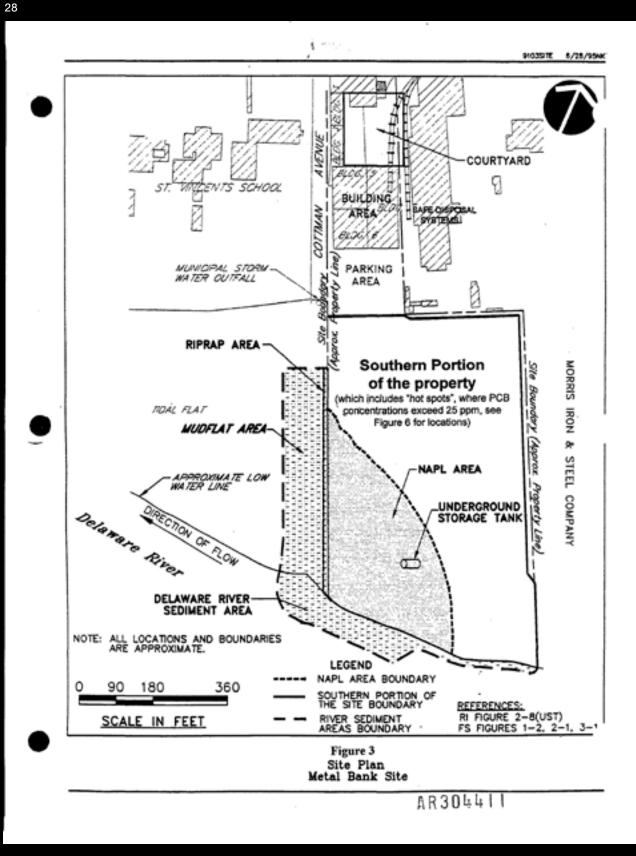
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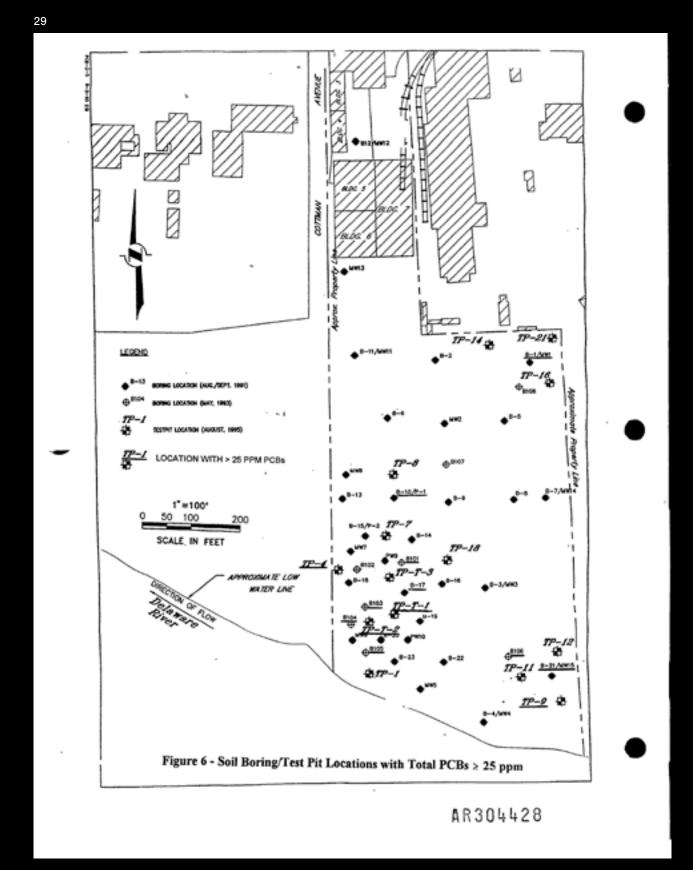
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Environmental Impact



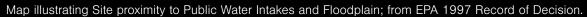


Site Plan of Metal Bank Site which illustrates areas of concern; from EPA 1997 Record of Decision.

