



MEMORANDUM OF UNDERSTANDING (MOU)
Between
THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
And
HACKENSACK UNIVERSITY MEDICAL CENTER

I. Purpose

The purpose of this Memorandum of Understanding (MOU) is to formally create a mutually beneficial working relationship between the United States Environmental Protection Agency (EPA) and Hackensack University Medical Center (HackensackUMC).

II. Background

The mission of the Environmental Protection Agency (EPA) is to protect human health and the environment. EPA works to develop and enforce regulations that implement environmental laws enacted by Congress. At laboratories located throughout the nation, the Agency works to assess environmental conditions and to identify, understand, and solve current and future environmental problems; integrate the work of scientific partners such as nations, private sector organizations, academia and other agencies; and provide leadership in addressing emerging environmental issues and in advancing the science and technology of risk assessment and risk management.

The Agency works through its headquarters and regional offices partnering with over 10,000 industries, businesses, nonprofit organizations, and state, local and tribal governments, on over 40 voluntary pollution prevention programs and energy conservation efforts. EPA advances educational efforts to develop an environmentally conscious and responsible public, and to inspire personal responsibility in caring for the environment.

Hackensack University Medical Center's (HackensackUMC) mission is to improve the lives of patients, families and communities, educate skilled healthcare professionals and conduct research that expands clinical knowledge. The HackensackUMC vision is to be a world class healthcare institution, recognized for excellence in patient care, research and healthcare education. HackensackUMC intends to continue to be recognized as an environmentally conscious healthcare institution using its resources wisely, reducing solid and hazardous waste and increasing recycling and re-use of materials.

HackensackUMC intends to continuously improve our programs to reduce waste, minimize the use of hazardous materials, prevent pollution of valuable natural resources, increase

recycling, comply with all environmental regulations, and work toward sustainability. The EPA and HackensackUMC will, through this MOU, work together to further progress in sustainable development.

III. Memorandum of Understanding (MOU) Commitments

The Parties recognize the importance of collaboration to in the area of proper design, construction, and management. Consequently, the Parties are hereby establishing a working relationship, and undertaking certain goals with respect to Hospital infrastructure and operations as they relate to environmental issues, including, but not limited to, the following specific undertakings related to hospital facilities and programming of HackensackUMC.

A. HackensackUMC Waste Recycling and Re-use Operations

The current HackensackUMC recycling percentage is 14%. By partnering with our new vendor under the Green MOU, HackensackUMC hopes to increase this rate to 35%. This will allow the collection and transportation of cans, bottles, plastics, kitchen, perioperative packing as well as corrugated and mixed office paper. HackensackUMC will initiate a hospital wide drive to conserve paper and promote paperless meetings.

In addition HackensackUMC will use reasonable efforts to deploy 450 additional recycling containers on campus. This will allow staff and visitors the ability to easily recycle. The hospital will further protect the environment by taking steps to increase collection and disposal of Pharmacy waste. Containers will be placed in the main and satellite pharmacies as well as all nursing and clinical units.

Recycling and the EPA's WasteWise Program

HackensackUMC will attempt to reduce its solid waste stream. Further, it will recycle material for which a market exists, including but not limited to: paper, cardboard, news print, metal, glass, plastic and electronics. HackensackUMC will join EPA's WasteWise program, which provides technical assistance to members for auditing MSW generation rates and developing MSW reduction and recycling plans. Members also set their own recycling goals. The Hospital will also utilize the WebWare software to measure the effectiveness of its recycling efforts.

Blue Wrap Waste Reduction

The Hospital will attempt to reduce the amount of blue wrap disposed of in municipal solid waste (MSW). A blue wrap recycling initiative is currently being implemented in the main operating room. HackensackUMC disposes of approximately 30,000 pounds of blue wrap annually. Under the Green MOU, the Hospital's goal is to reduce this measured waste load 10,000 pounds by year end 2012 and an additional 15,000 pounds by year end 2013.

