



STATE OF DELAWARE  
DEPARTMENT OF NATURAL RESOURCES  
AND ENVIRONMENTAL CONTROL

89 KINGS HIGHWAY  
DOVER, DELAWARE 19901

PHONE: (302) 739-9000  
FAX: (302) 739-6242

OFFICE OF THE  
SECRETARY

July 30, 2010

145<sup>th</sup> Delaware General Assembly  
Legislative Hall  
P.O. Box 1401  
Dover, DE 19901

Dear Members of the 145<sup>th</sup> General Assembly:

Pursuant to 29 Del. C. §8016A, the 2009 DNREC Community Environmental Project Fund (CEPF) Annual Report is attached for your review. The report provides an historical overview of CEPF investments and highlights the recent environmental efforts of local non-profit organizations. Under 7 Del. C. Chapter 60, 25 percent of all civil and administrative penalties collected by the Department must be made available to mitigate impacts from the violations.

In just 6 years the CEPF has invested more than \$2.6 million in projects that enhance the state's environment and protect the health of Delaware citizens and improve recreational opportunities. The CEPF is administered by the Department but the Community Involvement Advisory Council reviews grant applications and advises the Department on whether projects should be awarded grants. The Council recently adopted a 25 percent matching requirement and I am pleased to share that CEPF grantees have eclipsed the new 25% matching requirement. When their projects are completed, the 2009 CEPF grantees will have generated \$229,938 in services and funding from a \$125,162 investment of penalties.

Collaborative problem-solving projects with residents in Claymont, South Wilmington, and New Castle continue to engage citizens with their legislators, DNREC, state agencies, and industry in finding creative solutions to long-standing environmental problems.

In its first year of operation, the Sussex Community Corrections Center's Recycling Project has diverted more than 32 tons of materials from landfills to productive re-uses. It is making a major contribution to the ability of state government to recycle its own solid wastes and is moving beyond the public sector to engage small business in recycling partnerships.

The Delmarva Ornithological Society Ft. DuPont project is a small but effective and low-cost environmental enhancement of a significant historical landmark.

The Delaware Ecumenical Council on Children and Families project has enlisted 140 clergy and lay leaders in protecting the health of our most vulnerable populations, children and senior citizens from the effects of poor air quality.

*Delaware's Good Nature depends on you!*

The Friends of Wilmington Parks project offers more than 2,000 children a diversion from the traditional classroom setting to provide a recreational, hands-on environmental education experience in Wilmington's city parks.

In addition, we are taking steps to increase accountability and oversight of expended funds. The Department is following the recommendations of the state auditors to require audited financial statements and clear fiscal plans as a precondition of a grant award in an effort to fulfill the state's fiduciary responsibility of using these public funds.

I welcome this opportunity to share our record of activities and accomplishments with you. Together with DNREC staff and the Community Involvement Advisory Council, I look forward to the next year of service to all communities of our state.

Sincerely,



Collin P. O'Mara  
Secretary

Enclosure

2009 - 2010

Community Environmental Project Fund  
Annual Report

June 24, 2010

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## 2009 -2010 CEPF Report

### History and Background

The 142<sup>nd</sup> General assembly established the Community Environmental Project Fund (CEPF) in February 2004 by enactment of HB 192. The Bill requires the Department of Natural Resources and Environmental Control (DNREC) to withhold 25% of all civil and administrative penalties levied against polluters for violations of environmental laws. The resulting Community Environmental Project Fund (CEPF) is a resource for local non-profit organizations to repair environmental damage and reduce the risks to human health where the infractions occurred.

CEPF funds are allocated as grants to not-for-profit organizations that are representative of the affected community. Grantees must undertake environmental projects resulting in:

1. The elimination, minimization or abatement of pollution.
2. Improvement of conditions within the environment that eliminate, or minimize risks to human health.
3. The enhancement of natural resources for the purposes of improving indigenous habitats, or improving the recreational opportunities for the citizens of Delaware.

HB192 vests the DNREC Secretary with the decision-making authority for the funding program. It also established a consultative role for the Community Involvement Advisory Council (CIAC). Founded in 2001 under SB33, the CIAC originally had no grant making duties. The role of the CIAC has been expanded by direction of successive DNREC Secretaries to include:

- The development of grant making policies and procedures
- Public outreach for the fund
- Intake and screening of applications
- Advisory roles to the Secretary recommending projects for funding and suggesting the appropriate amount of the grant awards

As the Council has gained more grant making expertise it has implemented procedures that assure more reporting and accountability for funding, assist in the selection of the most feasible projects, and encourage the selection of projects with the best outcomes for the investment of public dollars. They include:

- ❖ Reducing grant making from four cycles to a single funding cycle each year

The one-time annual funding allows the Council to balance its grant making and citizen's participation duties. It helps to preserve the fund, and it creates a deeper pool of quality funding requests for consideration

- ❖ State- wide Public Notice of CEPF funding availability
- ❖ CEPF funding workshops
- ❖ Scoring and ranking of CEPF proposals from highest to lowest priority.

The process helps to assure that the projects selected for funding are those with the most promising outcomes.

- ❖ Development of a grant review subcommittee that is responsible for the evaluation of CEPF applications

Grant Review Subcommittee meetings allow for the participation of DNREC subject matter experts to provide technical insights and evaluations of the proposed projects for the Council. The subcommittee identifies the issues of concern with CEPF applications. It prepares questions to clarify the issues of concern. The Subcommittee provides with the questions prior to the open public meeting, giving each an opportunity to prepare their responses. The process enables the Council to vote in confidence on its recommendation to the Secretary

- ❖ Requirements for interim and final programmatic and financial reports.
- ❖ A 25% matching requirement
- ❖ Compliance with Title 29, Chapter 69 of the Delaware Code.

This section of the code requires that all state agencies assess and confirm the financial viability of organizations that are proposed to receive state funding under the Standard Professional Services Contract. CEPF applicants must produce the following documents with their application:

- Audited financial statement
- IRS 990 report form
- An itemized organizational budget for the applicant’s current fiscal year
- List of three largest funders in the last fiscal year and type of grant

Since its inception in 2004,, the CEPF has funded 39 projects and allocated \$2,605,119.76 to environmental projects from civil and administrative penalties collected by the Department.

## **2004-2010 Community Environmental Project Fund**

Feb 2010

DE Center for Horticulture	69,085.00	
Bear Babe Ruth	74,450.00	
Edgemoor Revitalization Cooperative	25,000.00	
Transportation Management Assn.	19,920.00	
Dover/Kent County MPO	4,500.00	
Nature Conservancy	13,959.62	
City of Rehoboth Beach	15,000.00	
<b>Total</b>		<b>221,914.62</b>

Jan 2009

Claymont Community Coalition	33,770.00	
Community Ecumenical Air Quality	23,900.00	
Clean Air Council	24,887.50	
SCCC Community Based Recycling	26,355.00	
Ft. Dupont State Park Habitat Enhancement	3,750.00	

	Friends of Wilmington State Park	12,500.00	
	<b>Total</b>		<b>125,162.50</b>
Sep 2007			
	Central Delaware Habitat for Humanity	42,416.00	
	Employee Free Bike Distribution	7,500.00	
	Ozone Action Transit Partners	17,780.00	
	North St. Georges Community Park	10,000.00	
	Urban Heat Island Mitigation	44,881.00	
	Asthma Action Partnership	57,700.00	
	Green Energy Green Savings	71,080.00	
	Bear Babe Ruth	150,000.00	
	<b>Total</b>		<b>401,357.00</b>
Jun-2007			
	Dragon Run Park Nature Trail	33,000.00	
	Re-Store 1st Year Start Up	25,000.00	
	Seal Island Restoration	23,000.00	
	<b>Total</b>		<b>81,000.00</b>
Oct 2006			
	Ardentown Forest Restoration	5,620.00	
	Ham Run Environmental Stream	43,250.00	
	Urban Tree Canopy	18,000.00	
	Septic Initiative Project	20,000.00	
	<b>Total</b>		<b>86,870.00</b>
Jun 2006			
	City of Wilmington Curbside Recycling	102,000.00	
	Acorn Institute Recycling Outreach Education	42,200.00	
	DE City Branch Canal Greenway Connector	1,300,000.00	
	<b>Total</b>		<b>1,444,200.00</b>
Jun 2005			
	Habitat for Humanity NCC Restore	53,189.00	
	Shue-Medill Middle School	2,473.73	
	11th Street Bridge Area Community Tree Planting	18,000.00	
	<b>Total</b>		<b>73,662.73</b>
Apr 2005			
	DE City Eco-Tourism	96,647.00	
	Urban Forestry Plan for Southbridge	56,500.00	
	<b>Total</b>		<b>153,147.00</b>
Oct 2004			
	Dragon Run Project	11,475.91	
	Woodville & Terry Drive Community Cleanup	2,500.00	
	Capitol Park Community Cleanup	1,350.00	

<b>Total</b>	<b>15,325.91</b>
<b>GRAND TOTAL</b>	<b>2,602,639.76</b>

### **The 2009 Community Environmental Project Fund Projects**

The total amount of penalty funds available to CEPF applicants in 2009 was \$406,497.24. There were eight applications totaling \$215,412.000 in requests. Secretary Collin O'Mara approved six projects totaling \$125,162.50. CEPF funding leveraged \$229,938 in matching funds and services.

#### **CEPF Project: Claymont Community Coalition Monitoring, Phase II (See Page 10)**

**Grantee**            **Claymont Community Coalition**

**Amount:**            33,770.00    Match: 105,010

#### **Project Description**

1. Monitor the dust still landing on our community for substance and frequency
2. Make findings available to DNREC, Evraz Claymont Steel and the community
  - Hold 2 public meetings
  - Hold interim meetings with DNREC and Evraz Claymont Steel to identify areas where progress can be made regarding emissions reductions
3. Summarize and confirm the Evraz Claymont Steel has conformed to Order No. 2006-A-0048

#### **Project Outcome Summary**

The CCC has taken 38 ambient air samples September 2009 through May 2010. Conclusions regarding the extent of environmental health risks will be based on an analysis of all the sample data at the conclusion of the project.

The CCC has established and maintained a schedule of regular monthly meetings with DNREC and the Division of Public Health to assess the monitoring process and review the sampling results

- DAWM Acting Director, Marjorie Crofts
- Engineering & Compliance - Brad Klotz
- Community Ombudsman - James Brunswick
- Dr. Gerald Llewellyn Department of Public health
- Jamie Mack Toxicologist Department of Public Health
- Representative Tom Kovatch

Claymont Evraz Steel has implemented 32 dust control measures that were developed in conjunction with DNREC Air Quality Management staff. They were recommended as action steps for Evraz implementation by the CCC. The company has secured financing for major pollution control additions. DNREC is expected to produce a new Secretary's Order in 2010.

#### **Asthma Action Collaborative Partnership (See Page 11)**

## Clean Air Council

Amount: \$24,887

Match amount \$6,221

### Project Description

1. Develop a collaborative partnership among civic associations, state and local agencies to monitor air quality and address long-standing fugitive dust and local air quality concerns in South Wilmington and New Castle.
2. Develop a diesel emissions reduction program modeled after the Clean Air Council's Port Environmental Task Force of Philadelphia

### Project Outcomes:

A March 29, 2010 convened by State Representative JJ Johnson established a working collaborative problem-solving partnership among civic associations, state and local government. Government officials included:

- State Representative JJ Johnson
- Department of Natural Resources and Environmental Control Secretary, Collin P. O'Mara
- Department of Natural Resources and Environmental Control Deputy Secretary, David Small
- DNREC Division of Air and Waste Management Director, Majorie Crofts
- DNREC Chief of Permitting and Enforcement, Paul Foster
- Department of Transportation Secretary Carol Ann Wicks
- New Castle County Economic Development Director, Karl Kalbacher
- New Castle County Land Use, Jim Smith.