Illustration of Soil Boring/Test Pit Locations with Total PCBs > 25 ppm; from EPA 1997 Record of Decision.

Environmental Impact







EPA consultant photograph showing color and consistency of contaminated oil infused soil samples.

Environmental Impact

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ntal Impact



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Environmental





GLOS	SSARY	Consent Decrees	Legal documents, ap between EPA and po will conduct all or pa actions or processes with EPA-initiated reg the Superfund site in take and may be sub
Alter Ego Liability Doctine	Legal doctrine whereby the court finds a corporation lacks a separate identity from an individual or corporate shareholder, resulting in injustice to the corpora- tion's debtors.	CSSO	Combined stormwate are designed to colle water in the same pip
Benzine	Any of various volatile flammable petroleum distillates used especially as solvents or as motor fuels.		occasionally and disc or other water bodies mately 772 cities in t
Bunker "C" Oil	A residual fuel oil. Residual means the material remaining after the more valuable cuts of crude oil have boiled off. It is possible for this oil to spill during the process of 'bunkering' which is the supplying of fuel for use by ships.	CWA	Clean Water Act. The that established the p maintaining the chem The CWA generally p
Capacitors	A capacitor is a device that stores electrical energy in an electric field. It is a passive electronic component with two terminals.		coastal or ocean wat
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act. A federal law (commonly known as "Superfund") passed in 1980 and modified in 1986 by the Superfund Amendments and Reauthorization Act (SARA). The law gives EPA the authority to investigate sites where there is a suspected threat to public health or the environment caused by the release or potential release	DARRP	Damage Assessmen program within NOA/ Fisheries Service, an aftermath of the Exxc conduct natural reso coastal and marine re
	of hazardous substances. The law also created a special tax on the chemical and petroleum industries. Money was collected under the tax until 1995 and deposited into a trust fund to be used to clean up abandoned or uncontrolled waste sites. Under the law, EPA can pay for the site cleanup when the parties responsible for contamination cannot be located or are unwilling or unable to perform the cleanup. EPA can also take legal action to require parties respon- sible for site contamination to clean up the site or pay back the federal govern-	Dielectirc Fluid	A fluid intended to be transformers, capacit voltage switchgear) a suppress arcing, and were widely used as
	ment for the cost of the cleanup.	Dioxins	A group of highly tox cause problems with
CIP	A Community Involvement Plan is a document that assesses a community's concerns about a site, recommends activities that EPA may conduct to address these concerns, and suggests means to foster communication between EPA and		can also disrupt horr tal pollutants (POPs)
	the community.	Dissolved Oxygen	The level of free, non important parameter
Cleanup	An action taken to deal with a release or threatened release of hazardous sub- stances that could adversely affect public health and/or the environment. The word cleanup is used to refer to both short-term removal actions and long-term remedial response actions at Superfund sites.	DNAPL	organisms living with Dense Non-Aqueous is immiscible in or do
Cobalt	A chemical element with the symbol Co and atomic number 27. Like nickel, cobalt is found in the Earth's crust only in chemically-combined form, save for small deposits found in alloys of natural meteoric iron. The free element, produced by reductive smelting, is a hard, lustrous, silver-gray metal.		by environmental eng groundwater, surface table when spilled in meable bedrock. The and remediate.

approved by a judge, that formalize agreements reached potentially responsible parties (PRPs) through which PRPs part of a cleanup action at a Superfund site; cease or correct es that are polluting the environment; or otherwise comply egulatory enforcement actions to resolve the contamination at involved. The consent decree describes the actions PRPs will ubject to a public comment period.

ater sewer outfall. Combined sewer systems are sewers that illect rainwater runoff, domestic sewage, and industrial wastepipe. Combined sewer systems are designed to overflow lischarge excess wastewater directly to nearby streams, rivers, ies. They are a major water pollution concern for the approxin the U.S.

he law (also called the Federal Water Pollution Control Act) e programmatic and regulatory framework for restoring and emical, physical, and biological integrity of the nation's waters. / prohibits discharges of oil and hazardous substances into /aters.

