



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.

MedImmune/AstraZeneca



Frederick Manufacturing Center and Gaithersburg R&D Site
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Biologics Manufacturing, Research and Development
Member since June 2013

Management and Leadership

Environmental Policy Statement

See AstraZeneca's Global Policy on Safety, Health and Environment [here](#):

Environmental Team

Our Frederick, MD and Gaithersburg, MD sites have active Green Teams that meet regularly to address environmental sustainability issues. Each team consists of a team chair, employee volunteers from various departments and an executive sponsor. Green Teams coordinate our annual Earth Week celebration, as well as several smaller events throughout the year.

The main goals for the Frederick Green Team are to "educate the site about environmental sustainability and manage our site's carbon footprint". In 2013, the Green Team added a site garden that can be used by all employees and is open from May to November. In observance of Earth Day 2015 a weeklong event was held that included an office supply swap, site spring cleaning, earth and wellness lunch and learns and an Earth Day vendor show and plant raffle.

The Gaithersburg Green Team is multi-departmental group of employees promoting green initiatives and sustainability as well as striving to reduce the environmental impact of site operations. The mission of the Green Team is to work with all departments and functional groups to identify opportunities and drive implementation of sustainability programs. The goals are to reduce waste generation through recycling and/or reuse, to decrease water and energy consumption thus reducing our environmental footprint. Engaging employees in

environmental sustainability is an important aspect of our responsible business practices.

The Gaithersburg Green Team meets monthly to discuss and plan environmental sustainability opportunities, activities, and events for the site. Some of the Green Team activities include:

- *Recycling awareness campaigns*
- *Office supply swaps*
- *Green vendor showcases*
- *Battery and electronics recycling events*
- *Blanket and towel drive for homeless cats and dogs*
- *Used sneaker drives for recycle*
- *Prescription eye wear collection drives for re-use*
- *CD/DVD recycle drive*
- *Ideas for greening your workspace*

Also, in honor of Earth Day, Medimmune’s property management company gifted ten Longleaf pine trees that will be planted by the Arbor Day Foundation in the Blackwater River State Forest.

In addition to the Green Team, the Gaithersburg site has a dedicated Sustainability Team within Safety, Health, and Environment to advance the site’s sustainability practices and strategy. The Sustainability Team developed a 2015 Environmental Sustainability Plan which includes strategic projects within the domains of waste, water, and energy reduction, biodiversity protection, performance measurement, and employee engagement. One of the highlights from the environmental sustainability plan is a Sustainability Communications Calendar, which includes monthly communication packages focusing on different topics to highlight sustainability goals and accomplishments for the company, site, and individual employees. Each communications package includes a story for the company intranet, a poster displayed on the cafeteria “Sustainability Wall”, and a slide for communication screens located throughout the site. In 2014, the Sustainability Team received an Excellence Award from AstraZeneca for their efforts and accomplishments in supporting a more sustainable site.



Annual Environmental Goals

AstraZeneca established a 10-year Safety, Health and Environment (SHE) Strategy that was approved in 2010 by the Senior Executive Team (SET). Targets were developed in three core areas – Environmental Sustainability, Product Environmental Improvement and Safety & Health. The hyperlink below will take you to the company website to review a complete description of the 2011-2015

goals. Note that our SHE performance is made available internally and externally to meet the requirements of our SHE Policy and commitment to transparency.
www.astrazeneca.com/Responsibility/The-environment

Environmentally Preferable Purchasing

AstraZeneca has a global policy that defines supplier expectations with respect to Responsible Procurement. The policy applies to safety, health and environment.
www.astrazeneca.com/Responsibility/Working-with-suppliers

In 2011, MedImmune/AstraZeneca created a formal process for employees to select recycled office supplies through an in-house office supplies depot and during bi-annual office supplies swap days. Through the supply swap program, employees can drop off new or used items that are then made available to other employees. In addition to the swap program, our office supply provider has offered “green” office supplies through our electronic punch-out catalog since 2010. Items containing recycled content are highlighted in the system providing an avenue for our employees to make environmentally responsible selections while purchasing materials for their offices.

Independently-Audited Environmental Management System

Using a third party, AstraZeneca conducts integrated audits that cover safety, health and environment (SHE) in addition to aspects of the Code of Conduct. The audits examine the effectiveness of a site’s SHE management system and how SHE risks are managed. The audits are also designed to encourage sharing of best practices between facilities, marketing companies and functions.

AstraZeneca’s SHE management system is based on key elements of ISO 14001 and has both a local and global dimension that covers:

- *SHE Policy, Standards, Guidelines*
- *Corporate SHE Goals & Targets*
- *Corporate Auditing*
- *Reporting System*
- *Management Review*
- *Communication*
- *Local Implementation (i.e., all sites are required to maintain a well-performing SHE management system with commitment and support at all levels in the organization)*

Facilities are typically audited on a 3- to 5-year rolling cycle based on their risk profile.

Waste

Recycling

The Frederick and Gaithersburg sites have implemented robust waste recycling programs for paper, cardboard, cans, glass, and scrap metal. Frederick also recycles, batteries, light bulbs and wood pallets while Gaithersburg recycles construction/demolition materials, batteries, light bulbs, toner cartridges, electronic components, metals, used oil, grease, wood pallets and reusable lab equipment.