B. Electronics Waste (E-Waste) Recycling

Computer components/CRTs contain hazardous substances, which can harm the environment if they are simply put out with the trash. These items and similar ones contain both lead and mercury. The Hospital has contracted with a computer and electronics recycling firm to properly handle the retirement of all e-waste that is not leased or returned to the supplier. The

amount of e-waste recycled or donated/sold for re-use will be included in the Green MOU status reports.

C. Energy Conservation and the ENERGY STAR Program

Under the MOU, HackensackUMC will join the EPA ENERGY STAR Program, which offers technical assistance for conducting energy audits, benchmarking energy use and establishing an energy reduction plan. HackensackUMC will also support the 10% ENERGY STAR reduction goal. Information collected from the audit will help us make the Hospital energy efficient and practical through the operating procedures. It is anticipated that these conservation measures will reduce Hackensack University Medical Center's expenses for energy, water, and operation and maintenance. In 2011, HackensackUMC deployed LED lighting (bulbs) in our day care lobby and above the Sanzari walkway. This new product is expected to last 7-10 years is mercury free and results in less waste.

D. Incorporating Green Technologies in New and Renovated Buildings and Leadership In Energy and Environmental Design

When applicable, minor renovations will consider the retrofit of HVAC control boxes with more efficient equipment and utilize energy efficient lighting fixtures, including the implementation of more environmentally friendly construction materials (carpeting, ceilings and furniture).

E. Re-Use of Industrial Materials

HackensackUMC will attempt to utilize construction materials with recycled material content.

F. Water Conservation

HackensackUMC will attempt to utilize WaterSense products, where appropriate, in the renovation or upgrade of existing buildings as well as in new buildings planned for HackensackUMC. HackensackUMC will pursue low flow toilets and faucets in any new construction and renovation projects. The use of WaterSense approved products ensures that HackensackUMC will be conserving its precious drinking water sources.

G. Reprocessing Medical Equipment

HackensackUMC reprocesses oxisensors, blades, burrs, bits, guide wires and SCD Stockings. Under this MOU, the HackensackUMC will also seek additional re-use and reprocesses opportunities of medical and non-medical equipment.

H. Reusable Sharps Containers

HackensackUMC utilizes reusable sharps containers to reduce the disposal of plastic by incineration. The disposal of plastics may be harmful to the environment and may introduce hazardous toxins into the air. Reusable sharps containers reduce by 90% the number of containers that would have to be incinerated along with their contents. Annually, this eliminates an estimated 48,200 containers from incineration.

I. Management and Minimization of Solid, Hazardous and Universal Wastes

Fluorescent Bulbs and Non-Alkaline Batteries

HackensackUMC collects and recycles fluorescent lamps and non-alkaline batteries.

Mercury, DEHP/PVC Reduction

HackensackUMC is working to reduce and eliminate mercury and di-2-ethylhexyl phthalate/polyvinylchloride (DEHP/PVC) throughout the Hospital. The Hospital will include a statement on its Bid/Quote Content Certification Form asking vendors if their product contains mercury. Our DEHP/PVC-Free Pledge has committed the Hospital to: 1) continuing to inventory our products to identify sources of DEHP; 2) eliminating the use of DEHP/PVC products in our ICU unless no reasonable alternatives are available; 3) communicating our commitment to PVC/DEHP-free purchasing to our staff, contractors, subcontractors and vendors; and 4) collaborating hospital-wide to urge support for implementation of PVC and DEHP reduction measures.

Toner and Ink Recycling

HackensackUMC Xerox's ColorQube printers are unique in using solid-ink supplies rather than liquid ink or powdered toner. HackensackUMC will continue its laser toner and inkjet cartridge recycling program. This multifunction printer uses Xerox's proprietary solid ink technology to lower the environmental impact of office printing. The cartridge-free design generates 90 percent less supplies waste and reduces the effects of manufacturing and transportation on the environment. A study reviewed by the Rochester Institute of Technology estimated that the ColorQube series uses 9 percent less lifecycle energy and produces 10 percent fewer greenhouse gases than a comparable laser device.