ent, Remediation, and Restoration Program. A multi-office AA involving the National Ocean Service, the National Marine and the Office of General Counsel. Formed in 1992 in the exon Valdez oil spill. Scientists, economists, and attorneys source damage assessments of and restoration projects for e resources injured by oil and hazardous material releases.

be used in medium to extra high voltage applications, e.g. acitors, high voltage cables, and switchgear (namely high and whose function is to provide electrical insulation, nd to serve as a coolant in such electrical application. PCBs as a dielectric fluid until they were banned.

oxic chemical compounds that are harmful to health. They can ith reproduction, development, and the immune system. They prmones and lead to cancer. Known as persistent environmen-'s), dioxins can remain in the environment for many years.

on-compound oxygen present in water or other liquids. It is an er in assessing water quality because of its influence on the ithin a body of water.

us Phase Liquid. A liquid that is both denser than water and does not dissolve in water. The term DNAPL is used primarily engineers and hydrogeologists to describe contaminants in ce water and sediments. DNAPLs tend to sink below the water in significant quantities and only stop when they reach imperheir penetration into an aquifer makes them difficult to locate

DRBC	Delaware River Basin Commission. A federal-interstate agency created in 1961 by compact legislation signed into law by President John F. Kennedy and the governors of Delaware, New Jersey, Pennsylvania, and New York (the four basin states with land draining to the Delaware River). The Commission was formed in response to major water resource challenges requiring regional solutions: water supply shortages and disputes over the apportionment of the basin's waters, poor water quality, and devastating flooding. There was a lack of coor- dination and cooperation amongst state, interstate, and federal agencies, and it was realized that a regional organization was needed to properly and effectively manage the basin's water resources.	Hazardous Waste	A solid waste, or com centration, or physical stantial present or pot improperly treated, sto
		HRS	Hazardous Ranking S public health and the calculates a score bas from the site through t 28.50 or higher on the
Electrical Transformers	A transformer is a passive electrical device that transfers electrical energy from one electrical circuit to another, or multiple circuits. An electrical transform- er generally has an iron or steel casing, within which a core of wound copper wire is immersed in a dielectric fluid or oil that is used for insulation and cooling	HSWA	Hazardous and Solid focused on waste min the enforcement stand
Environment	purposes. CERCLA section 101(8) defines "environment" as "(A) the navigable waters, the waters of the contiguous zone, and the ocean waters of which the natural resources are under the exclusive management authority of the United States under the Fishery Conservation and Management Act of 1976, and (B) any	Lamp Black	A finely powdered blac naceous materials and printing inks) as well a is dissimilar to soot in cantly lower (negligible (PAH) content.
	other surface water, ground water, drinking water supply, land surface or subsur- face strata, or ambient air within the United States or under the jurisdiction of the United States."	LNAPL	Light Non-Aqueous Pr in water and has lower
EPA	Environmental Protection Agency. A federal agency with the mission to protect human health and safeguard the environment. It has the responsibility of main- taining and enforcing national standards under a variety of environmental laws, in consultation with state, tribal, and local governments. It delegates some permit-		higher density than wa height of the water tab to locate and remove DNAPLs because LNA table.
	ting, monitoring, and enforcement responsibility to U.S. states and the federally recognized tribes. President Richard Nixon proposed the establishment of EPA on July 9, 1970.	Marine Mattresses	Rock-filled containers application for marine protected bays and lal
Exposure Pathways	Route or way in which humans or the environment may come into contact with contaminants.	Metal Bank	1962–1985, Metal Ba
Feasibility Study	A study that examines information provided by the remedial investigation activ- ities and evaluates possible cleanup methods that can be used to remove or		adjacent to the Delawa transformers from vari
	reduce contamination at a site.	Mudflat	A level tract lying at lit and left bare by the tic
Furans	Furan is a colorless, flammable, highly volatile liquid with a boiling point close to room temperature. It is soluble in common organic solvents, including alcohol, ether, and acetone, and is slightly soluble in water. [2] Its odor is "strong, ethereal; chloroform-like". [3] It is toxic and may be carcinogenic in humans. Furan is used as a starting point to other specialty chemicals.	NAPL	Non-Aqueous Phase L or easily mix with wate NAPLs tend to contam
Groundwater	The supply of fresh water found beneath the Earth's surface and in empty areas between rocks and soil particles. Groundwater is a major source of drinking water.	NCP	National Contingency would "provide for effi- from oil and hazardou and removal of oil and of all federal agencies

ombination of solid wastes, which because of its quantity, concal, chemical, or infectious characteristics may pose a subpotential hazard to human health or the environment when stored, transported, or disposed of, or otherwise managed.

