

VIRGINIA DEQ ENVIRONMENTAL EXCELLENCE PROGRAM

VEEP ANNUAL REPORT: EMS/POLLUTION PREVENTION PLAN RESULTS & UPDATE

Reports are due by April 1st for the **previous calendar year**.

See instructions for more information.

GENERAL INFORMATION 2011

FACILITY NAME: Albemarle County Public Schools

PRIOR FACILITY NAME:

MEMBERSHIP LEVEL: E3

FACILITY CONTACT

Name: Lindsay Check Snoddy

Phone: (434) 975-9340

Email: lcsnoddy@k12albemarle.org

FACILITY PERMIT NUMBERS

Water Discharge: VA0076244

Air: 40175

Water Discharge: VAG750045

Water Discharge: VAG0076244

Petroleum: 6022358

Petroleum: 6039404

Air: 40583

Petroleum: 6005047

Air: 40185

Petroleum: 6022357

Air: 40176

Petroleum: 6020477

Air: 81404

Petroleum: 6005048

Petroleum: 6005039

Air: 40178

Petroleum: 6005051

Air: 81405

Air: 40330

Petroleum: 6026642

Air: 40134

Petroleum: 6005045

Air: 40179

Petroleum: 6020278

Petroleum:	6005044
Air:	40177
Air:	81406
Petroleum:	6005042
Air:	40136
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Petroleum:	6005041
Air:	40137
Petroleum:	6005040
Air:	40171
Petroleum:	6005043
Petroleum:	6024231
Petroleum:	6005050
Hazardous Waste:	VAD988173373
Hazardous Waste:	VAD988203352

ENVIRONMENTAL IMPACT REPORTING

CATEGORY: Energy Use

INDICATOR: Total Energy Use

Additional Information on Environmental Results (e.g., how did you achieve the reduction? if there were increases, what was the reason?):

Albemarle County Public Schools completed lighting upgrades at 95% of schools to contribute to the energy usage reduction. Additionally, schools receive monthly updates on energy and water usage. Each school has an ENERGY STAR rating, and 22 schools have earned the ENERGY STAR label. A retro-commissioning contract for Western Albemarle High School has been awarded, and work is complete for our first renewable energy installation at Henley Middle School. The Renewable Energy Resource Center includes a 42 kW solar PV system, a wind turbine and a solar thermal system for 60% of the hot water needs. Live data monitoring is available at: http://live.deckmonitoring.com/?id=henley_middle_school

Normalizing Basis: Square footage of facility

Normalizing Basis Notes: Normalizing based on square footage allows us to easily compare years despite building additions. It is interesting to note that load has been added to many schools (air conditioning in gyms), and energy usage per square foot has decreased.

	Baseline	Year 1	Year 2	Year 3
Year	2008	2009	2010	2011
Actual Quantity	114023	114217	112534	103395.8
Normalizing Quantity	2257301	2432686.0509	2368961	2368961
Units	MMBtu	MMBtu	MMBtu	MMBtu
Normalizing Ratio	1.00	1.08	1.05	1.05
Normalized Quantity	114023.00	105982.50	107229.76	98522.28

Cost Savings Last Year (do not include savings that resulted from reduced utility rates, etc. Only use those that resulted from pollution prevention efforts): \$231,319.00

Additional Cost Savings Information: The cost savings is cost avoidance compared to calendar year 2007 baseline usage.

ENVIRONMENTAL IMPACT REPORTING

CATEGORY:

Waste

INDICATOR:

Non-hazardous Waste Recycled

Additional Information on Environmental Results (e.g., how did you achieve the reduction? if there were increases, what was the reason?):

Non-hazardous waste recycling includes commingled recycling (paper, cardboard, aluminum, glass, plastic), used oil, construction waste, scrap metal, batteries, cell phones, electronic waste, bulbs, auction waste, waste fuel, ballasts, and used antifreeze.

Less material was recycled in 2011 compared to 2009 due to the decrease in construction projects. Three major construction projects were occurring in 2009, and the projects recycled over 100 tons of construction material.