Approximately eighty representatives from the following community organizations attended:

- Hamilton/Eden Park Civic Association
- Holloway Terrace Civic Association
- Rosegate Civic Association
- Rose Hill Gardens Civic Association
- Simonds Gardens Civic Association
- Southbridge Civic Association
- Wilmington Metropolitan Area Planning Committee

The public officials have begun to address the concerns raised by community representatives:

**Dust Sources – DNREC Air Quality Management (AQM)** is developing a facility Dust Inspection form to inspect each of the industrial facilities in the area. The inspections will identify dust causing activities, advise the facility management on best management practices to control dust, and require the facilities prepare a dust mitigation plan

AQM will be inspecting Trinity Port Services at 504 Rogers Road, the site of parked trucks and idling generators for refrigerated trailers. The inspection will determine if the operations require an air permit and pollution control measures.

**DNREC Site and Restoration Branch (SIRB)** – SIRB is conducting soil and groundwater sampling in the Hamilton Park neighborhood to determine if remedial action will be required

**DNREC Environmental Crimes Unit (ECU)** – Deployed three surveillance cameras near 57 Pyles Lane, the site of reported solid waste dumping. No offenders were identified. However, the ECU had an abandoned trailer towed. A clean up of the area has resulted in the removal of solid wastes.

**Delaware Department of Transportation – Removed** railroad tracks and resurfaced Pyles Lane. DelDot has met with the City of Wilmington to investigate the re-routing of truck from Terminal Avenue to an alternate route proposed by the community. The change in traffic routes will reduce resident exposure to diesel truck fumes.

**Diesel Emissions Reduction** - The Clean Air Council developed \$62.9 Million Tiger Grant application with the Diamond State Port Corporation to upgrade and enlarge international cargo handling and storage capacity of the Port. The project had the following components:

- Installation of a new electricity powered crane
- Rehabilitation of berths 5,6, and the floating berth
- Replacement of the older section of warehouse
- Upgrading the refrigeration system in warehouses A,B,C, D and E
- Upgrading the lighting system in a warehouses
- Acquiring 10 vehicles which use V2G technology

The grant application was declined. However, Port operators are actively pursuing state of the art energy efficiency equipment and operations.

**The Sussex County Community Corrections Center (See Page 12)  
Community Based Recycling Project**

**Amount:** \$26,335

**Match Amount:** \$106,667 (Vehicle and trailer use, Offender work crew salaries)

**Project Description**

The CEPF grant to the institution has funded:

1. Purchase a baler to process recyclable material.
2. Purchase and construction of a metal pre-fabricated building to house the baler and to store recyclable material.

The purchase of these items has enabled the SCCC to collect and bundle recyclable materials such as cardboard and cans that it retrieves from roadways and public areas in its' Litter Collection program. They have expanded the recycling of shrink-wrap that is used by boatyards and marinas to store boats in good condition. The project allows undreds of tons of plastic that simply went into landfills to be recycled and re-used.

**Project Outcomes**

SCCC is now able to recycle shrink-wrap product from six area marine dealers. It receives cardboard and Tin cans from within the SCCC facility and Sussex Correctional Institution. Agriculture plastics from the Delaware Solid Waste Authority are also being recycled. Aluminum cans are collected by SCCC road crews for recycling. The product totals through May 2010 include:

- Shrink Wrap -30,000 lbs of product. (1,000 lb bale) of shrink wrap plastics
- cardboard - 3,400 lbs of product (450 lb bales)
- Agriculture plastics - 26,000 lbs of product (1,100 lbs bales)
- Tin food cans -3,200 lbs (400 lb bales)
- Aluminum cans - 3,000 lbs of product in (600 lb bales)

**Delaware Ecumenical Council on Children and Families (See Page 13)  
Ecumenical Air Quality Promotion**

**Amount: \$23,900**      **Match Amount: \$7,040** (\$3,500 cash, \$2,940 administrative, \$600 operating costs)

**Project Description:**

1. Develop and convene a project advisory committee to guide project implementation.
2. Publish and disseminate user-friendly informational materials to all faith communities and related faith- and community-based organizations in New Castle County.
3. Plan and implement a series of leadership development and professional training workshops for clergy and other congregational leaders on air quality in New Castle County; and
4. Plan and implement a series of community education events for parents of young children, elderly, caregivers of frail elderly, their families, and those who work with them or advocate for them, in New Castle County.

The Ecumenical Air Quality Promotion Project mobilizes faith communities to address health and wellness problems arising from poor air quality. High amounts of ground level ozone, due largely to industrial pollution and vehicular traffic, trigger frequent air quality advisories during the high heat and humidity of the summer months. The rates of hospitalizations and emergency room treatments for respiratory illnesses skyrocket in the communities nearest to heavy industry and high traffic areas. Vulnerable populations of children and the elderly are most impacted.

**Project Outcomes**

The project trains clergy and congregational leaders to understand air quality issues and reduce the impact of respiratory ailments on children and the elderly.

1. DECCF has established a project advisory committee to develop strategies to inform congregations. The membership includes:
  - Air Quality Partnership
  - American Lung association
  - Clean Air Council
  - Delaware Region Health Ministries Network
  - Delaware Public Health Association
  - Family Development Resources of Delaware
  - Henrietta Johnson Medical Center

- Subcommittee on Aging of the New Castle County Council
  - Advocacy Resource Team of the Peninsula-Delaware Conference of the United Methodist Church
2. Drafted an educational and informational workshop program for parents of young children, family caregivers of senior citizens and those who work and advocate for them.
  3. Drafted two user friendly booklets on air quality and related community environmental health issues for distribution to appropriate entities including community and faith-based organizations in northern Delaware.
  4. Begun to provide educational and informational presentations to community and faith groups in northern Delaware, including groups representing churches and human services, e.g., day care and senior programs in New Castle, South Wilmington, Newport, Mill Creek and Christiana.

One hundred-forty (140) clergy lay and community residents have participated in training:

- 1/29, New Castle, clergy (20)
- 3/11, Dover/Statewide, clergy and lay leaders (12)
- 3/31, Newport, clergy (8)
- 4/22, Christiana, seniors (25)
- 5/5, Mill Creek, clergy ( 5)
- 5/6, Wilmington, clergy and lay leaders (15)
- 5/13, Delaware City, clergy (25)
- 5/26, Wilmington, seniors (25)

**Delmarva Ornithological Society (See Page 14)**  
**Fort DuPont State Park Environmental Enhancement**

**Amount:** \$3,750                      **Match Amount:** \$1,250

**Project Description:**

The Delmarva Ornithological Society (DOS) project enhances the Fort DuPont State Park environment by clearing a six acre parcel of invasive multi-flora roses, shrubs and vines and replacing them with native species. DOS volunteers enclosed the native seedlings with circular fences (tree circles) to protect them from being eaten by deer, groundhogs, and rabbits.

DOS members initiated the project with the planting of 48 tree circles. On May 15, 2010, Delaware State Parks staff; The Boy Scouts of America, Delaware AAA, and the Environmental Stewardship Program (ESP) volunteers joined DOS volunteers to plant an additional 76 native trees and shrubs at the restoration site. Delaware AAA contributed \$500.00 towards the purchase of the plants.

The lack of availability of some specific plant species may require a small planting in the fall of 2010.

**Friends of Wilmington Parks (See Page 15)**  
**Hands Across the Brandywine, Scholarship for Urban -based Parks**

**Amount:** \$12,500      **Match:** \$3,750 to be raised through a silent auction at the Annual Jasper Crane Rose Garden Spring party

**Project Description:**

The Friends of Wilmington Parks (FWP) support and promote educational and cultural events in the parklands along the Brandywine River. Volunteers contribute to the enhancement of the parks, its gardens, and historical buildings. FWP collaborates with Department of Natural Resources, Division of Parks and Recreation staff to conduct environmental education and recreational programs for the citizens of Wilmington and park visitors.

**Project Outcomes:**

The CEPF grant has subsidized the tuition of 2,200 k-7<sup>th</sup> grade low-income students. The purpose of The Hands Across the Brandywine program is to educate students regarding the history of Wilmington, to promote their awareness of the environment, and the beauty of the historic Brandywine River. The students have participated in environmental education courses and experiments:

- Going Green
- Energy Now and then
- Energy is Everywhere
- Forces in Motion
- Land Formations
- Water's Power to Change
- The Power of Water
- Wildlife in the City
- Mysterious Magnets

The students are from low-income households in the following schools:

- Claymont Elementary School
- George Read Middle School
- Harlan Elementary
- Highlands Elementary
- Hilltop Lutheran
- Lancashire Elementary
- Pulaski Elementary
- Shortlidge Elementary
- Warner Elementary

**Claymont Community Coalition  
Dust Study Monitoring, Phase II**

## Study shows steel mill hasn't swept away Claymont's dust problem

By **Jesse Chadderdon**  
**Community News**

Posted Jun 16, 2009 @ 04:24 PM

Last update Jun 18, 2009 @ 12:25 PM

Claymont, Del. — After an eight-month long air sampling study, residents say the efforts by Evraz Claymont Steel to reduce dust raining on nearby homes, cars, and boats, is failing.

The report, issued today by Claymont Community Coalition and California-based Global Community Monitor, notes that the amount of dust did not decrease since the onset of the study, except when the steel mill was shut down for retooling.

"We need real change from Evraz," said Dee Whildin of the Claymont Community Coalition. "In response to our complaints, they've started regular street sweeping and tree planting, but it isn't fooling us. The air is still dirty and we need them to fix this mess now."

Residents have been dealing with piles of metallic dust eroding the finish of their vehicles and homes for over six years. Neighbors are now concerned about health implications of prolonged exposure to the dust.

As a part of the study, trained coalition members took 67 air samples from July 2008 through February 2009. The air samples, each taken over a 24-hour period, show that the dust collected from Claymont cars, homes and air, matches the fingerprint of Evraz Claymont Steel's Toxic Release Inventory and operations.

The study also found manganese and lead in the dust. According to consultant Dr. Mark Cherniak, "manganese and lead are known to accumulate in the brain. Health effects may occur from the cumulative impacts of multiple short-term exposures to high levels of these neurotoxins."

According to the report, Evraz is the only facility in the industrial area of Claymont and Marcus Hook that emits reportable amounts of manganese, an element commonly associated with steel making and melting operations.

The Dust Study Report includes recommendations for Evraz.

The recommendations, agreed upon by the Dust Study Team and Department of Natural Resources and Environmental Control (DNREC), include immediate work on the melt shop and the electric arc furnace, the main source of operations for the plant.

"Evraz is going to need to make a significant investment in the facility to get it running cleaner. The Russian owners should put Claymont at the top of their to-do list," said Ruth Breech, Program Director of Global Community Monitor.

Whildin agreed. She said she believes the company has "tried hard" to address the problem through a series of improvements to its melt shop, but said a larger equipment overhaul may be necessary to truly alleviate the dust.

Victor Clark, vice president and general manager of the mill, said there is no evidence that the company is violating any EPA emissions

### RECOMMENDATIONS FOR EVRAZ CLAYMONT STEEL

1. Re-route Melt Shop Plenum to the Electric Arc Furnace (EAF) (baghouse duct) from various sources in the Melt Shop.
2. Investigate creating negative pressure in the Melt Shop and add an additional baghouse inside the Melt Shop to capture fugitive dust.
3. Lower temperature in the Melt Shop to keep emissions down and add a water mister as well.
4. Conduct a new independent study by experts agreed upon by the CCC and DNREC to identify all particulate matter sources by speciation of the dust for

standards and said Evraz is striving to "maintain a healthy workplace and be a responsible neighbor.

"During the past few year, the company has undertaken many projects at a significant expense to substantially reduce dust emissions from our operations, and we believe those efforts have been succesful," he said.

On another front, Whildin said the Community Coalition is awaiting a \$33,970 grant from the Department of Natural Resources and Environmental Control that she said would allow the community to continue their monitoring for another year. The previous monitoring was paid for with a grant from Evraz.

Whildin said the DNREC funds were supposed to come through June 1, but that specifics of a contract were still being hammered out. Whildin said DNREC wants more of a say in the methodology used by the community in gathering the dust samples. Calls to DNREC Ombudsman James Brunswick, who has been working with the coalition on the grant contract, were not returned.