The Gaithersburg site has recently procured an expanded polystyrene compactor to densify and recycle polystyrene waste generated on site.

Business recycling in Montgomery County (where the Gaithersburg site is located) became mandatory in 1993 with the passage of Executive Regulation (ER) 109-92. Since then the County has increased its recycling goal to 70 percent by 2020. In response to the ordinance, Gaithersburg's 2014 recycling rate has increased to 60 percent. Frederick's recycling rate has increased as well and was 37 percent in 2013.

Composting

The Frederick and Gaithersburg sites both collect yard debris for composting and the Gaithersburg site also collects food waste for composting.

Energy

Energy Efficiency

Our Frederick and Gaithersburg sites are among AstraZeneca's top 10 energy consuming facilities. As a result, each site has established energy reduction plans to support the company's global energy reduction target of 20 percent by 2015. Since 2010 Gaithersburg has been a participant in the U.S. Department of Energy's (DOE's) Better Plants Program. The site has identified 35 energy savings opportunities and implemented several improvements such as exterior lighting retrofits, compressor capacity optimization, boiler plant optimization, and new building specifications development. These improvements have helped Gaithersburg reduce its energy consumption by 7% (about \$1.2MM/yr.) and receive \$50,000 in energy rebates from its energy provider, PEPCO. To drive continuous improvement, Gaithersburg kicked off an 18-month

North East Superior Energy Performance (SEP) Demonstration in 2013 and became certified in 2014 – the first biotech company in the U.S. and the first company in the State of Maryland to achieve this distinction. SEP is a national certification program developed by DOE in partnership with the U.S. Council for Energy-Efficient Manufacturing. The program helps facilities verify their energy performance improvements by adopting the global energy management standard ISO 50001.

Renewable Energy

To meet our commitment to reduce greenhouse gas emissions, Frederick and Gaithersburg began purchasing 10 percent of their electricity from renewable energy resources in 2014. Voluntary renewable energy credits (REC) purchases will match 10 percent of each site's load following electricity use. Frederick estimates it will purchase 4,701 RECs based on the site's 2012 electricity use. Gaithersburg estimates it will purchase 6,334 RECs based on the site's 2012 electricity use.

Transportation



Employee Commute

Our Gaithersburg site implemented an Electric Vehicle (EV) Charging Station Program in January 2011. Using a federal grant offered by the "Charge Point America Program," Gaithersburg installed 5 of 8 charging units free, saving the company \$50,000 in equipment costs. The grant was made possible by the American Recovery and Reinvestment Act through the Transportation Electrification Initiative administered by the Department of Energy.

The intent of the program is to encourage employees to use electric vehicles, reducing gas consumption and greenhouse gas (GHG) emissions. Charging is free to registered employees and visitors. Participating employees become members of the ChargePoint Network with more than 11,500 stations in the United States.

The stations have a standard SAE J1772 connector as well as a 110V outlet, which means that they are compatible with any EV on the market such as Chevrolet Volt, Ford Transit Connect, Ford Focus Electric, BMW ActiveE, Nissan LEAF™, Fisker Karma, CODA, Tesla, Th!nk or the smart electric drive.

Since the inception of the Gaithersburg program, interest in electric vehicles has grown from two users to more than 15. Additionally, the program has saved 8.2 tons of GHG emissions (equivalent to saving 30 trees for 40 years)

and saved nearly 874 gallons of fuel (equivalent to filling up a Standard SUV 45 times).

Gaithersburg also sponsors a commuter van service between its campus and the Shady Grove Metro station. This allows employees to ride the Metro and avoid car travel commuting to work. The van service also provides transportation between the Gaithersburg Marriott Hotel and the campus for employees and visitors. An estimated 200 people use this service each week.

Efficient Business Travel

AstraZeneca is a global company with operations in 100 countries. While business travel is necessary, according to our Global Business Travel Policy “virtual meetings (web meetings, tele- and video-conferencing) are effective alternatives to travel that not only support better work/life balance but also represent an opportunity to significantly reduce travel costs as well as having a positive impact on the environment.” Onsite conference rooms are equipped with various presentation support technologies. The company also supports flexible work arrangements, like telecommuting, which allows employees to work remotely depending on business needs.



Fleet Vehicles

In 2010, Medimmune conducted a feasibility study to determine if its sales fleet could conserve more fuel and reduce CO₂ emissions to help meet the company’s 2015 greenhouse gas reduction target of 20 percent. At that time, the fleet consisted of 415 vehicles with each averaging 1,933 miles per month. The average miles per gallon (mpg) were 20.5. Additionally, 67 percent of the fleet consisted of low mpg vehicles such as:

- *SUVs (37.5%) – 18.7 mpg*
- *Minivan (15.5%) – 18.6 mpg*
- *Regular Sedan (14%) – 19.6 mpg*

Vehicles were typically replaced at 36 months or 65,000 miles. As a result, approximately 1/3 of the sales fleet (or 135 vehicles) were replaced each year.