g System. A measurement tool used to evaluate the risks to he environment posed by a hazardous waste site. The HRS based on the potential of a hazardous substance moving gh the air, water, or soil. EPA places sites with a HRS score of the National Priorities List (NPL).

lid Waste Amendments. An Amendment to the RCRA that minimization and land disposal of hazardous waste, making andards more stringent.

black soot deposited in incomplete combustion of carboand used chiefly as a pigment (as in paints, enamels, and ell as a reinforcing filler in tires and other rubber products. It t in its much higher surface-area-to-volume ratio and signifigible and non-bioavailable) polycyclic aromatic hydrocarbon

s Phase Liquids. A groundwater contaminant that is not soluble ower density than water, in contrast to a DNAPL which has a water. Once a LNAPL infiltrates the ground, it will stop at the table because the LNAPL is less dense than water. Efforts we LNAPLs is relatively less expensive and easier than for LNAPLs float on top of the water in the underground water

ers constructed of high-strength geogrid material. A common ine mattresses is bank protection for rivers and shorelines of I lakes.

I Bank of America Inc. owned and operated a salvage yard laware River. The facility recycled scrap metal and electrical various utility companies.

t little depth below the surface of water or alternately covered e tide.

se Liquid. liquid solution contaminants that do not dissolve in vater (hydrophobic), like oil, gasoline, and petroleum products. taminate soil and groundwaters.

acy Plan. A 1973 amendment to the Clean Water Act which efficient, coordinated, and effective action to minimize damage dous substances discharges, including containment, dispersal, and hazardous substances." The NCP governs the actions cies involved in responding to oil and hazardous material

NOAA	The National Oceanic and Atmospheric Administration is an American scientif- ic agency within the United States Department of Commerce that focuses on the	Remediation	The action of remedyin mental damage.	
	conditions of the oceans, major waterways, and the atmosphere. They act on behalf of the public to protect and restore natural resources harmed by oil spills, releases of hazardous waste, and, in some instances, vessel groundings.	RI	Remedial Investigation the nature, extent, and estimate the health an	
NPL	National Priorities List. The list of sites of national priority among the known releases or threatened releases of hazardous substances, pollutants, or con- taminants throughout the United States and its territories. The NPL is intended	Riprap	Also known as rip rap	
	primarily to guide the EPA in determining which sites warrant further investigation.	Πριαρ	rock or other material pilings, and other sho	
OLEM	Office of Land and Emergency Management. Provides guidance for the EPA's emergency response and waste programs.		erosion.	
OSRTI	Office of Superfund Remediation and Technology Innovation. Implements CERCLA.	RODs	Records of Decision. used at Superfund Sit	
PA DEP	The Pennsylvania Department of Environmental Protection (DEP) is the agency in Pennsylvania responsible for protecting and preserving the land, air, water, and public health through enforcement of the state's environmental laws. The Depart- ment is responsible for all aspects of environmental protection, and the regulation	SARA	Superfund Amendmer after six years of imple es standards and requ and provides addition	
	of mining operations.	Sheet Pile Wall	Steel sheet piles are lo that create a continuo	
PAH	Polycyclic aromatic hydrocarbons. PAHs are a class of chemicals that occur naturally in coal, crude oil, and gasoline. They also are produced when coal, oil, gas, wood, garbage, and tobacco are burned. PAHs generated from these		or water. The ability of geometry and the soil side of the wall to the	
	sources can bind to or form small particles in the air. Naphthalene, phenanthrene, and 2-methylnaphthalene are among the PAHs that have been found in the soils and sediments at the (7301 Milnor St Superfund) Site.	Solid waste	Any garbage, refuse, s plant, or air pollution o	
PCB	Polychlorinated biphenyl, a class of chemicals previously used in manufacturing that remain in the environment for many decades, accumulate in living creatures,		liquid, semisolid, or co cial, mining, and agric	
	and pose health hazards to humans, wildlife, and fish. An oil used in the cooling process within electrical transformers. Its use was banned in the U.S. in 1979.	Superfund	A fund that can be use The fund was establis	
PPB	Parts per billion. A unit of measurement for PCB concentration levels.		ronmental Response, received largely from	
PPM	Parts per million. A unit of measurement for PCB concentration levels.		authority to collect the Fund monies can be u	
RCRA	The Resource Conservation and Recovery Act (RCRA) gives EPA the authority to control hazardous waste from cradle to grave. This includes the generation,		releases of hazardous the environment. The conduct cleanups usir	
	transportation, treatment, storage, and disposal of hazardous waste. RCRA also set forth a framework for the management of non-hazardous solid wastes. The 1986 amendments to RCRA enabled EPA to address environmental problems that could result from underground tanks storing petroleum and other hazardous substances.	Superfund Site	An uncontrolled or ab- affecting local ecosyst for evaluation and clea	
Reclamation	[A] The act or process of reclaiming. Restoration to use. [B] The cultivation of waste land or land formerly under water.	SVOCs	Semi-volatile organic o have a higher molecu VOCs.	