A community meeting open to discuss the study's findings will be held at 7 p.m. on Monday, July 13 at Claymont Fire Company on Philadelphia Pike.

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its content.

5. Enclose all slag dust piles.
6. Enclose all scrap loading and unloading operations to eliminate and minimize dust releases.
7. Enlarge the size of the canopy of the plenum in order to fully capture emissions.
8. Employ the use of an enlarge slag mover (pot).
9. Add secondary duct from roof monitors to another baghouse.
10. Enclose the entire facility and dust sources in large buildings.

Source: Global Community Monitoring

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## Dust Management

During the past several years, Evraz Claymont Steel (ECS) has studied and implemented a number of dust control measures intended to further reduce dust emissions from its facility. ECS implemented some of these measures in conjunction with DNREC under DNREC's Dust Order. ECS has also implemented other measures on its own initiative as part of its overall commitment to further reduce dust emissions from its operations. Some of these dust control measures completed at the ECS facility are listed below. ECS continues to evaluate additional opportunities for further improvement in its dust management practices, notwithstanding the significant commitment of resources to the evaluation and implementation of the many control measures identified in the following list. ECS will endeavor to keep DNREC and the community informed of these projects going forward.

### Dust Management Actions Completed By ECS:

1. Purchased and commenced the use of a vacuum sweeper for in-plant roadways.
2. Planted a line of Cypress trees along the facility border at Naamans Road to act as a barrier between the facility and the neighboring residential community.
3. Worked with facility operators to optimize best management practices for minimizing slag dust generation.
4. Constructed a series of slag bay cooling structures and implemented wet suppression of slag with fine spray.
5. Purchased and installed a weather station at north border of the plant to assist in responding to any public comments and provide information for evaluating slag processing controls.
6. Paved a large portion of melt shop area roadways.
7. Instituted on-site speed limit to reduce fugitive dust from truck traffic.
8. Added water spray on slag piles, thus increasing moisture content to reduce windblown emissions.
9. Installed a water spray at the grizzly on the main feed hopper at the slag plant.
10. Instituted Ambient Air Monitoring Program.
11. Added a second truck for roadway watering. Unpaved roadways are being wetted at a more frequent pace.
12. Constructed new scarfing operation with larger capacity baghouse. This process underwent significant improvements which reduced emissions. In addition, the area has been paved.
13. Ceased accepting crushed and drained oil filters in coordination with the Delaware Solid Waste Management Authority.

14. Constructed truck wheel wash system to minimize dust carry-off at the exit to Philadelphia Pike.
15. Purchased a "high-end" sweeper truck and increased sweeper truck hours of operation to 40 hours per week.
16. Reduced inventory of processed slag and scarfing fines to reduce the stockpile exposure to wind.
17. Closed roof vents and other openings in building walls to minimize fugitive emissions from the melt shop operations.
18. Implemented improvements to the carbon silo system to seal the hopper, auger and connection below the hopper.
19. Improved damper controls for the EAF to more effectively achieve capture of unit emissions.
20. Optimized air flow to the existing baghouse based upon the results of probe analyses.
21. Evaluated and improved operation of the dampers within the baghouse.
22. Evaluated performance of blower in the baghouse silo to achieve enhanced flow control.
23. Improved timing on the movement of the tapping hood to ensure that the hood is in optimal position prior to commencement of furnace tapping.
24. Graded melt shop roadways to provide adequate drainage and fugitive dust control.
25. Commenced tarping procedure for slag and scarfing stockpiles that are susceptible to wind erosion.
26. Implemented a daily best practices checklist for slag handling and processing.
27. Investigated ductwork to identify any evidence of leakage, with the goal of maintaining negative pressure in furnace exhaust.
28. Reduced the rate of alloy wire feed at the stir station to minimize the generation of fugitive dust.
29. Optimized energy input to the furnace by completing the installation of a real-time furnace off-gas analysis system. This system analyzes EAF off-gas and automatically adjusts energy input into the furnace using proprietary computer software. This system will provide a feedback mechanism for the baghouse dampers and should reduce fugitive emissions from the EAF.
30. Posted and implemented a lime truck unloading procedure where trucks can only unload during day shift and while a supervisor is available.
31. Implemented environmental management system training program for Melt Shop and Plate Mill employees.
32. Completed construction of enclosure for slag processing charge hopper.

***Evraz Claymont Steel is a community partner and is committed to playing a role in resolving any issues raised by our neighbors concerning our operations.***

**ECS 24-HOUR COMMUNITY CONNECTION CALL-IN NUMBER: (302) 792-5411**

To Our Community

March 22, 2010

- Evraz Claymont Steel commits extensive resources to ensure the facility's compliance with applicable environmental standards including federal and state regulations and permit terms.
- Evraz Claymont Steel has spent significant time and resources to implement programs at the facility to minimize its dust generation.
- Evraz Claymont Steel values its relationship with the community, and has worked hard to maintain and enhance that relationship, and will continue to do so.
- A significant number of our employees live in the community, and we therefore are a meaningful part of this community in more ways than one.
- We are actively working to keep neighbors informed about our operations and activity, for example:
  1. In the past year, and since we hosted a public information meeting last March, we've instituted a Community Connection Hotline which is active 24-hours a day. We investigate caller concerns or complaints right away and, to the extent that there are measures that we can undertake to attempt to address any concerns, we do so promptly.
  2. We issue a Community Report newsletter to keep our neighbors informed about activity at the plant and deliver that to neighbors as an insert in the Brandywine News community newspaper.
  3. Our senior management representatives attend monthly Claymont Community Coalition meetings and provide reports on plant activity, continuous improvement implementation and answer questions from the attendees.
  4. We hosted a meeting at our plant with leaders of the Claymont for Clean Air, Claymont Community Coalition and the Dust Study Team for an open dialogue and more technical explanation session about our progress and our work with DNREC. This meeting reflected our efforts to be responsive to community concerns.
  5. We post information on our website, [www.claymontsteel.com](http://www.claymontsteel.com) in the "Community" and "Recent News" sections.

Dear Denny and Ruth,

Attached is my interpretation of heavy metal and particulate matter levels in eight air samples collected in Claymont, Delaware, since 6 September 2009.

What follows are the conventions I used: 1) If the measured concentration is zero or if the measured value is less than its uncertainty, the I marked the level as below its minimum detectable limit (ND); 2) If the measured concentration is greater than its uncertainty, but less than two times its uncertainty (considered to be below its two-sigma MDL [95% confidence]), I marked the value in underline; and 3) If the measured concentration is greater than its uncertainty, but less than three times its uncertainty (considered to be below its two-sigma MDL [99.7% confidence]), then I marked the value in italics].

Regarding the health significance of the data:

1. All lead levels are below the U.S. EPA three-month national ambient air quality standard for lead. The average of all lead levels is only 10% of the U.S. EPA three-month national ambient air quality standard for lead ( $0.015 \text{ ug/m}^3$  versus  $0.15 \text{ ug/m}^3$ )

2. During the first month of the renewed sampling effort, manganese levels were of a health concern. Four of the first eight samples contained manganese levels that exceed the U.S. EPA reference concentration for manganese of  $0.050 \text{ ug/m}^3$ ). More importantly, the average of all the eight manganese measurements ( $0.076 \text{ ug/m}^3$ , assuming non-detects = zero) is also above the U.S. EPA reference concentration for manganese. By comparison, when DNREC analyzed air quality in Wilmington from June 2001 to Nov. 2003, it found average manganese levels of  $0.0035 \text{ ug/m}^3$  (PM<sub>2.5</sub> species mass concentration).

Since September 2009, measured manganese levels have declined significantly. Of the 30 additional samples collected since September 2009, only one additional sample (collected 1 October 2009) exceeded the U.S. EPA reference concentration for manganese. More importantly, the average of all 38 manganese measurements ( $0.025 \text{ ug/m}^3$ , assuming non-detects = zero) is now only 50% of the U.S. EPA reference concentration for manganese

3. Only eight samples had detectable levels of mercury and these levels are all below the California Office of Environmental Health Hazard Assessment's Chronic Reference Level for mercury.

4. Seventeen of the thirty eight samples had a detectable level of nickel. Twelve of the seventeen samples having detectable levels of nickel contained a level of nickel that is greater than the level considered by the World Health Organization to be associated with a lifetime, one per one million increased risk of cancer ( $0.0025$  micrograms per cubic meter). The average of all 38 nickel measurements ( $0.004$  micrograms per cubic meter, assuming non-detects = zero) is also slightly greater than the level considered by the World Health Organization to be associated with a lifetime, one per one million increased risk of cancer.

However, by comparison, when DNREC analyzed air quality in Wilmington from June 2001 to November 2003, it found average nickel levels of 0.0042 micrograms per cubic meter (PM<sub>2.5</sub> species mass concentration). Therefore, the average nickel levels in Claymont over the period of September 2009 to May 2010 seem nearly the same as average nickel levels in Wilmington measured from June 2001 to November 2003.

5. Eleven of the thirty-eight samples had a detectable level of arsenic. Each of the samples that did have a detectable level of arsenic contained a level of arsenic that is greater than the level considered by the World Health Organization to be associated with a lifetime, one per one million increased risk of cancer (0.00066 ug/m<sup>3</sup>). The average of all the 38 arsenic measurements (0.0019 ug/m<sup>3</sup>, assuming non-detects = zero) is also greater than the level considered by the World Health Organization to be associated with a lifetime, one per one million increased risk of cancer. By comparison, according to the World Health Organization, mean levels of arsenic ambient air in the United States range from <0.001 to 0.003 ug/m<sup>3</sup> in remote areas, and from 0.020 to 0.030 micrograms per cubic meter in urban areas.

6. Three of the thirty-eight samples had a level of cadmium greater than the California Office of Environmental Health Hazard Assessment's Chronic Reference Level of 0.02 ug/m<sup>3</sup> of cadmium to prevent kidney effects (proteinuria) and respiratory effects (reduction in forced vital capacity and reduction in peak expiratory flow rate). However, the last sample to exceed the Cal OEHHA's CRL for cadmium occurred on 1 October 2009. More importantly, the average of all 38 cadmium measurements (0.025 ug/m<sup>3</sup>, assuming non-detects = zero) only 50% of Cal OEHHA's CRL for cadmium.

7. Particulate matter levels are health concern. The average level of very fine particulate matter (PM<sub>2.5</sub>) (18 measurements) in Claymont is 15.1 ug/m<sup>3</sup>, which slightly exceeds the U.S. EPA annual National Ambient Air Quality Standard for PM<sub>2.5</sub> (15 ug/m<sup>3</sup>) and which exceeds the World Health Organization annual Guideline Value for PM<sub>2.5</sub> (10 ug/m<sup>3</sup>). The average level of fine particulate matter (PM<sub>10</sub>) (20 measurements) in Claymont is 24 ug/m<sup>3</sup>, which exceeds the World Health Organization annual Guideline Value for PM<sub>10</sub> (10 ug/m<sup>3</sup>).

8. There seems to be a recent downward trend in levels of heavy metals and particulates in the last few months of the overall sampling effort.

Please let me know if you have any questions.

Warmly,

Mark

According to our expert Mark Chernaik:

*"The dataset you sent me today includes, for the first time since the early Fall of 2009, two air samples in which manganese exceeds the U.S. RfC of 0.05 ug/m<sup>3</sup>. Specifically, the sample collected 20-May-10 at 7 Sherman Drive had a manganese level of 0.072 ug/m<sup>3</sup>, and the sample collected 24-May-10 at Balfour & Colby Park had a manganese level of 0.124 ug/m<sup>3</sup>. Also, iron levels in the samples collected on 20-May-10 are some of the highest since the Fall of 2009."*

The new data is in rows 45-50 of the new spreadsheet.

This may represent an increase in production, but it would be helpful to have production levels for the days we sampled and the production trend information from Evraz to factor that in to analysis of the success or lack there of in dust control measures.