Normalizing Basis:

Square footage of facility

Normalizing Basis Notes:

Square footage of all facilities used to normalize data

	Baseline	Year 1	Year 2	Year 3
Year	2008	2009	2010	2011
Actual Quantity	340.4	519	388.9	345.6
Normalizing Quantity	2257301	2432686.0509	2368961	2368961
Units	tons	tons	tons	tons
Normalizing Ratio	1.00	1.08	1.05	1.05
Normalized Quantity	340.40	481.58	370.57	329.31

Cost Savings Last Year (do not include savings that resulted from reduced utility rates, etc. Only use those that resulted from pollution prevention efforts):

\$1,206.00

Additional Cost Savings Information:

Payment from scrap metal recycling.

EMS & ENVIRONMENTAL PERFORMANCE UPDATE

EMS Development Progress:

Following are progress reports for the objectives and targets during the most recent EMS cycle.

(a) Energy Management

Objective: Reduce natural resource depletion through energy conservation practices

Target: Reduce energy usage at 3 schools through retro-commissioning projects

Progress: Three term contracts in place, and Western Albemarle High School is scheduled for a retro-commissioning project to be completed by June 30, 2012.

(b) Water Conservation

Objective: Maximize efficiency of water fixtures in schools

Target: Improve water efficiency by 10% from FY2009-2010 baseline

Progress: Water fixture audits conducted at 1 high school, 3 middle schools and 10 elementary schools. Over \$18,000 in water fixture upgrades have resulted from the audits including aerator replacement and total fixture replacement. Many older 3.5 gpf toilets will be replaced by efficient models.

(c) Green Building

Objective: All new school construction and major renovations should be LEED for Schools certified and smaller projects must follow the Green Project SOP

Target: Obtain LEED for Schools for AHS and implement Green Renovation SOP

Progress: AHS achieved LEED for Schools Silver

(d) Renewable Energy Resource Center at Henley Middle School

Objective: Promote renewable energy education

Target: Complete Renewable Energy Resource Center Installation and Outreach by December 31, 2011

Installation of 42 kW photovoltaic array, wind turbine and solar hot water system complete, and data collection is operational.

Comments Related to Compliance Issue:

None

ADDITIONAL INFORMATION

Facility Objectives:

Following are the objectives and targets during the most recent EMS cycle.

(a) Energy Management

Objective: Reduce natural resource depletion through energy conservation practices

Target: Reduce energy usage at 3 schools through retro-commissioning projects

(b) Water Conservation

Objective: Maximize efficiency of water fixtures in schools

Target: Improve water efficiency by 10% from FY2010-2011 baseline

(c) LEED for Existing Buildings

Objective: Promote energy and resource conservation in existing buildings

Target: Obtain LEED for Existing Buildings Certification for Henley Middle School

(d) After-Hours Event Scheduling

Objective: Formalize procedures for After-Hours Event Scheduling in Schools

Target: Develop SOP for managing after-hour events and implement training at all schools by August 15, 2012

Awards and Recognition:

- ACPS won 2nd Place in VSBA's 2011 Green Schools Challenge
- LEED for Schools Silver for Albemarle High School additions
- LEED for Schools Gold for Brownsville Elementary School additions

Outreach to the Public:

- Kickoff Event for the Renewable Energy Resource Center at Henley Middle School and associated outreach with UVA students and Virginia Discovery Museum

Best Practices:

- The water fixture audits are very time consuming, but we are fortunate to have interns from UVA who earn course credit in lieu of payment. With their 20 hours of dedication per week, many water conservation projects are able to reach implementation.

Others:

ATTACHMENTS

[Clean Energy Board 33x22.pdf](#)

[Dedication Invitation.pdf](#)

[Solar Energy Board 33x22.pdf](#)

[Wind Energy Board 33x22.pdf](#)

[Charlottesville Tomorrow - Kickoff Event.pdf](#)

[Crozet Gazette Kickoff Event Coverage.pdf](#)

SUBMITTAL

Name:

Initials:

Date: