

Delaware County / Chester City Toxic Tour

DelCo Alliance for Environmental Justice

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Tinicum

- Philadelphia International Airport
 - two thirds of the airport is located in DelCo
 - huge source of benzene and other hazardous air pollutants (HAPs)
 - 38% of toxic lead pollution in the U.S. is from airlines since leaded gasoline is still used (167 lbs of lead in 2008)
 - increase in jets that use more toxic fuels
 - airport expansion flipped the runway around, causing planes to fly over Chester

Eddystone

- Boeing military helicopter plant / Vertol
- Liberty Electric 541 MW gas-fired power plant
 - 3 units; started in 2002
 - run by North American Energy Services Company
- Exelon Eddystone 1,400 MW coal (and oil and gas-fired) power plant
 - 8 units; closing the 2 coal-fired units in ~~2011~~ (now 2013), totaling 588 MW (42% of plant's 1400 MW capacity)
 - “In order to maintain the reliability of the regional transmission system, **Exelon agreed to continue operating** one of the two Cromby Generating Station units in Phoenixville until May 2012, and **one of the two coal-fired units at the Eddystone Generating Station in Chester through the end of 2013.**”
Inquirer, 3/3/2010: <http://www.allbusiness.com/energy-utilities/utilities-industry-electric-power/14041134-1.html>
 - **Stopped burning coal in April 2011 & coal units closed in 2013**
 - will keep the oil & gas units going, which total 820 MW; they're primarily oil and gas backup
 - eliminating 280 jobs
 - the coal units operated since 1960; the other 6 units started up between 1967-1976
 - coal comes from MTR in WV
 - one of the largest polluters in DelCo; largest source of mercury pollution in the county
- **Proposed Oil Shale and Frack Water Rail-to-Barge Facility (Eddystone Rail Co & Enbridge)**
 - Would take shale oil from fracking in North Dakota and transfer from rail to barge to bring to area refineries; Enbridge is famous for pipeline spills
 - The Philly area is the largest recipient of Bakken crude oil trains
- Foamex polyurethane foam plant site / Camden Iron & Metal scrapyards proposed/defeated
- Industrial Park Development Company property
- Petrolite Corp (formerly Monroe Chemical)
- Taylor Oil
- Valley National Gases
- JLN Assoc (formerly Eastern Flame Hardening)
- Penn Terminal

Chester

- Harrah's Casino
- State Correctional Institute – Chester (prison)
 - one of 28 state prisons (www.actionpa.org/prisons/)
 - SCI Chester opened in April 1998 as the state's first facility designed to treat inmates with substance abuse problems. It also is the state's first tobacco-free facility.
 - *Is this prison just for lifers?*

- o Bears Chester's name (as does the casino), yet the Stadium is named after Philadelphia
- Kimberly Clark Tissue Corporation paper mill
 - o formerly Scott Paper, makes tissues
 - o 67 MW; current burner started in 1986
 - o burns waste coal (59%), petroleum coke (41%), and is also allowed to burn sludge waste, natural gas and fuel oil [the 41% may include fuel oil]
 - waste coal is the low-density, half-coal / half-rock left over from coal mining
 - Petroleum coke has 5x higher sulfur levels than the waste coal (which is already high)
 - o uses circulating fluidized bed boilers, which are known to release higher levels of cancer-causing polycyclic aromatic hydrocarbons (PAHs) as well as higher levels of nitrous oxide, a potent global warming pollutant
 - areas in PA near waste coal burning power plants have been identified as having clusters of a very rare blood cancer, polycythemia vera; CDC's ATSDR found 3 clusters
 - in 2004, 4 cases found among people living on one road in Tamaqua, PA
 - o Tried to burn tires in 1999
 - Wanted to burn 800+ tires per day
 - KCTC can burn 2-4 million scrap tires/year in the form of tire-derived fuel
 - Tested burning tires for 3 days in 1999; test burn showed 4,140% increase in dioxin emissions when burning 4-8% tires in their fuel mix
 - CRCQL and Laborer's International Union Local 413 protested this plan
 - Union threw back tire chip samples at the DEP meeting
 - Permit battle: KCTC sought a 6 month permit, but DEP sought to have KCTC get a permit for 18 months, so that the mill would be required to install pollution controls. KCTC refused, and applied for 6 months permit anyway. DEP denied it. KCTC appeals to the Environmental Hearing Board and they settled.
 - KCTC wanted to burn their paper mill sludges (major source of dioxins!) and DEP didn't go for this.
 - DEP attorney: "no way in hell... not even over my dead body"
 - KCTC is part of ARIPPA, the waste coal burning industry trade association
 - Pushed for PA's Alternative Energy Portfolio Standard law (passed in 2004) to include waste coal burning as an alternative energy. When it passed, it set a precedent for the nation's dirtiest state renewable energy mandate, and the first to include 3 types of coal technologies. The precedent was supported by PennFuture under John Hanger's leadership and has since inspired a few other states to follow suit.
 - Waste coal pile, if not covered, will leach acid and toxic metals
- Chester Water Authority
 - o Water fluoridation
 - *Is this the plant where they add the fluoridation chemicals?*
- Riverbridge Industrial Center, formerly Reynolds Metals & others
 - o Tower was for running spools of cable; corrugated building were labs?
- Certainteed (asphalt roofing)
- Dee Paper
- PQ Corp Chemicals
- Evonik Degussa Chemicals
 - o 2008: reported releasing 2,980 pounds of sulfuric acid & 480 pounds of ammonia
- Possible future stadium parking lot: former manufactured gas plant; excavating contaminated soil (4,500 tons) for disposal; groundwater contamination is likely
- McCusker-Ogborne Trash Removal / Chester Resource Recovery (local waste hauler)
 - o proposed construction/demolition waste transfer station defeated in 1998