Thank you,

Outdoor samples	Date Collected	Location	Filter Samples, as ug/m3 (calculated concentrations)												
			Fe	Pb	Mn	Zn	Cu	Hg	Ni	As	Cd	PM-2.5	PM-10		
GCM-0184	6-Sep-09	Balfour & Colby Park	0.644	0.112		1.078	0.020	ND	ND		0.011	27.3	-		
GCM-0188	6-Sep-09	7 Sherman Drive	0.022	ND	0.002	0.004	ND	ND	ND		0.003	23.8	-		
GCM-0186	13-Sep-09	Stockdale & Cathedral	0.037	ND	ND	0.010	ND	0.007	ND		0.007	16.7	-		
GCM-0204	13-Sep-09	2607 White Avenue	0.034	0.009	ND	0.007	ND	ND	ND		0.012	14.9	-		
GCM-0150	20-Sep-09	Balfour & Colby Park	0.969	0.039		0.087	0.057	ND					ND		
GCM-0159	20-Sep-09	7 Sherman Drive	2.411	0.044		0.211	0.114	ND					62.2		
GCM-0207	26-Sep-09	Balfour & Colby Park	0.533	0.112		0.492	0.039	ND					15.0		
GCM-0209	26-Sep-09	7 Sherman Drive	0.101	0.007	0.004	0.010	ND	ND			0.007	28.6	-		
GCM-0205	1-Oct-09	Balfour & Colby Park	0.723	0.036		0.234	0.020	ND	ND				22.0		
GCM-0210	1-Oct-09	7 Sherman Drive	0.389	0.009	0.007	0.025	0.010	0.011	ND	ND	0.009		23.4		
GCM-0206	8-Oct-09	Balfour & Colby Park	0.089	0.007	ND	0.005	ND	0.006	ND	ND		14.0	-		
GCM-0211	8-Oct-09	7 Sherman Drive	0.398	0.020	0.042	0.107	0.029	0.004	ND	ND	0.016	16.5	-		
P8101664	14-Oct-09	7 Sherman Drive	0.269	ND	0.007	0.009	0.008	0.008	ND		0.014		12.8		
P8101689	14-Oct-09	Balfour & Colby Park	0.560	0.008	0.007	0.028	0.009	ND	ND		0.014		21.6		
P8101665	20-Oct-09	7 Sherman Drive	0.412	0.007	0.008	0.026	0.020	ND	ND		0.015		19.8		
P8101690	20-Oct-09	Balfour & Colby Park	-	-	-	-	-	-	-	-	-	-	-		
P8101666	25-Oct-09	7 Sherman Drive	0.216	0.013	ND	0.008	0.007	ND	ND				10.0		
P8101691	25-Oct-09	Balfour & Colby Park	0.626	0.011	0.012	0.029	0.016	ND	ND				14.4		
P8101667	3-Nov-09	7 Sherman Drive	0.141	ND	0.003	0.014	0.008	0.010	0.0024			6.33	-		
P8101692	3-Nov-09	Balfour & Colby Park	0.067	0.005	ND	0.008	0.004	ND	0.002	ND		7.87	-		
P8101668	7-Nov-09	7 Sherman Drive	0.545	0.015	0.020	0.064	0.017	ND					24.07		
P8101693	7-Nov-09	Balfour & Colby Park	0.332	0.015	0.005	0.022	0.010	ND	0.002	ND			20.90		
P8101669	15-Nov-09	7 Sherman Drive	0.101	0.011	0.001	0.011	0.005	ND	ND	ND	0.0127	15.28	-		
P8101694	15-Nov-09	Balfour & Colby Park	0.105	0.008	ND	0.014	0.002	ND	ND	ND		15.74	-		
P8101670	22-Nov-09	7 Sherman Drive	0.186	0.010	0.005	0.014	0.007	ND			0.0143		18.98		
P8101695	22-Nov-09	Balfour & Colby Park	Field blank												
P8101671	28-Nov-09	7 Sherman Drive	0.174	ND	0.003	0.015	0.008	ND					14.66		
P8101696	28-Nov-09	Balfour & Colby Park	0.091	0.008	0.002	0.011	ND	ND	0.002	ND	0.0160	11.88	-		
P8101672	6-Dec-09	7 Sherman Drive	0.687	0.014	0.011	0.070	0.028	ND			0.0155		35.65		
P8101697	6-Dec-09	Balfour & Colby Park	0.235	0.004	0.004	0.031	0.008	ND	0.002	ND			28.24		
P8101673	15-Dec-09	7 Sherman Drive	0.042	ND	ND	0.010	ND	ND	ND	ND	0.0116	6.61	-		
P8101698	15-Dec-09	Balfour & Colby Park	0.021	ND	ND	0.002	ND	0.003	ND	ND	0.0162	5.53	-		
P8101674	15-Jan-10	7 Sherman Drive	1.145	0.013	0.023	0.259	0.054	ND					40.28		
P8101699	15-Jan-10	Balfour & Colby Park	0.237	ND	0.004	0.022	0.002	ND	ND	ND	0.0103		35.34		
P8101675	22-Jan-10	7 Sherman Drive	Field blank												
P8101700	22-Jan-10	Balfour & Colby Park	Field blank												
P8101685	18-Apr-10	7 Sherman Drive	0.003	0.004	ND	ND	ND	ND			0.0155		2.62		
P8101709	18-Apr-10	Balfour & Colby Park	0.139	ND	0.003	0.014	ND	ND	ND	ND	0.0142		10.30		
P8101686	28-Apr-10	7 Sherman Drive	0.226	ND	0.006	0.013	ND	ND	ND	ND	0.0131	16.20	-		
P8101710	28-Apr-10	Balfour & Colby Park	0.050	0.007	ND	0.007	ND	ND	ND	ND	0.0181	8.95	-		
P8101687	1-May-10	7 Sherman Drive	0.913	0.013	0.021	0.019	0.012	0.004			0.0098		45.99		
P8101711	1-May-10	Balfour & Colby Park	0.413	0.009	0.007	0.015	0.007	ND					35.96		
P8101688	8-May-10	7 Sherman Drive	0.036	0.004	0.002	0.005	ND	ND	ND	0.0023		3.54	-		
P8101712	8-May-10	Balfour & Colby Park	0.132	0.006	0.002	0.004	ND	ND	ND	ND	0.0073	10.96	-		
P9095195	20-May-10	7 Sherman Drive	1.969	0.038		0.201	0.049	ND			0.0030	0.0177	44.44		
P9095196	20-May-10	Balfour & Colby Park	1.263	0.010	0.030	0.056	0.028	ND			0.0073	0.0084	28.7		
P9066058	24-May-10	7 Sherman Drive	0.092	ND	0.004	0.004	0.004	ND	ND	0.0030	0.0146	11.88	-		
P9095197	24-May-10	Balfour & Colby Park	0.392	0.069		0.354	0.024	ND	0.004	0.0033	0.0127	17.28	-		
Health-based standards, micrograms per cubic meter			none	0.150	0.050	none	none	0.030	0.0025	0.0007	0.020	35.0	150 EPA 24-hour standard		
<i>italic = conc &lt; 3 times uncertainty</i>												25.0	50 WHO 24-hour standard		
<u>underline = conc &lt; 2 times uncertainty</u>												15.0	none EPA annual standard		
												10.0	20 WHO annual standard		
Average conc., ND = 0			0.413	0.016	0.027	0.082	0.014	0.001			0.009				

NOTE: Pump did not run

For individual PM levels, ORANGE means a value that exceeds a short-term, health-based standard

For average metal levels, YELLOW means a value that exceeds 50% of a long-term, health-based standard

REFERENCES

Health-based standard for Lead - U.S. EPA 3-month NAAQS

Health-based standard for Manganese - U.S. EPA RfC  
<http://www.epa.gov/ttn/atw/hlthef/manganes.html>

Health-based standard for Mercury - Cal OEHHA Chronic REL  
<http://www.oehha.org/air/allrels.html>

Health-based standard for Nickel - WHO GV for nickel at 1 per million lifetime cancer risk  
[http://www.euro.who.int/document/aig/6\\_10nickel.pdf](http://www.euro.who.int/document/aig/6_10nickel.pdf)

Health-based standard for Arsenic - WHO GV for arsenic at 1 per million lifetime cancer risk  
[http://www.euro.who.int/document/aig/6\\_1\\_arsenic.pdf](http://www.euro.who.int/document/aig/6_1_arsenic.pdf)

Health-based standard for Cadmium - Cal OEHHA Chronic REL  
<http://www.oehha.org/air/allrels.html>

# **Asthma Action Collaborative Partnership**

## **Clean Air Council**

# Science for Citizens

8 January 2010:

Denny Larson, Executive Director  
Global Community Monitor  
P.O. Box 1784  
El Cerrito, CA 94530

RE: Air quality data, New Castle-Wilmington area of Delaware

Dear Mr. Larson,

Thank you for sending me the data about levels of particulate matter, heavy metals, organic carbon (OC), elemental carbon (EC) and total carbon (TC) in air samples that have been collected from the New Castle-Wilmington area of Delaware.

- Particulate matter levels in ambient air samples are a health concern.

Exposure to excessive levels of particulate matter is associated with premature death, respiratory illness and cardiovascular illness. The World Health Organization (WHO) has established a guideline value for very fine particulate matter (PM<sub>2.5</sub>) of 25 micrograms per cubic meter (ug/m<sup>3</sup>) averaged over a 24-hour period and 10 ug/m<sup>3</sup> averaged over one year. The PM<sub>2.5</sub> level in the sample collected on 4 August 2009 at 57 Pyles Lane exceeds the WHO 24-hour guideline value. PM<sub>2.5</sub> levels in the four samples for which data is available average 15.8 ug/m<sup>3</sup>. This exceeds the WHO annual guideline value by more than 50%. If these PM<sub>2.5</sub> are representative of PM<sub>2.5</sub> levels year round, then I would characterize ambient air in this area as unsafe.

Levels of manganese in the eight samples collected in New Castle/Wilmington in July and August correlated strongly with levels of iron (correlation coefficient of >0.95). Manganese levels are often elevated in the vicinity of iron metal and scrap iron metal processing facilities. The strong covariance of manganese and iron in these eight samples suggest that an industrial activity involving iron metal or scrap iron metal is the source of manganese in the samples. In contrast, manganese levels at these locations in New Castle/Wilmington co-vary less strongly with levels of particulate matter.

- Levels of elemental carbon in the air samples collected in September are strongly indicative of the presence of diesel emissions.

In urban areas, vehicle exhaust, primarily diesel exhaust, is the predominant source of EC in ambient air. Even in urban areas, levels of EC in air samples almost never exceed  $1 \text{ ug/m}^3$  unless the sample is within a few hundred feet of road traffic.<sup>1</sup>

- Levels of elemental carbon in the air samples collected are associated with excess risk of cardiovascular mortality.

In 2008, scientists from the California Office of Environmental Health Hazard Assessment, Oakland, California, published a paper on EC levels in ambient air samples in California. The mean level of EC in ambient air samples collected between 2000 and 2003 was  $0.966 \text{ ug/m}^3$ . The 95th percentile level of EC in ambient air samples was  $2.57 \text{ ug/m}^3$ .<sup>2</sup> The paper examined the relationship between health effects and the interquartile range (IQR = the difference between the third and first quartiles) of EC levels. The paper reports strongly significant associations between excess risk of cardiovascular mortality two and three-days post exposure and the IQR for EC.

The EC level in the sample collected on 22 September 2009 ( $2.78 \text{ ug/m}^3$ ) is above the 95th percentile of EC levels in the data examined in the 2008 paper by scientists from the OEHHA. The EC level in the sample collected on 25 September 2009 ( $2.07 \text{ ug/m}^3$ ) is in the fourth quartile of EC levels in the data examined in the 2008 paper by scientists from the OEHHA. Therefore, exposure to EC levels at these locations on these days would entail an excess risk of cardiovascular mortality caused by emissions from diesel vehicles.

EC levels in the samples collected on 9 November 2009 were below the level of uncertainty ( $0.33 \text{ ug/m}^3$ ). The report you sent does not contain any meteorological data other than temperature. I might inquire whether windy and/or rainy conditions on 9 November 2009 can explain the much lower levels of EC in samples collected on this day compared to samples collected in late September.

