



Maryland Green Registry MEMBER

The Maryland Green Registry promotes and recognizes sustainable practices at organizations of all types and sizes. Members agree to share at least five environmental practices and one measurable result while striving to continually improve their environmental performance.

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Life Sciences Facility

Member since January 2015

Management and Leadership



Environmental Policy Statement

Canon's corporate philosophy is based on Kyosei: All people, regardless of race, religion, or culture, harmoniously living and working together into the future. This philosophy extends to the corporate Environmental Assurance Philosophy which is to pursue maximization of resource efficiency and contribute to the creation of a society that practices sustainable development.

Environmental Charter:

<http://canonusa.cusa.canon.com/EMPS/PDFs/20.20CanonAmericasEnvironmentalCharter.pdf>



Environmental Team

The CLS Environmental Management System (EMS) Working Team is comprised of a Team Leader plus four Team Members from various departments throughout the Company and is overseen by the Company Executive. The EMS Working Team meets at least once monthly. CLS strives for continual improvement by setting annual objectives and targets as well as maintaining ISO 14001 certification. The team continuously monitors environmental aspects and the associated potential impacts to the environment using a matrix. Control measures are implemented and monitored for all identified environmental aspects that cannot be reduced or eliminated in our daily operations. All-staff environmental awareness meetings are held twice/year plus the EMS Working Team conducts formal training on our EMS program for all new hires with annual refresher training sessions for all employees.

Annual Environmental Goals

Each year, specific goals are set from broad categories as a means of reducing our environmental impact. Some of the broad categories include achieving and maintaining environmental certifications, pollution prevention, energy conservation, improving environmental awareness, purchasing products with a lower environmental burden, and fostering relationships with the community.

One example for the current year: three administrative goals (as shown below) were identified (and met) within the broader category of “Purchasing products with a lower environmental burden”.

<i>Purchase products with lower environmental burden</i>	<ol style="list-style-type: none">1. <i>Continue to purchase 100% recycled copy paper</i>2. <i>Begin to purchase Fair Trade Coffee</i>3. <i>Reduce usage of paper cups/eliminate purchase of bottled water (require use of reusable water bottles/coffee cups)</i>
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Other examples of environmental targets for 2014 included:

- 1) Maintain ISO 14001 certification*
- 2) Attend Montgomery County SORRT Recycling seminar*
- 3) Conduct battery usage survey, evaluate need for rechargeable vs. single use*
- 4) Meet 50% of Montgomery County’s Green Business certification requirements*
- 5) Perform a Clean Earth activity*
- 6) Distribute quarterly EMS Team Newsletters to all staff*
- 7) Participate in Maryland Dept. of Environment (DC-MD-VA) Clean Air Partners program*
- 8) Promote “Protect the Bay” awareness on the EMS bulletin board and in one dedicated EMS Team Newsletter*
- 9) Post community environmental events (shredding and electronics recycling) on EMS bulletin board*
- 10) Submit Maryland Green Registry Member application*

Environmentally Preferable Purchasing

The CLS Environmental Charter outlines environmentally responsible purchasing expectations by calling for materials with a lower environmental burden to be purchased. Guidelines are in place for having approved vendors with preference given to companies with high environmental criteria. Examples of environmentally responsible purchases are light weight 100% recycled PCF free copy paper, 100% recycled PCF free paper towels and bathroom tissue, contracting with a green certified cleaning business, using re-manufactured toner cartridges, reusing or donating packaging supplies for reuse, and purchasing a

trade show exhibit booth made of recycled and sustainable materials. In addition, employees are encouraged to return unused/slightly used office supplies to the office supplies inventory room so they can be reused or consumed by others to reduce office supplies purchases.

Laboratory guidelines also outline pollution prevention for research operations which include purchasing the least hazardous material available for laboratory operations, encouraging employees to investigate ways to reuse or recycle materials before purchasing new ones, and considering the downstream waste generated by equipment prior to purchase.

Environmental Restoration or Community Environmental Projects

The EMS Team organizes and participates in one Clean Earth Event annually in the local community. Clean Earth events in the past have included removing trash from local parks, planting trees, and planting shrubs/mulching for the community as erosion prevention and as a visual and sound barrier to an adjacent road. Additionally, the EMS team announces and encourages employees to volunteer at Montgomery County recycling events such as paper shredding and electronic waste collection.

Park Clean up Event

[http://culs.canon.com/About Us/OurCommitmentPage.shtml](http://culs.canon.com/About_Us/OurCommitmentPage.shtml)

Independently-Audited Environmental Management System

CLS is ISO14001 certified (Environmental Management System accreditation). The program is audited internally every year and externally every three years.

In our 2014 external ISO 14001 recertification audit, we achieved the best results ever with no major or minor non-conformities.

waste

Solid Waste Reduction and Reuse

Our organization:

- *Reuses packaging materials onsite and donates excess packaging materials to a local company for reuse at their site.*
 - *Recycled 26 large bags of packing peanuts and bubble wrap in addition to what was reused onsite*

- Greatly reduced the purchase of disposable cups and eliminated the purchase of bottled water by providing all employees with reusable mugs and water bottles. (Note: Bottled water was not available for general consumption by all employees, but was used for meetings prior to this initiative.)
 - Paper cups are rarely used in our facility now.
 - One year savings associated with eliminating bottled water

Total water consumed	79 gallons
Extra Water Required for Production and Purification of bottled water	158 gallons
Energy Required for Manufacturing bottled water	51 mega joules
Oil Required to Produce the Plastic Bottles	12 gallons
Carbon dioxide equivalent to Manufacture Plastic Bottle	95 Pounds

Note: Figures are through November for 2014. December data is not yet available.

Recycling

CLS is in a leased facility with other tenants so we are unable to break out the weight for the commingled materials, mixed paper, and pallets that we recycle. The items we recycle on our own include the following for 2014 (Final 2014 data not yet available; figures shown are through November):

- Electronics – 1,266 lbs
- Batteries - 85 lbs
- Toner cartridges– 33.3 lbs
- Packaging materials including Styrofoam peanuts and bubble wrap) - 26 bags
- Paper (recycled through Shred-it) – 3,223.43 lbs (27.4 trees)

Hazardous Waste/Toxic Use Reduction

CLS has written procedures in place specifying that laboratory materials with the least environmental burden should be used whenever possible and that all new equipment purchases proactively take into consideration the downstream wastes that could be generated.

In 2014, a facility wide survey of battery usage was conducted and a decision was made to convert to use of rechargeable batteries.

Assuming that manufacturer's claims are correct, rechargeable batteries last 1800 charges or 5 years. Last year's costs represent our average use for the next 5 years:

Non-rechargeable batteries:

<i>Yearly replacement charge for AA/AAA, C batteries:</i>	<i>\$71.18</i>
<i>Cost of battery removal 2013</i>	<i>\$282.00</i>
<i>Total yearly cost of AA/AAA, C batteries:</i>	<i>\$353.18</i>
<i>5 year estimated cost:</i>	<i>\$1,765.90</i>

Rechargeable batteries:

<i>Initial purchase (chargers, batteries, adapters, storage cases)</i>	<i>\$503.15</i>
<i>Cost of battery removal</i>	<i>\$94.00</i>
<i>Total</i>	<i>\$597.15</i>

Rechargeable batteries are approximately 1/3rd the cost of non-rechargeable batteries over this time period. We will recuperate our investment in 2 years and start saving thereafter.

Energy

Energy Efficiency

As tenants, our data is combined with all other tenants in the building. Therefore we cannot give specific results/metrics for facility energy efficiency. However, below is a list of things we do to save energy as an organization:

- Energy Star labeled office equipment is used in many instances.*
- LCD screens are purchased.*
- All employees pledge to keep personal computers on an energy saving setting.*
- All computers, with the exception of essential laboratory computers, are shutdown at the end of each day.*
- Signs are posted throughout the facility to remind employees to shut off all lights when not needed and at the end of each day.*
- Motion detection lights have been installed in some of the lower traffic areas of the facility.*
- Hotplate style coffee makers were recently updated to air pot brewers to be more energy efficient (Energy Star).*
- Water coolers were upgraded to Energy Star in 2014.*
- Refrigerators and freezers are set to specified temperatures for energy savings where possible.*
- Building window and door gaps have tightened seals.*

- *Hot water pipes are insulated.*
- *Fluorescent lamps have been updated to energy efficient bulbs.*
- *Incandescent bulbs have been replaced with CFLs.*

Transportation

Employee Commute

- *CLS provides a pre-tax benefit program for employees who take public transportation as an incentive to employees to reduce miles traveled in personal vehicles.*
- *New hire and annual refresher trainings provide public transportation information that directs employees to Montgomery County transportation opportunities*
- *On Earth Day 2014, a booth was brought on-site to provide information on local transportation options such as the new Bike Share program in our area.*

Efficient Business Travel

When traveling on CLS business, employees are encouraged to consider rail rather than air travel, subway or shuttle bus rather than taxi or rental car for ground transportation, when practical, and car-pooling when taxi or rental car is necessary.

Fleet Vehicles

We don't have fleet vehicles per se. However, when a group of employees travel from one site in Maryland to another Canon site in Virginia, a van is provided for transportation which reduces CO₂ emissions and gasoline usage. Based on the number of miles reduced for business travel by individuals, approximately 13,338 pounds of CO₂ emissions and approximately 558 gallons of gasoline were saved in 2014 by implementing van rental usage.

Water

Stormwater Management and Site Design

CLS operates in a leased facility and has influenced the landlord regarding the following storm water management items:

- *Making spill kits available at points of use to control accidental spills*
- *Making sure buffers used in pH tank equipment are disposed when expired*

- *Maintaining pH tank equipment calibration*
- *Posting stormwater Discharge Limitations in pH tank equipment room*

Additionally the landlord for the site maintains the following storm water controls as per county regulations:

- *Interceptors remove oil, grease and sediment from parking lot runoff by means of three-compartment underground tanks. Tanks are cleaned annually and collected wastes are disposed of in an environmentally sound manner.*
- *Infiltration areas capture stormwater and reduce runoff by promoting percolation through the soil and return to the groundwater supply.*
- *Preventative maintenance and vegetation removal are in place to maintain the systems.*

Other



- *In 2014, CLS received an Outstanding Achievement award for businesses in Montgomery County. This achievement is awarded to businesses or individuals for their outstanding efforts in implementing or improving their recycling, waste reduction or buying recycled programs, and educational efforts.*
- *In 2014, CLS enhanced/improved our EMS program by attaining Montgomery County Green Business Certification.*
- *CLS began participating in the Washington-Baltimore Metro Region's Clean Air Partners program in 2014 as another way to improve our already well-developed environmental program. Notices are posted on "red alert days" as a way to provide awareness to employees on the impacts of air quality as well as to provide information on ways individuals can contribute to improving air quality in our community.*



Help build a greener, more sustainable Maryland through voluntary practices that reduce environmental impacts and save money.

Learn more at www.green.maryland.gov/registry