- o company owner drove truck through a line of protesters, hitting one during a blockade of the trash incinerator by the Chester Residents Concerned for Quality Living
 - o does lousy job recycling
- PECO substation
- Wade Dump Site
 - o 3 million gallons of industrial waste dumped at the Wade lot in the 1970s were produced by at least 49 companies including:
 - 750,000 gallons of lead-contaminated wastewater was sent to the Wade dump from Gould's battery-manufacturing plant near Scranton
 - 375,000 gallons of SmithKline Corp's waste (not SmithKline Beecham) which was dumped illegally by their hauler without their knowledge
 - 72,000 gallons of wastes were taken from Boeing Vertol (a minor contributor)
 - DuPont Co., Congoleum Corp., Kimberly-Clark Corp. (which acquired Scott Paper Co.), Rhone-Poulenc Rorer (which acquired Amchem), and Texaco Inc.
 - o fire erupted under the Commodore Barry Bridge on February 2, 1978
 - o At least 230 firefighters and other emergency workers were exposed to the Wade dump fire or its aftermath.
 - o Serious illnesses - cancer, vascular and neuromuscular disorders, kidney failure – have afflicted at least 45, about one in five. Of those, 28 are dead.
 - o See: <http://inquirer.philly.com/specials/2000/fire/> (specifically <http://inquirer.philly.com/specials/2000/fire/companies.asp>) for list of which companies dumped which chemicals and how much
- PECO / Chem-Clear toxic waste site
- PPL Park (Soccer Stadium)
 - o small areas of arsenic, PCB & coal tar remediated in the past. Potentially more arsenic, asbestos, coal tar, PAHs.
- Empty area that was going to be the gated community used to be Ugite (experimental petroleum cracking processes to make fuels and hydrocarbon intermediates from crude oil)
 - o became Pennsylvania (not Philadelphia) Industrial Chemical Company dumping hydrocarbon resins & byproducts in a constructed pond which was found seeping into river in 1980.
 - o others included Chem Clear industrial waste treatment, Petron bulk fuel storage & distribution.
 - o contamination includes: arsenic, lead, Volatile Organic Compounds, pesticides, polycyclic aromatic hydrocarbons, coal tar residuals, petroleum oil, and resins.
 - o PECO installed bioslurping system (15 wells, 2 collection trenches, an oil/water separator) and whenever it's turned off for maintenance or repairs the seeping immediately resumes.
- Chester Generating Station – 39 MW, 3-unit oil burning peaking plant
<http://www.exeloncorp.com/PowerPlants/chester/Pages/profile.aspx>
<http://maps.google.com/maps?daddr=39.831411,-75.385866&ll=39.831156,-75.385823&spn=0.00187,0.004823&t=h&z=18&vpsrc=6>
- The Wharf at Rivertown
 - o Now closed?
 - o old PECO generating station 1918 - ~1980 (and old Pittsburgh Coal & Iron site is parking lot)
- Fishing sites / Highland Ave / CSO
 - o People fish at end of the road, next to the DELCORA Combined Sewer Overflow, and ignoring fish consumption advisories
 - o They also fish from a pier off of DELCORA's access road
- Russel, Rea, Zappala and Gomulka (RRZ&G Holdings, Inc.)
 - o Pittsburgh-based investment banking firm that owns 19-acre property under the incinerator, Abbonizio, ThermalPure, Clean Metals and the would-be Soil Remediation Systems site
 - o Zappala:
 - grandfather: Frank J. - attorney, magistrate, legislator
 - father: Stephen Sr. - Supreme Court Justice 1/1983, Chief Justice 1/2002,

son: Stephen Jr. - Allegheny County District Attorney 1998
son: Gregory - RRZ and (Western) Pennsylvania Child Care juvenile prisons (which bribed 2 corrupt judges in Luzerne County to sentence kids).

Covanta trash incinerator (1991)

- CAPACITY: 3,510 tpd [largest in the U.S.; 5th? largest in the world]; originally 2,688 tons/day
- ELECTRIC GENERATION: 80 MW
- OPERATOR: Westinghouse, then American Ref-Fuel, then Covanta
- PR:
 - Incineration is worse than landfills – ash landfilled; leaches more than unburned trash; far more air pollution than landfills; new toxins created that aren't created in landfills
 - Waste-OF-Energy (NOT Waste-TO-Energy)
 - Embodied energy in waste is destroyed, requiring materials to be remade using far more energy than if those materials were reused/recycled/composted
 - Trash to Toxic Ash and Toxic Air Emissions (NOT Trash-to-steam)
 - steam is just water vapor; trash is more than just hydrogen and oxygen; incineration emissions contain far more chemicals than water
 - Not renewable, but benefits from alternative energy policies
 - Incineration is one of the most unpopular technologies in the world; communities compete to keep them out; over 90% of incinerators proposed in the U.S. in the last few decades have been stopped before being built, or have been shut down after being built
 - “Energy from Waste” is the industry’s preferred term; they avoid calling them incinerators, even though the government calls them that and regulates them as such
 - Dictionary: Incinerator – *n.* an apparatus, such as a furnace, for burning waste
- TRUCKS:
 - Trucks used to come down Thurlow; protests led to them being re-routed to Harwick St.
- ODORS
 - ‘negative pressure’ system
- AIR POLLUTION:
 - Fewest air pollution control devices of any of the 6 trash incinerators in PA
 - Only uses SDA/FF; York uses SDA/FF/CI; other 4 use SDA/FF/CI/SNCR
 - SDA for acid gases, heavy metals and organic pollutants; FF for PM; CI for mercury and trace organics; SNCR for NO_x
 - Air Pollution:
 - Nitrogen oxides (NO_x):
 - Largest source of NO_x in Chester
 - 2nd largest source in DelCo after PHL airport
 - Among electric generating facilities:
 - Largest emitter in 5 county Philly area
 - 4th largest source from electric generators in the eastern half of PA
 - Sulfur dioxide (SO₂)
 - Among electric generating facilities:
 - largest source in 5-county Philly area
 - 6th largest in eastern half of PA
 - Dioxin emissions = 10 times more than rest of county’s facilities combined, based on TRI
 - Mercury = second only to Eddystone coal plant; will be #1 source once coal burning ends
 - Other air pollutants: acid gases, PM, heavy metals, PAHs, GHGs, nanoparticles...
 - Real air emissions unknown; lack of CEMs for toxics
 - they only use CEMs for CO, NO_x, SO₂, opacity and HCl
 - Rankings:

- Compared to other incinerators in the U.S. (EPA National Emissions Inventory 2011):
 - #1 in PM Condensable
 - #1 in PM10 (filterable and condensable)
 - #1 in PM2.5 (filterable and condensable)
 - #2 in PM10 filterable (after HPOWER)
 - #2 in PM2.5 filterable (after HPOWER)
 - #3 in SO₂
 - #6 in mercury
 - #7 in NO_x
- VIOLATIONS and MISHAPS:
 - o Since Covanta took over in 2005, they've received at least 68 violations totaling \$261,126 in fines
 - o In 1993, a highly radioactive pellet of Cesium-137 was lost. The community wasn't notified until many months after the fact. The pellet was either vaporized in the incinerator or melted down in the steel plant of one of Westinghouse's contractors. This means that it's either in the air and ash from the incinerator or is now a part of the metal consumer products manufactured by Lukens Steel Co. No fines were assessed.
 - o received medical waste
- ASH:
 - o Dumped in Delco's landfill in Berks County; used to be processed by Clean Metal for metal recycling in 2003-2005
- WORKERS/JOB:
 - o Exposed to ash dust; no respirators used; scratchy throat after just short exposure
 - o 10 times fewer jobs than if the waste were recycled
- HEALTH:
 - o Dioxin alone: cancer, immune system damage, reproductive and developmental problems+
 - o In other communities, where trash incinerator workers were tested for dioxin levels in blood, they were found to have elevated levels
 - o Studies have found health problems in residents who live near incinerators, such as increased risk of babies being born with heart defects and spina bifida (baby born with split spine).
 - *Adverse pregnancy outcomes around incinerators and crematoriums in Cumbria, north west England, 1956-93, J. Epidemiol. Community Health 2003;57:456-461*
- WATER USE: uses 62.372 million gallons of water per month
 - o now starting to use DELCORA sewage effluent for cooling
- WASTE FLOW:
 - o NYC trash trains to come through Chester on northern rail line, unload in Wilmington, then be trucked into Chester for 20-30 years
 - o 93% of the county's trash is burned at Covanta
 - o tons of ash about equal to DelCo's waste tonnage
 - o the county's landfill is in Berks County
 - o Waste Sources 1991-2014:
 - **1.5% Chester City**
 - **31% Rest of DelCo**
 - **25% Philadelphia**
 - **22% New York**
 - **11% New Jersey**
 - **8% Delaware**
 - **1% 10 other states (CT, GA, IN, MA, MD, NC, OH, OK, TN, VA), Puerto Rico, Canada and 18 other PA counties**
 - o Waste Sources (2012 – March 2014):

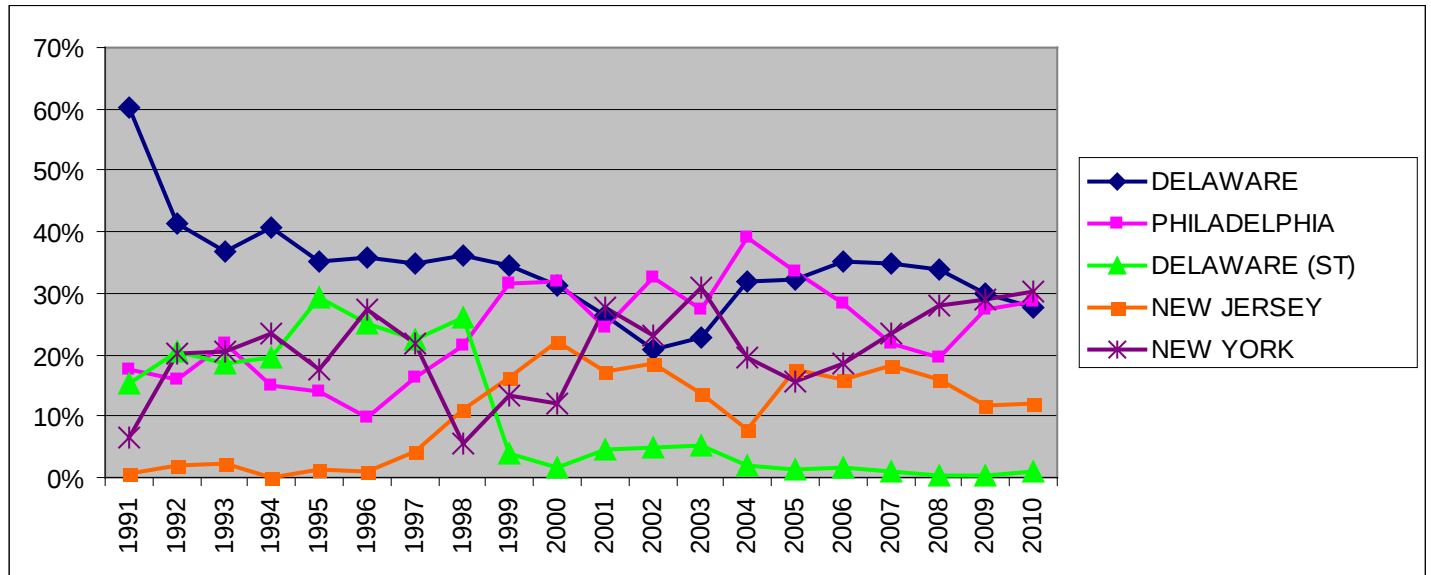
- **1.5% Chester City**
- **29% Rest of DelCo**
- **28% Philadelphia**
- **21% New York**
- **15% New Jersey**
- **4% Delaware**
- **1% MD, VA, NC & Puerto Rico and 2 other PA counties (Lehigh & Chester)**
- DE made up 25-30% of their waste in mid-1990s until 1999, when it fell to 0-5% after protests
- Delaware County fraction is falling in past few years, while Philly and NY increased
 - when Laid to Waste was made (1996), 50% was Delco, 25% DE state, and 25% spot market
- **INDUSTRIAL WASTE:**
 - 2.5% of their waste is industrial waste; increased over the years
 - 1999 permit change allowed more toxic forms of industrial waste
 - accepts and burns tires from NJ
- **RECYCLING:**
 - Competes with recycling
 - Ocean City
 - Needs to burn materials with high BTU value, like recyclable paper products and plastics (and tires...)
 - Put-or-pay concept
 - DelCo is only county in PA to have waste disposal paid through county taxes, so can't do a RecycleBank type of program here, as municipalities can't save money
 - 25 year contract up in 2017
 - Incineration is not recycling
 - DCSWA would like to get state permission to start burning yard waste
- **ZERO WASTE**
 - Real solution is being embraced by communities from New Zealand to Nova Scotia, from New York to San Francisco
 - San Francisco is already at 75% diversion from landfills and incinerators
 - Communities are setting goals aiming to divert 100% of their waste from landfills and incinerators, using source reduction, reuse/repair, recycling and composting
 - Some have reached 90% (a town in Italy?)