Please let me know if you have any questions.

Sincerely,

Mark Chernaik, Ph.D., J.D.  
2355 Dale Avenue  
Eugene, Oregon 97408  
Tel: (541) 513-1335  
E-mail: [mark@scienceforcitizens.com](mailto:mark@scienceforcitizens.com)

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<sup>1</sup> Traffic emissions of elemental carbon (EC) and organic carbon (OC) and their contribution to PM<sub>2.5</sub> and PM<sub>10</sub> urban background concentrations. <http://www.mnp.nl/bibliotheek/rapporten/500099011.pdf> figures 2-12 and 2-13 on page 25

<sup>2</sup> Ostro, et al. (2008) "The impact of components of fine particulate matter on cardiovascular mortality in susceptible subpopulations." *Occup. Environ. Med.*, 65;750-756. See Table 2 on page 752.

**Results from June 2009**

Sample Date	Site	Comments	Units	Al	Cr	As	Mn	Fe	Ni	Zn	Pb
6/19/2009	4130 New Castle		ug/filter	7.1250	0.1322	nd	0.6351	28.8300	nd	nd	nd
6/19/2009	32 Center		ug/filter	2.1680	nd	nd	0.1401	8.7280	nd	0.1424	nd
6/19/2009	2 Hastie Rd.		ug/filter	2.6000	0.0237	0.0508	0.1740	11.2600	nd	0.3480	nd
6/19/2009	495 Ex #12	large hole - removed portion for XRF	ug/filter	15.9000	0.6995	nd	3.2080	70.0400	nd	0.7006	0.0983
6/19/2009	495 Ex Ramp South		ug/filter	4.9200	0.1119	nd	0.6000	28.7600	nd	2.2130	0.1898
6/19/2009	Under 495 overpass	Tom filter - unsuitable for XRF analysis	ug/filter	9.7730	0.2656	nd	1.4610	32.0400	nd	0.8385	nd
6/19/2009	Pigdon Point Rd Rock		ug/filter								

**Results from Jul-Aug 2009**

Sample Date	Site	Comments	Units	Al	Cr	As	Mn	Fe	Ni	Zn	Pb	Part. Size	Net Mass
7/27/2009	203 Wilm Av	Sampled on Incorrect Side	ug/filter	0.7707	0.0508	0.0113	0.0520	1.7270	nd	0.0215	0.0000	PM2.5	166
7/27/2009	29 Terminal	Sampled on Incorrect Side	ug/filter	1.3750	0.0554	0.0000	0.0610	2.7740	nd	0.0825	0.0316	PM10	221
8/4/2009	New Castle & Harrison		ug/filter	2.4960	0.0655	0.0090	0.1446	6.5010	nd	0.1650	0.0384	PM10	331
8/4/2009	57 Pyles Ln		ug/filter	4.8870	0.2836	0.0045	0.2136	8.2590	nd	0.1514	0.0396	PM2.5	354
8/18/2009	325 Sheridan		ug/filter	6.3570	0.0780	0.0000	0.3096	9.1810	nd	0.1062	0.0531	PM2.5	260
8/18/2009	407 New Castle Av		ug/filter	1.3110	0.0282	0.0000	0.0441	3.5180	nd	0.0893	0.0305	PM10	144
8/25/2009	1 Oakmont Rd.		ug/filter	1.6400	0.0226	0.0000	0.0734	4.2730	nd	0.1028	0.0508	PM10	172
8/25/2009	Peoples Bapt. Ch.		ug/filter	0.6170	0.0000	0.0045	0.0181	1.6200	nd	0.0203	0.0011	PM2.5	105

**Results since July 2009, in ug/m3**

Sample Date	Site	Comments	Units	Al	Cr	As	Mn	Fe	Ni	Zn	Pb	Part. Size	Net Mass
7/27/2009	203 Wilm Av	Sampled on Incorrect Side	ug/filter	0.1070	0.0071	0.0016	0.0072	0.2399	nd	0.0030	0.0000	PM2.5	11.86
7/27/2009	29 Terminal	Sampled on Incorrect Side	ug/filter	0.1910	0.0077	0.0000	0.0085	0.3853	nd	0.0115	0.0044	PM10	-
8/4/2009	New Castle & Harrison		ug/filter	0.3467	0.0091	0.0013	0.0201	0.9029	nd	0.0229	0.0053	PM10	-
8/4/2009	57 Pyles Ln		ug/filter	0.6788	0.0394	0.0006	0.0297	1.1471	nd	0.0210	0.0055	PM2.5	-
8/18/2009	325 Sheridan		ug/filter	0.8829	0.0108	0.0000	0.0430	1.2751	nd	0.0148	0.0074	PM2.5	18.57
8/18/2009	407 New Castle Av		ug/filter	0.1821	0.0039	0.0000	0.0061	0.4886	nd	0.0124	0.0042	PM10	-
8/25/2009	1 Oakmont Rd.		ug/filter	0.2278	0.0031	0.0000	0.0102	0.5935	nd	0.0143	0.0071	PM10	-
8/25/2009	Peoples Bapt. Ch.		ug/filter	0.0857	0.0000	0.0006	0.0025	0.2250	nd	0.0028	0.0002	PM2.5	7.5
3/29/2010	203 Pilgram Rd	scrapes/holes on deposit	ug/filter	0.3322	0.0271	0.0000	0.0000	0.5887	nd	0.0689	0.0181	PM10	-
3/31/2010	203 Pilgram Rd		ug/filter	1.2010	0.0396	0.0000	0.0000	2.2170	nd	0.1638	0.0000	PM10	-
4/2/2010	115 Central Ave		ug/filter	0.4283	0.0147	0.0316	0.0316	1.6620	nd	0.1492	0.0373	PM10	-
4/7/2010	29 Terminal		ug/filter	2.1670	0.0362	nd	nd	3.6690	nd	0.1390	0.0599	PM10	-
4/10/2010	27 Terminal		ug/filter	0.4034	0.0158	nd	0.0192	0.3209	nd	0.0282	0.0350	PM10	-
4/12/2010	203 Pilgram Rd	sampled on wrong side/scrapes	ug/filter	2.9100	0.0249	nd	nd	3.3890	nd	0.1209	0.0384	PM10	-
5/15/2010	3101 New Castle Ave	hole/scrape on deposit	ug/filter	0.1469	nd	nd	nd	nd	nd	nd	0.0203	PM10	-
	Average concentration			0.7246	0.0101	0.0477	1.2217	0.0128	0.0159	16.3			

Health-based benchmarks  
 EPA 24-hour  
 WHO 24-hour  
 EPA Annual Standard  
 WHO Annual Standard

Correlation of Mn with Fe  
 Correlation of Mn with PM2-5  
 Correlation of Mn with PM-10

0.9349  
 0.78808  
 0.93461

35  
 25  
 15  
 10

# New Castle Pollution Log

Name \_\_\_\_\_  
Street \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_  
Postal Code \_\_\_\_\_  
Phone \_\_\_\_\_ Email \_\_\_\_\_

## Incident

Date \_\_\_\_\_ Your Location \_\_\_\_\_  
Time started \_\_\_\_\_ Time ended \_\_\_\_\_  
Wind direction \_\_\_\_\_

**I See**    black soot    brown dust    trucks driving    trucks idling

Please describe \_\_\_\_\_  
\_\_\_\_\_

**I Smell**    rotten garbage    sewer    burning tires    cocoa

Please describe \_\_\_\_\_  
\_\_\_\_\_

**I Feel**    throat/nose irritation    metallic taste    cough    headache  
nauseous    itchy/watery eyes    other

Please describe \_\_\_\_\_  
\_\_\_\_\_

## Action Taken (Please notify your neighbors immediately)

Call Councilman Johnson 322-3521    Call to DNREC 800-662-8802  
Call to Company/source    Diamond Materials 323-4542

Please describe action and response \_\_\_\_\_

Return your filled out form(s) to the monthly Civic Association Meeting



**Sussex County Community Corrections Center  
Community-based Recycling Project**

# MODEL V63HD CUSTOMER ORDER FORM



**Bill To:**  
 Company: Department of Correction  
 (Legal Name)  
 Address: 245 McKee Road  
 Address:  
 City/State/Zip: Dover, DE 19904  
 Attention: Account's Payable  
 Phone: 302-999-5601  
 Fax: 302-739-8219

**Ship To:**  
 Company: Dept of Corrections - SOD-SVOP  
 Address: 23301 Dupont Blvd  
 Address:  
 City/State/Zip: Georgetown Delaware 19947  
 Attention: SLT Thomas Ballen  
 Phone: 302-856-5790  
 Fax: 302-856-

**Select HP/Voltage & Electrical Requirements:**

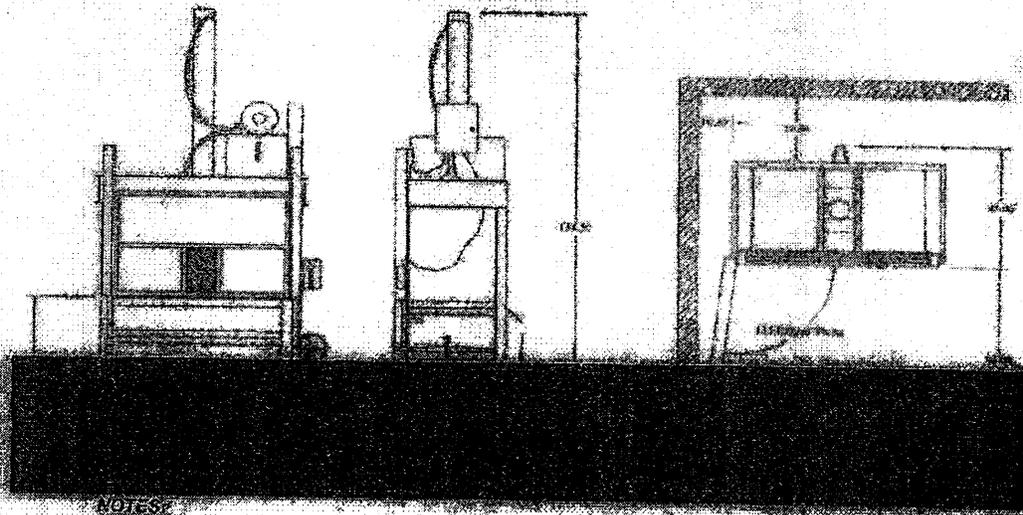
Motor HP	Voltage	Full Load Amps	Power Supply Required
<input type="checkbox"/> 20HP 3 Phase	208V	59	100
<input checked="" type="checkbox"/> 20HP 3 Phase	208V	59	100
<input type="checkbox"/> 20HP 3 Phase	460/480V	27	50

**Door Swing:** (drawing shows LEFT HAND layout based on side of hinge when facing the baler)

- Left Hand Hinge
- Right Hand Hinge

**Options:**

- Slotted Door
- Single Phase Power Unit
- Rear Wire Guides
- Full Bale Light
- Custom Logo
- Custom Color
- Rear Feed Front Eject
- Front Feed Chute
- Trough Retainer Dogs
- Oil Heater
- Weather Proof (outdoor use)



NOTES:

**Color:**  Grey  Green  Blue  Custom Color (CODE) \_\_\_\_\_

All balers come with a **STARTER** bundle of baling wire. Do you need extra wire? (\$90/Bundle)  YES  NO  
 If YES, how many Bundles? \_\_\_\_\_

**Delivery:**  
 What is your required delivery date? 7/15/09

Do you have a Loading Dock?  YES  NO  
 Do you have a 5,000lb capacity Forklift?  YES  NO

**Installation:** If you require BACE to set up installation please fill out PAGE 2 of this document.

**SECURITY INTEREST:** BACE hereby reserves and Customer grants to BACE a security interest pursuant to the Uniform Commercial Code, in and to the Products sold to Customer, (and all products and proceeds of it) until full payment of the purchase price is received by BACE.