To support CO₂ emission goals, the Team recommended the following:

- *Set minimum mpg threshold for new fleet vehicles at 22.5*
- *Establish a 3-year CO₂ reduction target for the sales fleet*
- *Establish new fleet selection criteria*

By Sept 2013, the Team accomplished the following:

- *Reduced annual CO₂ emissions by 32% since 2010.*
- *Improved the average miles per gallon for the fleet by 21.5% to 24.9 mpg*
- *Achieved both CO₂ and mpg goals 2 years ahead of schedule*

The team continues to look for opportunities to improve both CO₂ and mpg averages as vehicle technology options continue to advance.

Water



Water Conservation

AstraZeneca has made a public commitment to reduce water use by 25 percent based on its 2010 baseline. To meet that 2015 target, facilities located in water-stressed areas or considered significant water users (greater than 2% of the company's total water consumption) must implement Water Conservation Plans (WCP). The Frederick and Gaithersburg sites are among the top 10 users of water among company facilities, primarily due to the nature of the biologics R&D and manufacturing process. These facilities are also experiencing substantial growth and increased production.

In 2013, Gaithersburg completed its WCP and identified several potential opportunities for water reduction. Current projects from the WCP include:

- 1. Re-using gray water sources for our cooling towers, resulting in up to 6% potable water reduction*
- 2. Replacing manual and battery-operated plumbing fixtures (656 faucets, urinals, and commodes) with motion sensor devices*
- 3. Installing soil-moisture sensors in our irrigation system that automatically shut-off when the moisture is adequate and reduce unnecessary watering*

Frederick also completed its WCP in 2013; however, due to an efficient site design, the plan revealed few opportunities to significantly improve water consumption. For example, Frederick already uses recycled process water from operations. It has an 80,000 gallon grey water collection tank that is used for cooling tower make-up. Water is collected from roof drains and water treatment reject; however, the main source of grey water comes from the site's Water For Injection (WFI) system. Depending upon manufacturing demand, the WFI system produces 7,500 gal/day (on average) of reject water that is collected in the grey water tank. In the winter months, the grey water collection system is able to supply all of the cooling tower demand. In the summer months, when there is a

greater cooling demand, the grey water system significantly reduces consumption of city water use.

Stormwater Management and Site Design

The Gaithersburg site is not regulated by industrial storm water laws because of its operations. Nonetheless, the site has established Best Management Practices (BMPs) to minimize any potential runoff concerns. Specifically, the site has no manufacturing machinery, equipment, or raw material storage areas located outside of buildings. There are no vehicle fleets or other mobile equipment (i.e. fork lift trucks) located permanently onsite that could release motor oil, require outdoor battery collection, or require water for detergent cleaning. Bulk chemical, fuel storage tanks, and emergency generators are enclosed or have containment around them to prevent potential releases to the ground. The majority of our employee parking is under two large covered garages. At these two locations, any motor oil leaked from vehicles can be cleaned up without incident, or if oil were to become entrained in storm water, the storm water would flow into one of several oil/water separators before discharging clean storm water to the city's system. Trash and recycled materials are collected in covered non-leaking containers that are emptied several times a week. Tree limbs and leaves are collected and recycled. All sanitary, process, and utility wastewater discharges (including roof-top cooling towers) go directly to the sanitary sewer system for treatment. Shipping and receiving of goods is conducted under a roof. Cafeteria grease is collected for recycle. All non-hazardous and hazardous wastes (including used oils) are properly labeled and stored indoors until a licensed waste management company disposes/recycles them. Erosion and sediment controls are developed and implemented for major construction activities. Additionally, non-structural spill control measures are in place.

The Frederick site currently does not have any materials that are treated, stored or disposed onsite which are exposed to storm water runoff. Any materials that are stored on site are contained within secondary containment or are stored within closed structures. Storm water management practices include but are not limited to: preventive maintenance, good housekeeping, spill prevention response and weekly visual inspections of equipment and plant areas. Due to these measures, storm water pollution risks associated with Frederick are low.

Green Building

☑ LEED Gold

For significant capital projects like new builds and major renovations, AstraZeneca's Global Engineering conducts a Sustainability Review to minimize a project's environmental impacts and also assure considerations to save energy, recycle resources and minimize waste are evaluated during the conceptual phase.

Two facilities located on the Gaithersburg campus were awarded LEED Gold certification in August 2012. The Area 6 308,000 ft² R&D laboratory was recognized for its low use of energy, lighting, water and material as well as incorporating a variety of other sustainable strategies including:

- *Heat recovery system*
- *High-efficiency chilled water and laboratory lighting systems*
- *High-efficiency, low-emission boilers and emergency generators*
- *Glass; approximately 44% of the building envelope is made of glass, which provides natural light to perimeter laboratories*
- *Less water use; the building uses 40% less water than the established sustainable design baseline*

The 800 ft² employee fitness center was awarded LEED certification for recycling construction waste and the use of product made from recyclable materials. HVAC and lighting design incorporated energy efficiency practices.

The Gaithersburg laboratory and fitness center join three other AstraZeneca facilities in the US that have achieved LEED Gold certification.



View our video
Profile Updated May 2015



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