Job Creation: Reuse & Recycling Versus Disposal in the United States¹⁰⁰

Type of Operation	Jobs Per 10,000 Tons per Year
Product Reuse	
Computer Reuse	296
Textile Reclamation	85
Misc. Durables Reuse	62
Wooden Pallet Repair	28
Recycling-Based Manufacturers	25
Paper Mills	18
Glass Product Manufacturers	26
Plastic Product Manufacturers	93
Conventional MRFs¹⁰¹	10
Composting	4
Incineration	1
Landfilling	1

Institute for Local Self-Reliance, 1997.

[Covanta = 981,120 tpy at 2,688 tpd; 1,188,805 tpy at 2006-2009 actual levels; this means 98-118 jobs; 10x that for conventional MRF]



Year	TPD
1991	1,209
1992	2,424
1993	2,597
1994	2,269
1995	2,362
1996	2,508
1997	2,592
1998	2,894
1999	2,958
2000	3,044
2001	3,167
2002	2,920
2003	3,048
2004	3,133
2005	3,137
2006	3,216
2007	3,144
2008	3,263
2009	3,406
2010 Q1	3,127

American Ref-Fuel takes over in early 1997

June - Covanta takes over

Average for 2006-2009 = 3,257 tpd

- Zulene's house; Former office of Chester Residents Concerned for Quality Living (a couple blocks away on 3rd St near Highland)
- Bowman's Concrete (2nd between Hayes and Wilson) – left abandoned equipment for years
- old ThermalPure medical waste autoclave site
 - o permitted in 1993; closed in 1995?
 - o workers routinely stuck with needles
 - o medical waste and patient files found on streets, having spilled from trucks
 - o unrefrigerated truck (illegally) left in July 1995 summer heat wave for days
 - o 1996?: CA-based Ally Capital Corp bought the dilapidated building and tried to get permit to reopen it, but failed miserably; couldn't even get their permit number right on their application
 - o Project went bankrupt
 - o Building later torn down (but ancillary building – with company name on a sign – is still there)
- old Clean Metals ash processing site
 - o operated in Fairmont, WV, with Chester incinerator as it's sole customer
 - o takes the toxic ash and shakes the ash off of the metals to send the metals for recycling
 - o kicked out of WV, when neighbors were unhappy about the excessive black dust that would coat their properties; the town required that they be regulated as a scrapyard, then denied them a permit when the company sought one
 - o set up shop next to Covanta in Nov 2002; operated without a permit until 2005, when DEP granted them a permit with conditions that the company couldn't meet (like enclosing the building they were using, which had dozens (perhaps over 100) broken windows and walls that one could walk through)
 - o Laborer's International Union Local 413 protested the DEP meeting, shutting it down
 - o No DEP hearing held since it was a "general permit"
 - o ash dust clouds with every step
 - o ash dust pouring out of large openings in bldg
- site of defeated Soil Remediation Systems soil burner proposal
 - o defeated when they withdrew their permit application in order not to set a precedent at the U.S. Supreme Court, where we were winning on the issue of whether private citizens can use the Civil Rights Act of 1964 to sue a recipient of federal funds for actions that have a discriminatory effect (without having to prove intent)
- Abbonizio concrete / aggregate site
- **DELCORA sewage treatment plant and sewage sludge incinerator**
 - o 50 million gallons/day capacity (was 44 mmgpd when first built)
 - o all of the sewage treated in DelCo is treated here (but half of DelCo's waste is treated in SW Philly); *for some reason, legal docs from 1990s argue that this plant takes 100% of DelCo's sludge... need to find out why, and if there is/was any truth to that*
 - o Uses two burners, each 48 tons/day
 - o Was largest source of arsenic in Chester's air until PILCOP/CRCQL sued and made them "clean up" (they're still filthy)
 - The lawsuit resulted in a \$320,000 penalty, of which \$120,000 went to DEP/EPA and \$200,000 went to CRCQL to run the Chester Lead Poisoning Prevention Project, which Zulene ran
 - o 1/3rd of what they take in is from Kimberly Clark and Sun oil
 - o 2010: tried to take frack (natural gas drilling) wastewater from upstate PA, but withdrew under protest; is currently not allowed to take frack water without obtaining new permission from the Delaware River Basin Commission
 - o 2015: working to massively increase the waste they import by truck
- Scrapyard