Signature: [Signature] Date: 6-18-09 PO# \_\_\_\_\_

In order to process your order we must receive a signed copy of this document along with a signed copy of the Estimate from BACE for this job. Please fax to: (704) 394-2210 or email to sales@bacecorp.com

PLEASE POST

# A BUILDING PERMIT

## Has Been Issued

# To Erect Improvements ON THESE PREMISES

State of DE  
IN ACCORDANCE WITH CONDITIONS OF PERMIT  
Pole Building

In all cases where operation or work is being performed under a new building permit, this poster or sign shall be conspicuously displayed upon that part of the site of such operation or work which is closest to a street or public highway, so that such said poster or sign shall be visible to the general public at all times.

A-7

135-23.00-19.00

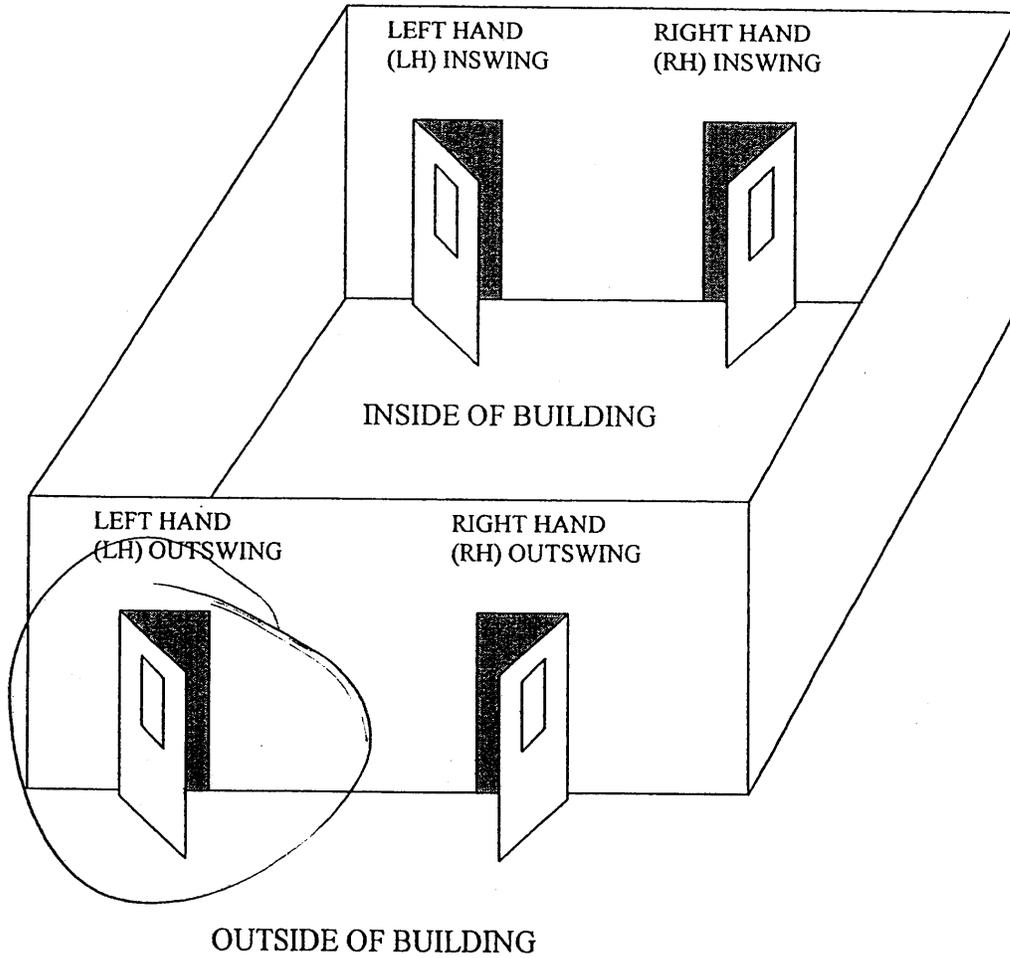
A FINAL INSPECTION MUST BE MADE AND A CERTIFICATE OF OCCUPANCY ISSUED BY PLANNING & ZONING OFFICE PRIOR TO ANY OCCUPANCY OR INTENDED USE OF BUILDING.

No. 276195

BOARD OF ASSESSMENT  
SUSSEX COUNTY, GEORGETOWN, DELAWARE

7-17-10

# Delmarva Pole Building Supply Door Swing



BE ADVISED, IN-SWING DOORS ARE SUSCEPTABLE TO LEAKAGE.  
DELMARVA POLE BUILDING SUPPLY, INC. WILL NOT BE RESPONSIBLE FOR  
LEAKS DUE TO IN-SWING DOORS

CUSTOMER: *[Signature]*

SALES PERSON: *Karen Christophers*

# INSTALLATION FORM



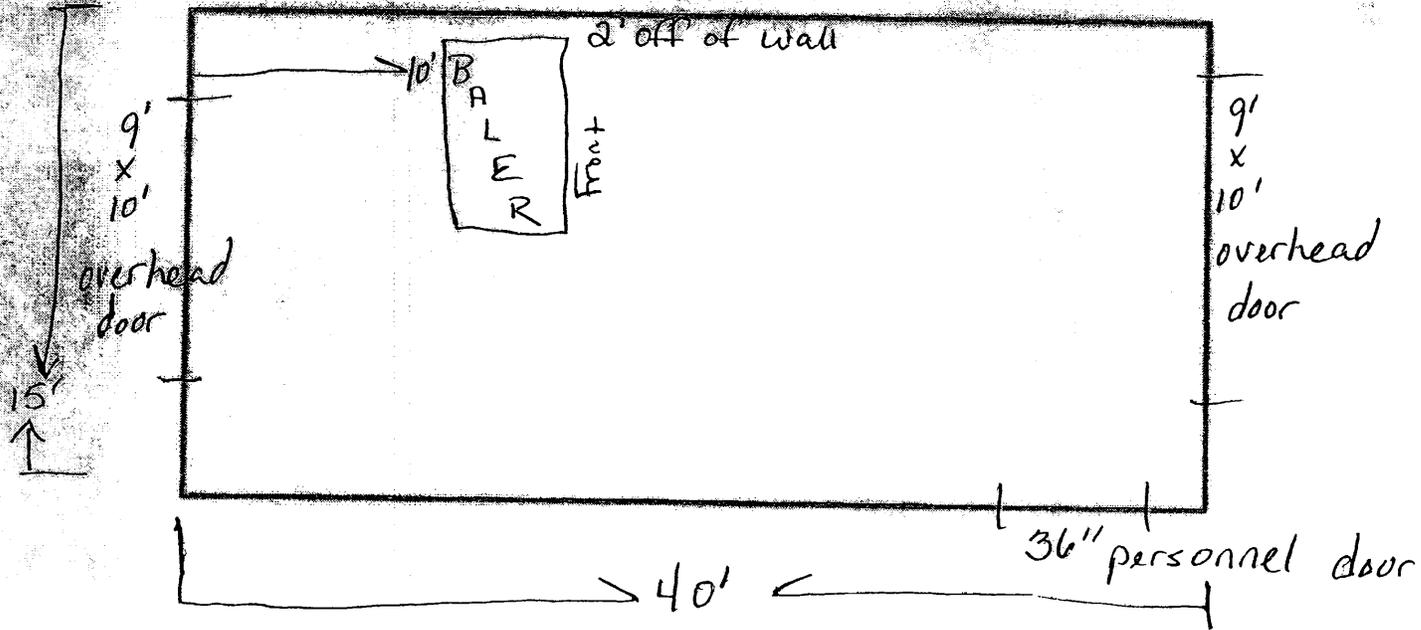
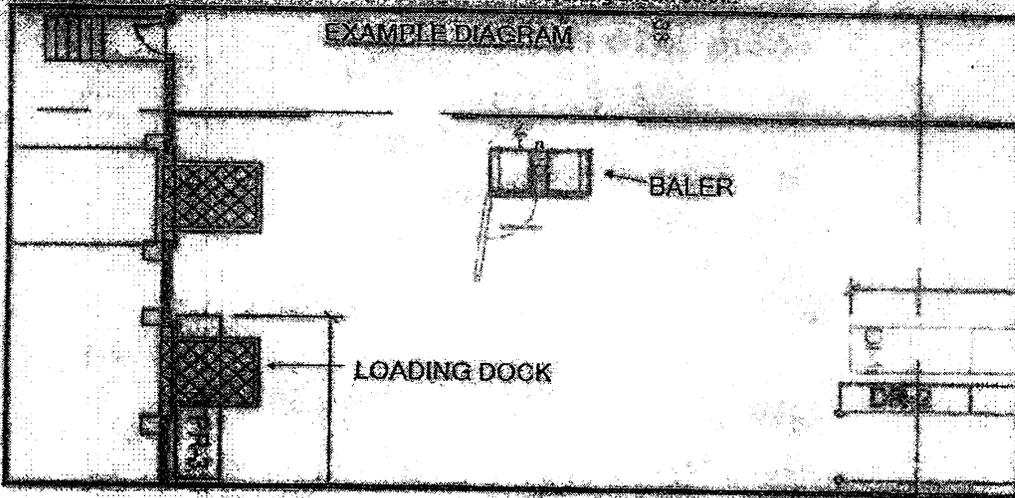
**Installation:** If you require BACE to set up installation please completely fill out this document.

**Preferred Installer:**

Company: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 City/State/Zip: \_\_\_\_\_  
 Attention: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_

	YES	NO
Do you have a loading dock with 8' wide door?		X
What is your ceiling height?	12'	
Any obstacles (steps, grade change, overhead pipes)?		X
Do we need to remove an existing baler?		X

Provide a diagram for the proposed location of the baler similar to the drawing shown below.



**Delaware Ecumenical Council on Children & Families**  
**Ecumenical Air Quality Promotion**

# Delaware Ecumenical Council on Children and Families

Creation Care: Air Quality Promotion

## Presentation Schedule

January 29	New Castle	Clergy Meeting
March 11	Dover (Statewide meeting)	Clergy/Laity Meeting
March 31	Newport	Clergy Meeting
April 22	Christiana	Seniors Gathering
May 5	Mill Creek	Clergy Meeting
May 6	Wilmington	Clergy/Laity Meeting
May 13	Delaware City	Clergy Meeting
May 26	Wilmington	Seniors Gathering
<i>June 4</i>	<i>New Castle</i>	<i>Clergy Meeting</i>
<i>June 7</i>	<i>Christiana</i>	<i>Clergy Meeting</i>
<i>June 9</i>	<i>Newport</i>	<i>Seniors Gathering</i>
<i>June 14</i>	<i>tba</i>	<i>Faith Community Nurses Meeting</i>
<i>June 16</i>	<i>Wilmington</i>	<i>Health Advocates Meeting</i>
	<i>Fairfax</i>	<i>Clergy/Health Professionals Meeting</i>

# **Delaware Ecumenical Council on Children and Families**

## **Creation Care: Air Quality Promotion**

### **Outline: Healthy Air - Children**

- I. Air Quality Problems
  - A. Ground Level Ozone
  - B. Particles
  - C. Others
  
- II. Related Disease Conditions
  - A. Asthma
  - B. Other
  
- III. Impact on Children/Statistics
  
- IV. Reducing Impact of Air Quality Problems on Children
  
- V. Reducing Impact of Air Quality Problems on Community/Preventing Pollution
  
- Vi> Other Environmental Issues Affecting Children

# **Delaware Ecumenical Council on Children and Families**

## **Creation Care: Air Quality Promotion**

### **Outline: Healthy Air - Seniors**

- I. Air Quality Problems
  - A. Ground Level Ozone
  - B. Particles
  - C. Others
  
- II. Related Disease Conditions
  - A. Diseases of the Heart
  - B. Diseases of the Lung
  - C. Other
  
- III. Impact on Seniors/Statistics
  
- IV. Reducing Impact of Air Quality Problems on Seniors
  
- V. Reducing Impact of Air Quality Problems on Community/Preventing Pollution
  
- Vi> Other Environmental Issues Affecting Seniors

# **Delaware Ecumenical Council on Children and Families**

## **Creation Care: Air Quality Promotion**

### **Training Draft - Clergy**

- I. Creation Care - role of religious community in pollution prevention
- II. Key Issues in Air Quality
- III. Consequences of Air Pollution
  - A. On Children
  - B. On Seniors
  - C. Other
- IV. Activities for Faith Communities
  - A. Health Promotion
  - B. Pollution Prevention
  - C. Use of Project Materials

# **Delaware Ecumenical Council on Children and Families**

## **Creation Care: Air Quality Promotion**

### **Training Draft - Community**

- I. Problems with Air Quality
  - A. Ground Level Ozone
  - B. Particulates
  - C. Others
  
- II. Consequences of Air Pollution
  - A. Disease Conditions
  - B. At-Risk Populations
  
- III. Reducing the Impact of Air Pollution
  - A. On Children
  - B. On Seniors
  - C. Others
  
- IV. Reducing the Incidence of Air Pollution

**Delaware Ornithological Society**  
**Fort Dupont Habitat Enhancement**

# Fort Dupont State Park

2007 Aerial Photo



Legend

--- Trails

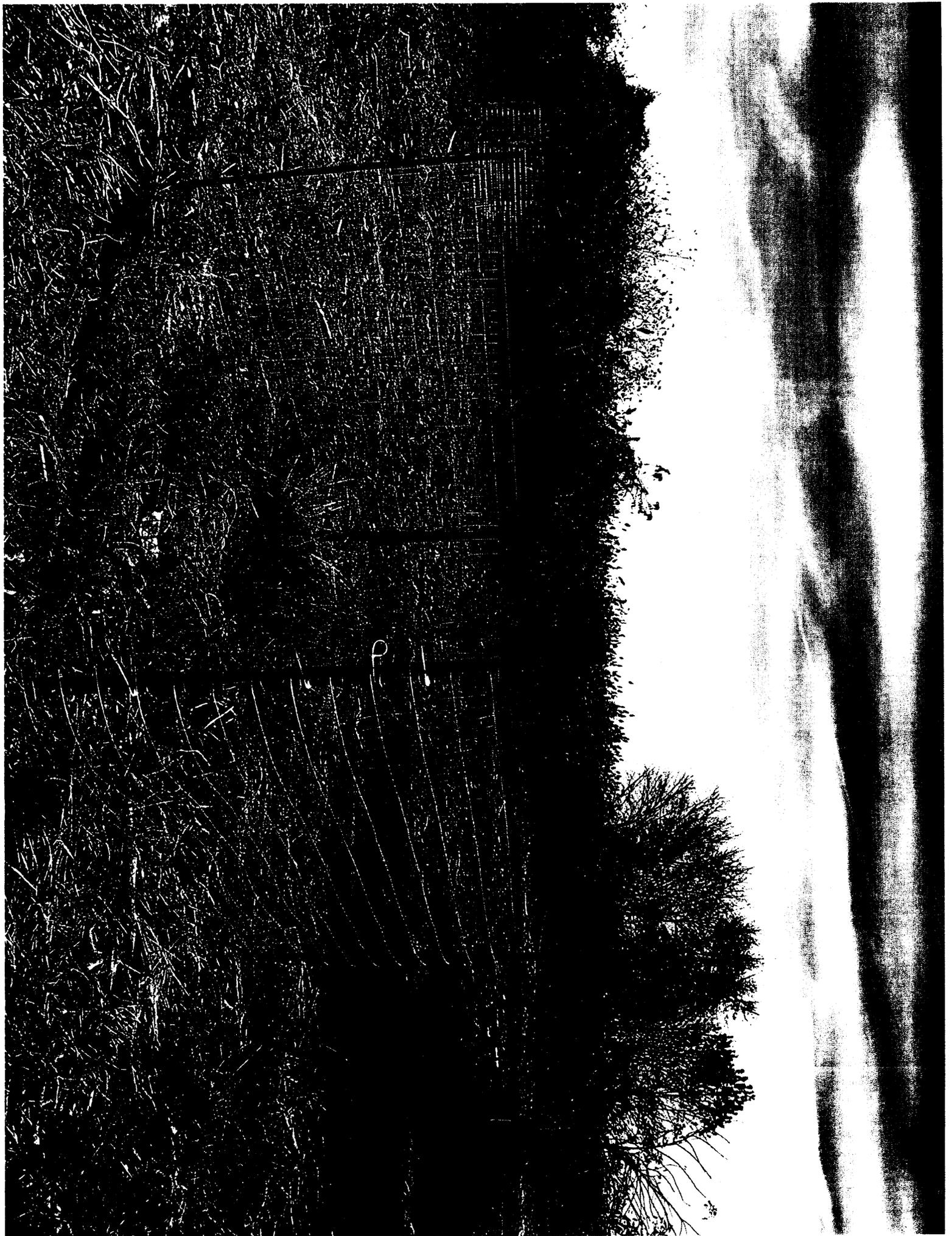
--- Park Boundary

Target Restoration Area



Created by Chris Bennett 2 February 2009  
Environmental Stewardship Program  
Division of Parks and Recreation







**Friends of Wilmington Parks  
Hands Across the Brandywine**

School Name	Address	City	State	Lead Teacher	Email	Grade	Program Title	Title 1	Outreach	On-site # of Students	# of Classes	Invoice Amt.
Claymont ES	3401 Green Street	Claymont	DE, 19703	Rashieda Washington	<a href="mailto:rashieda.washington@bsd.k12.de.us">rashieda.washington@bsd.k12.de.us</a>	2	Going Green	Yes	4/12/2010	81	4	\$320.00
George Reed MS	314 E. Basin Rd	New Castle	DE, 19720	Nikki Light	<a href="mailto:nlight@colonial.k12.de.us">nlight@colonial.k12.de.us</a>	7	Forces in Motion	Yes	4/13/2010	90	4	\$315.00
George Reed MS	314 E. Basin Rd	New Castle	DE, 19720	Nikki Light	<a href="mailto:nlight@colonial.k12.de.us">nlight@colonial.k12.de.us</a>	7	Land Formations	Yes	5/1/2010	8	1	\$80.00
Harlan ES	3601 Jefferson Street	Wilm.	DE, 19802	Tracy Turcozy	<a href="mailto:tracy.turcozy@bsd.k12.de.us">tracy.turcozy@bsd.k12.de.us</a>	5	Forces in Motion	Yes	2/1/2010	45	3	\$180.00
Harlan ES	3601 Jefferson Street	Wilm.	DE, 19802	Tracy Turcozy	<a href="mailto:tracy.turcozy@bsd.k12.de.us">tracy.turcozy@bsd.k12.de.us</a>	5	Water's Power to Change	Yes	3/18/2010	71	3	\$240.00
Highlands ES	2100 Gilpin Ave	Wilm.	DE, 19806	Deanna Niggli	<a href="mailto:deanna.niggli@redclay.k12.de.us">deanna.niggli@redclay.k12.de.us</a>	1	Going Green	Yes	3/2/2010	68	3	\$272.00
Highlands ES	2100 Gilpin Ave	Wilm.	DE, 19806	Kathleen Gornley	<a href="mailto:kathleen.gornley@redclay.k12.de.us">kathleen.gornley@redclay.k12.de.us</a>	3	The Power of Water	Yes	2/18/2010	53	3	\$240.00
Highlands ES	2100 Gilpin Ave	Wilm.	DE, 19806	Deanna Niggli	<a href="mailto:deanna.niggli@redclay.k12.de.us">deanna.niggli@redclay.k12.de.us</a>	1	Wildlife in the City	Yes	4/21/2010	47	2	\$160.00
Highlands ES	2100 Gilpin Ave	Wilm.	DE, 19806	Kathleen Gornley	<a href="mailto:kathleen.gornley@redclay.k12.de.us">kathleen.gornley@redclay.k12.de.us</a>	3	Water's Power to Change	Yes	4/22/2010	60	3	\$180.00
Hilltop Lutheran	1018 W. 6th Street	Wilm.	DE, 19805	Johnna Kimmel	<a href="mailto:johnna.kimmel@cord.edu">johnna.kimmel@cord.edu</a>	K	Energy Is Everywhere	Yes	4/6/2010	20	1	\$80.00
Hilltop Lutheran	1018 W. 6th Street	Wilm.	DE, 19805	Johnna Kimmel	<a href="mailto:johnna.kimmel@cord.edu">johnna.kimmel@cord.edu</a>	4	Water's Power to Change	Yes	4/6/2010	20	1	\$80.00
Lancashire ES	200 Naamans Road	Wilm.	DE, 19810	Rebecca Hurford	<a href="mailto:rebecca.hurford@bsd.k12.de.us">rebecca.hurford@bsd.k12.de.us</a>	3	Power of Water	Yes	4/19/2010	78	4	\$320.00
Lancashire ES	200 Naamans Road	Wilm.	DE, 19810	Rebecca Hurford	<a href="mailto:rebecca.hurford@bsd.k12.de.us">rebecca.hurford@bsd.k12.de.us</a>	3	Water's Power to Change	Yes	5/14/2010	84	4	\$294.00
Pulaski ES	1300 Cedar Street	Wilm.	DE, 19805	Kathy Trent	<a href="mailto:kathy.trent@christina.k12.de.us">kathy.trent@christina.k12.de.us</a>	K	Energy Is Everywhere	Yes	1/5/2010	64	4	\$320.00
Pulaski ES	1300 Cedar Street	Wilm.	DE, 19805	Kathy Trent	<a href="mailto:kathy.trent@christina.k12.de.us">kathy.trent@christina.k12.de.us</a>	K	Wildlife in the City	Yes	4/14/2010	58	4	\$174.00
Pulaski ES	1300 Cedar Street	Wilm.	DE, 19805	Lizette Gutierrez	<a href="mailto:lizette.gutierrez@christina.k12.de.us">lizette.gutierrez@christina.k12.de.us</a>	1	Energy Now and Then	Yes	5/20/2010	80	4	\$280.00
Pulaski ES	1300 Cedar Street	Wilm.	DE, 19805	Lizette Gutierrez	<a href="mailto:lizette.gutierrez@christina.k12.de.us">lizette.gutierrez@christina.k12.de.us</a>	2	Energy Is Everywhere	Yes	4/28/2010	85	4	\$256.00
Pulaski ES	1300 Cedar Street	Wilm.	DE, 19805	Elizabeth Stoford	<a href="mailto:elizabeth.stoford@redclay.k12.de.us">elizabeth.stoford@redclay.k12.de.us</a>	2	Wildlife in the City	Yes	5/3/2010	80	4	\$320.00
Pulaski ES	1300 Cedar Street	Wilm.	DE, 19805	Elizabeth Stoford	<a href="mailto:elizabeth.stoford@redclay.k12.de.us">elizabeth.stoford@redclay.k12.de.us</a>	2	Energy Is Everywhere	Yes	5/19/2010	85	4	\$256.00
Shortidge ES	100 W. 18th Street	Wilm.	DE, 19802	Doris Hairston	<a href="mailto:doris.hairston@redclay.k12.de.us">doris.hairston@redclay.k12.de.us</a>	3	Power of Water	Yes	3/31/2010	80	4	\$320.00
Shortidge ES	100 W. 18th Street	Wilm.	DE, 19802	Doris Hairston	<a href="mailto:doris.hairston@redclay.k12.de.us">doris.hairston@redclay.k12.de.us</a>	3	Forces in Motion	Yes	4/13/2010	75	3	\$240.00
Shortidge ES	100 W. 18th Street	Wilm.	DE, 19802	Beverly Lewis	<a href="mailto:beverly.lewis@redclay.k12.de.us">beverly.lewis@redclay.k12.de.us</a>	5	Water's Power to Change	Yes	5/5/2010	85	3	\$297.00
Shortidge ES	100 W. 18th Street	Wilm.	DE, 19802	Beverly Lewis	<a href="mailto:beverly.lewis@redclay.k12.de.us">beverly.lewis@redclay.k12.de.us</a>	5	Water's Power to Change	Yes	5/20/2010	65	3	\$228.00
Shortidge ES	100 W. 18th Street	Wilm.	DE, 19802	Doris Hairston	<a href="mailto:doris.hairston@redclay.k12.de.us">doris.hairston@redclay.k12.de.us</a>	2	Energy Now and Then	Yes	5/21/2010	90	4	\$315.00
Shortidge ES	100 W. 18th Street	Wilm.	DE, 19802	Doris Hairston	<a href="mailto:doris.hairston@redclay.k12.de.us">doris.hairston@redclay.k12.de.us</a>	3	The Power of Water	Yes	1/21/2010	91	5	\$400.00
Warner ES	801 W. 18th Street	Wilm.	DE, 19801	Jessica Baker	<a href="mailto:jessica.baker@redclay.k12.de.us">jessica.baker@redclay.k12.de.us</a>	3	Water's Power to Change	Yes	1/26/2010	92	5	\$368.00
Warner ES	801 W. 18th Street	Wilm.	DE, 19801	Jessica Baker	<a href="mailto:jessica.baker@redclay.k12.de.us">jessica.baker@redclay.k12.de.us</a>	4	Forces in Motion	Yes	1/27&28/10	61	4	\$320.00
Warner ES	801 W. 18th Street	Wilm.	DE, 19801	Pavia Fielder	<a href="mailto:pavia.fielder@redclay.k12.de.us">pavia.fielder@redclay.k12.de.us</a>	5	Water's Power to Change	Yes	3/25/2010	68	4	\$272.00
Warner ES	801 W. 18th Street	Wilm.	DE, 19801	Diane Mahotiere	<a href="mailto:diane.mahotiere@redclay.k12.de.us">diane.mahotiere@redclay.k12.de.us</a>	5	Water's Power to Change	Yes	1/25/2010	70	4	\$320.00
Warner ES	801 W. 18th Street	Wilm.	DE, 19801	Mary Carr	<a href="mailto:mary.carr@redclay.k12.de.us">mary.carr@redclay.k12.de.us</a>	1	Mysterious Magnets	Yes	3/30/2010	90	5	\$400.00
Warner ES	801 W. 18th Street	Wilm.	DE, 19801	Mary Carr	<a href="mailto:mary.carr@redclay.k12.de.us">mary.carr@redclay.k12.de.us</a>	4	Water's Power to Change	Yes	4/15/2010	98	5	\$343.00
Warner ES	801 W. 18th Street	Wilm.	DE, 19802	Pavia Fielder	<a href="mailto:pavia.fielder@redclay.k12.de.us">pavia.fielder@redclay.k12.de.us</a>	4	Water's Power to Change	Yes	4/15/2010	2264	4	\$8,694.00