dying something, in particular of reversing or stopping environ-

tion; Remedial Investigation/Feasibility Study ("RI") to define and sources of contamination at a contaminated site and to and environmental risks associated with the contaminants at

rap, rip-rap, shot rock, rock armor, or rubble, is man-placed rial used to armor shorelines, streambeds, bridge abutments, shoreline structures against scour and water, wave, or ice

on. Issued by the EPA to explain which cleanup methods will be Sites.

nents and Reauthorization Act. An amendment to CERCLA nplementation. SARA increases the trust fund capacity, reinforcrequirements, encourages liability and community feedback, ional support and structure to the initial CERCLA policy.

re long structural sections with a vertical interlocking system nuous wall. The walls are often used to retain either soil y of a sheet pile section to perform is dependent upon its soils it is driven into. The pile transfers pressure from the high the soil in front of the wall.

e, sludge from a waste treatment plant, water supply treatment on control facility and other discarded material, including solid, r contained gaseous material resulting from industrial, commergricultural operations, and from community activities.

used to finance cleanup actions at hazardous waste sites. blished under the legislative authority of Comprehensive Envise, Compensation, and Liability Act (CERCLA) with funds of a tax levied on the chemical and petroleum industries. EPA's the tax expired in 1995 and fund monies are being depleted. be used by EPA to respond directly to releases or threatened ous substances that may endanger public health, welfare, or he term "Superfund" also may refer to the EPA programs which using these fund monies.

abandoned place where hazardous waste is located, possibly systems or people. Sites are listed on the National Priorities List cleanup by the U.S. Environmental Protection Agency.

tic compounds (SVOCs) are a subgroup of VOCs that tend to ecular weight and higher boiling point temperature than other

TEF	Toxic equivalency factor expresses the toxicity of dioxins, furans, and PCBs in terms of the most toxic form of dioxin. The toxicity of the individual congeners may vary by orders of magnitude. With the TEFs, the toxicity of a mixture of dioxins and dioxin-like compounds can be expressed in a single number: the toxic equivalency (TEQ).	WORKS C	
Toxic Substance	The Toxic Substances Control Act of 1976 provides EPA with authority to require reporting, record-keeping and testing requirements, and restrictions relating to chemical substances and/or mixtures. Certain substances are generally excluded from TSCA, including, among others, food, drugs, cosmetics, and pesticides.	A bibliography of selected resources from the entire research dossier	
ТРН	Total petroleum hydrocarbons. A term used to describe a large family of several hundred chemical compounds that originally come from crude oil. Crude oil is used to make petroleum products, which can contaminate the environment.	1 "Big Fires in Philadelphia." <i>The Daily New Era</i> , 17 April 1899.	
TSCA	Toxic Substances Control Act. The Toxic Substances Control Act of 1976 provides EPA with authority to require reporting, record-keeping and testing	2 "Fire in a Glue Factory." The Philadelphia Times,18 April 1899, p. 10.	
	requirements, and restrictions relating to chemical substances and/or mixtures. Certain substances are generally excluded from TSCA, including, among others, food, drugs, cosmetics and pesticides.	3 "Name Is Changed After 101 Years." <i>The Philadelphia Inquirer</i> , 16 December 1966, p. 33.	
UST	Underground storage tank. In the case of the Metal Bank Superfund Site, the UST was a 6,000 gallon underground storage tank meant to hold oil which was drained from used transformers.	 4 "PCBs in the Delaware: A Thirty-One-Year Technical and Legal Odyssey; by Itzchak E. Kornfeld, Esquire." Contaminated Soils, Sediments and Water: Science in the Real World, by Edward J. Calabrese et al., Springer, 2005. 	
VOCs	Volatile organic compounds (VOCs) are compounds that easily become vapors or gases. VOCs are released from burning fuel such as gasoline, wood, coal, or natural gas. They are also released from many consumer products like cigarettes and solvents.	 5 Bate, Dana, and Susan Phillips. "How the Clean Water Act fixed the Delaware River's pollution problem." WHYY, 15 January 2019, whyy.org/articles/the-delaware-river-before-and-after-the- 	

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	terms of the most toxic form of dioxin. The toxicity of the individual congeners may vary by orders of magnitude. With the TEFs, the toxicity of a mixture of dioxins and dioxin-like compounds can be expressed in a single number: the toxic equivalency (TEQ).	
Toxic Substance	The Toxic Substances Control Act of 1976 provides EPA with authority to require reporting, record-keeping and testing requirements, and restrictions relating to chemical substances and/or mixtures. Certain substances are generally excluded from TSCA, including, among others, food, drugs, cosmetics, and pesticides.	
ТРН	Total petroleum hydrocarbons. A term used to describe a large family of several hundred chemical compounds that originally come from crude oil. Crude oil is used to make petroleum products, which can contaminate the environment.	
TSCA	Toxic Substances Control Act. The Toxic Substances Control Act of 1976 provides EPA with authority to require reporting, record-keeping and testing requirements, and restrictions relating to chemical substances and/or mixtures. Certain substances are generally excluded from TSCA, including, among others, food, drugs, cosmetics and pesticides.	
UST	Underground storage tank. In the case of the Metal Bank Superfund Site, the UST was a 6,000 gallon underground storage tank meant to hold oil which was drained from used transformers.	
VOCs	Volatile organic compounds (VOCs) are compounds that easily become vapors or gases. VOCs are released from burning fuel such as gasoline, wood, coal, or natural gas. They are also released from many consumer products like cigarettes and solvents.	

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This Research Dossier is presented by RAIR in 2020 as part of *Site to be Seen: Concepts for and from the Superfund* supported by The Pew Center for Arts & Heritage.

This is a public living document that begins to catalogue histories of the Superfund Site at 7301 Milnor. It is not meant to be a finished or final collection but rather one that can be added to, modified, and reinvented as needed by the future user.

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The Dossier Editors thank the following project collaborators and supporters:

Billy Dufala and **Fern Gookin** of RAIR Revolution Recovery Site to be Seen Advisors: **Kate Kraczon**, **Kaitlin Pomerantz**,

Legacy Russell, Mierle Laderman Ukeles, and Patti Phillips Louis latarola and The Tacony Historical Society Riverfront North John Pettit and the Temple University Urban Archives

Site to be Seen has been supported by The Pew Center for Arts & Heritage.

The views expressed are those of the author(s) and do not necessarily reflect the views of The Pew Center for Arts & Heritage or The Pew Charitable Trusts.