Trainer

- Trainer Industries
- **Stony Creek Technologies chemical plant [formerly Witco Chemical]**
 - o manufactures corrosion inhibitors, fuel additives and oil additives
 - o DEP suspended their operating permits, and worked with EPA and Stoney Creek to process the remaining on-site chemical inventory, and removed the rest
 - o 17 million pounds of chemicals are currently stored on the 15-acre site
 - o in 2008, released 21,232 lbs of methanol [TRI]
 - o 4/2007 situation became critical when the electric company informed Stoney Creek that it would terminate service for non-payment of bills. Without power, the company's safety systems cannot manage certain chemicals
- **Delta Air Lines oil refinery (172,000 barrels/day) [formerly BP → Tosco → ConocoPhillips → Delta]**
 - o 3rd largest oil refinery in PA
 - o 78% of their *imports* are from Africa; 40% just from Nigeria
 - human rights abuses; Nigeria's history of executing environmental activists in Nigeria
 - Bush/Obama Africom program to provide U.S. military coverage of Africa to secure the flow of oil in the name of peacekeeping and "fighting terrorism"
 - o ConocoPhillips closed refinery in late 2011, and was to tear it down in March 2012, but Delta bought it to reopen it in 2012; Blue Green Alliance fought to keep it open and community members pretended it meant energy security, as if the oil is from the U.S.
 - o Refinery will meet 80% of Delta's needs; Delta putting \$100 million investment into it
 - o Dumps some of their toxic wastes into the sewage system that goes to the DELCORA plant next door, where the sewage sludge is incinerated

Marcus Hook

- Med-Waste / Safety Disposal Systems of PA, Inc. – medical waste autoclave
- **Sun Oil refinery (175,000 barrels/day)**
 - o 2nd largest refinery in PA
 - o 2003-2009: paid over \$1.7 million in fines for violations, including a 2009 fine of over \$750,000 for emitting nearly twice the permitted limit of particulate matter and an average of four times the permitted level of ammonia from a unit at this facility for more than one year
 - o 2009: major explosion took almost a full day to put out the blaze
 - o Only 13% of their feedstocks are from the U.S. 77% are from Africa; 61% just from Nigeria.
 - human rights abuses; Nigeria's history of executing environmental activists in Nigeria
 - Bush/Obama Africom program to provide U.S. military coverage of Africa to secure the flow of oil in the name of peacekeeping and "fighting terrorism"
 - o Sunoco closed the refinery in late 2011 and is interested in converting it to process natural gas from shale gas drilling ("fracking") in Pennsylvania to convert ethane to ethylene in a dangerous and polluting "cracking" plant.
- Pure Energy – trash-to-ethanol biorefinery was proposed in 1999 at the Sun oil refinery, but abandoned
- FPL Energy / Marcus Hook Refinery Cogen (50 MW natural gas power plant)
 - o 1987 stand-by unit
- **FPL Energy Marcus Hook LP (717 MW natural gas power plant)**
 - o 12/2004 - 4 units
 - o also burns some of the Sun oil refinery's waste oils