School Haddon ES  
Grade 5th

Wilmington State Parks Region  
Environmental Education Program Evaluation

Please take a few minutes to complete this survey to help us improve our programming and better meet your needs.

Program Title Water's Power to Change Date of Program 3/18/10  
Naturalist's Name Barbara Woodford, Jen Sykes, Cathy Perotto

Please describe the most valuable learning experience for your students during this program.

Everything ~~that~~ was great & beneficial to our students. Hands on activities were excellent. It was so nice to relate our science/SS standards to DE. Students were able to understand everything.

What were your student's favorite activities or parts of this program?

water balloon activity & sand/river activity

How can we improve our programs or registration process?

Everything was great & registration was super easy.

What other types of programs would you be interested in scheduling for your students?

Ones related to Mixtures & Solutions. or anything that would address/reinforce science standards.

Please rate this program?

- Excellent  
 Good  
 Satisfactory  
 Fair

Please list the science units you teach:

- Unit #1 Mixtures & Solns.  
Unit #2 Motion & Design  
Unit #3 Ecosystems  
Unit #4 \_\_\_\_\_

School Highlands  
Grade 3rd

Wilmington State Parks Region  
Environmental Education Program Evaluation

651  
2715  
X105

Please take a few minutes to complete this survey to help us improve our programming and better meet your needs.

Program Title Water's Power to Change Date of Program 4/22/10  
Naturalist's Name Barbara Woodford, Jon Sykes, Cathy Perotto

Please describe the most valuable learning experience for your students during this program.  
The most valuable experience was the hands-on nature in addition to making predictions and asking questions prior to the experiment.

What were your student's favorite activities or parts of this program?

building the river and creating a slope  
the balloons w/ potential & kinetic energy

How can we improve our programs or registration process?

no improvement needed - program directly correlates to our science standards and the activities were effective in teaching the concepts to the students.

What other types of programs would you be interested in scheduling for your students?

Earth Materials - types of rocks, how rocks change - weathering, river sedimentary, igneous, metamorphic

Please rate this program?

Excellent

Good

Satisfactory

Fair

52 students

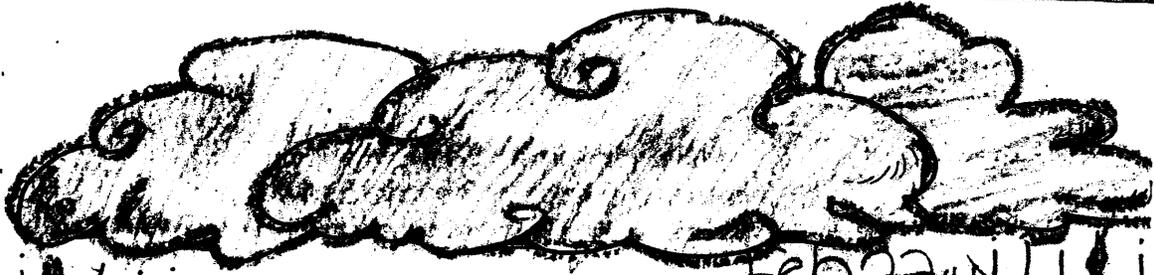
Please list the science units you teach:

Unit #1 Water

Unit #2 Earth Materials

Unit #3 Human Body

Unit #4 \_\_\_\_\_



FEB 22 1978

Dear Ms. Barbara, Ms. Kathy,

Ms. Jen, I kept these words

in my head, erosion, water

pressure and other words.

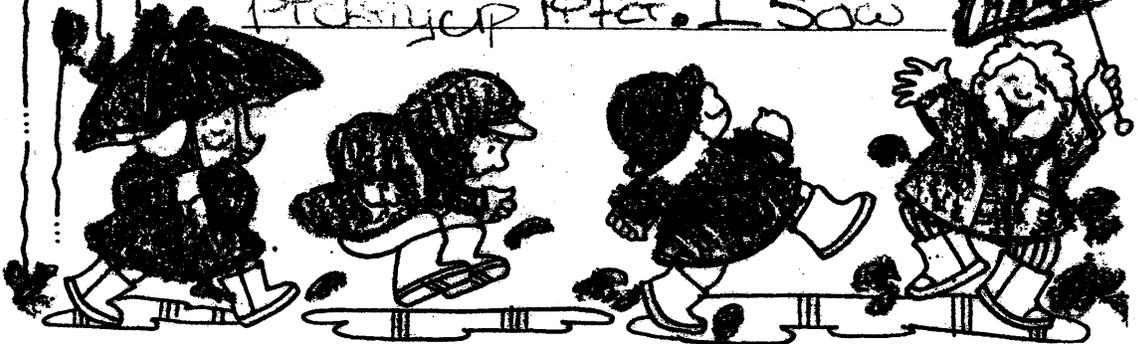
Also I need to say thank

you. Last weekend I

went to a park by a river

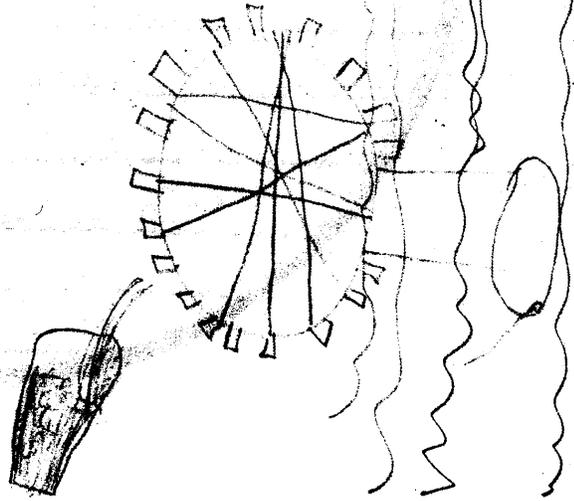
and I was supposed to be

picking up Peter. I saw

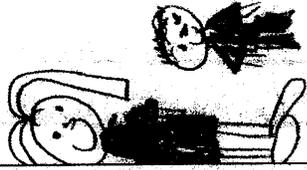


Thank you

Wilmington  
State Park



We appreciate you  
teaching us about water  
w/ water wheels and I  
love that time we saw  
the water fall



Love  
Beattie

Date 02/23/10

Daily  
Journal

Dear Ms. Barbara & Ms. Jen,

Thank you for coming to my school  
and teaching us about water.

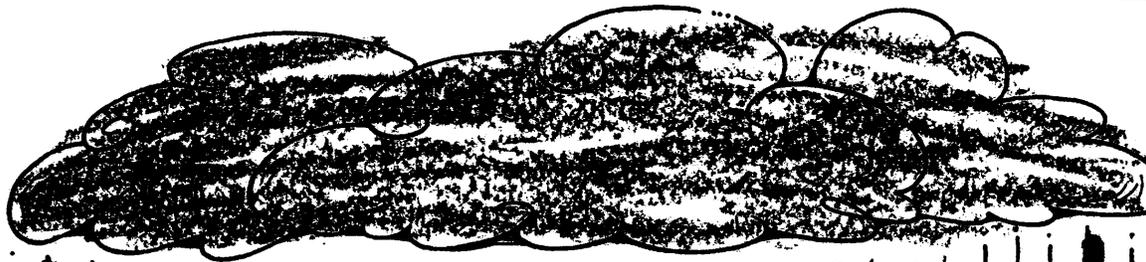
My favitt stason was the water wheel  
because it was fun!

You taught us more about water.

Now we know alot about water

Sincerely,

Bre Anna



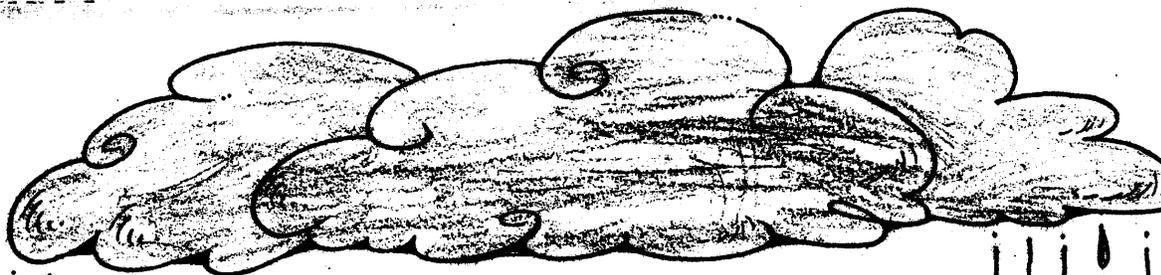
2/22/10

Dear Ms. Barbara, Ms. Kathy  
and Ms. Jen Thank you  
for the field trip.

I liked how the water  
wheel moved. It is awesome.  
One more thing I liked,  
was how you taught me  
about water. From

RaJon





Dear miss Barba  
misscathy I herd about  
the water wheel's wen  
you and yourbudy's came  
to my school.

I now some stuff  
about water there  
are dirty water and  
fresh water. from Jonathan



Date Feb. 23, 2009

Daily  
Journal

Dear Ms. Barbara and  
Ms. Jen, thank you for  
coming to our class and  
teaching us the Properties of  
Water. My favorite part was when  
we did the water wheel! What  
was your favorite part? I can't  
wait till we go there in April.  
What are we going to do  
there? Are we going to see  
what happens when we fill  
something with water? Are  
we going to learn why  
water fall from the sky.

Sincerely, Aniah