Non-toxic Cleaning Products

Environmental Services will consult the Environmentally Preferable Products List that promotes reduced toxins and re-use of materials. Today, the 14 buildings on HackensackUMC's campus of approximately 3.4 million sq. ft. of floor space are cleaned with products that are non-toxic, readily biodegradable and free of any known human carcinogens, teratogens, endocrine and hormone disruptors. Greening the Cleaning® GTC Products were implemented at HackensackUMC in 2001. These GTC® products are derived from renewable natural resources committed to environmental balance, through innovative technology and green practices.

Eleven GTC products are utilized at HackensackUMC on a daily basis, ranging from an All Purpose Cleaner to Bowl cleaner to Carpet Cleaners. HUMC will strive to eliminate all cleaning agents containing hazardous ingredients, and replace them with environmentally-responsible, less toxic products. HackensackUMC has been chosen to receive an Excellence in Patient Care award from The Studer Group®. HackensackUMC was presented with this award and recognition at the eighth annual What's Right in Health Care Conference for their exemplary "cleanliness" rating on the HCAHPS patient survey.

J. Green Roof Garden and Food Waste

Green Roof Garden

In 2011, HackensackUMC had a state-of-the-art green roof garden constructed at the new The John Theurer Cancer Center. Working with a premier environmentally responsible landscaping firm, the first phase consisted of activity installing drought-tolerant green roof modules, decorative planters, shrubs, and sitting areas for patients, visitors and staff. The hospital will complete the final phase of the project in May of 2012 with the installation in the areas of design/build, grounds maintenance, irrigation, lighting and plant health care. In addition to helping patients, the green roof garden also provides economic and environmental benefits that support a healthier community.

The 7,000-square-foot garden consist of plants which are rooted in a combination of lava and expanded shale that needs little watering. They are in 2-foot trays that can be picked up and replaced. Insulation spread under these planters and the white concrete stones that form the sitting area will expand the life of the roof. In addition to the flowers and trees, the rooftop oasis also holds vegetable and herb plants, which will be plucked when ready and used in the center's kitchen classes for patients and their families.

HackensackUMC will realize exterior insulation as the green roofs significantly reduce heat gain and loss, resulting in lower energy output for heating and cooling and thereby reducing harmful emissions. In addition, this green roof will provide further air quality benefits by filtering air that moves across it and absorbing carbon dioxide. This will also reduce heating and cooling costs, and create a longer roof lifespan.

The green roof substrate also retains water — up to 90 percent of summertime precipitation and 40 percent of wintertime precipitation — greatly reducing storm water runoff. The vegetable garden-occupies 4,000 square feet of the cancer center's rooftop, providing patients with easy access to the outdoors, a place to sit among greenery, and even the chance to learn about growing healthy foods. Additionally, the garden provides a space for visiting families and friends to spend time while their loved ones are receiving treatment.

K. Water Coolers

HackensackUMC will promote the use of bottle-less water coolers in order to reduce plastic bottles usage by patients, visitors and staff. HackensackUMC expects to reduce plastic bottle use by 15 % by 2013 under the Green MOU. Currently we have 226 Quench™ water coolers on campus. An estimate on the water and plastic bottles saved and associated transportation emissions reduced will be provided in the Green MOU updates.

L. Clean Construction Equipment and Clean Fuel Use

HackensackUMC will seek to utilize clean construction equipment that reduces pollution from conventional diesel fuel-powered construction vehicles and equipment by requiring the use of Ultra-Low Sulfur Diesel (ULSD) fuel. The hospital will also promote the use of best available pollution control retrofit technologies on construction equipment and implement a no-idling policy.

M. Employee Green and Sustainability Education and Training Program

HackensackUMC plans to make all employees aware of all of our new programs and request their participation. HackensackUMC will establish a Green Team in November of 2011 made up of 12-15 employees from throughout the enterprise. The Team will establish and publish 12 -24 month goals and objectives in December of 2012 centered on awareness, engagement and participation. The Team will also establish a measurement process (overall) for waste prevention, reuse and recycling. HackensackUMC Sustainability Team will lead host this initiative.

N. EPA GreenScapes

Under this MOU, the Hospital will attempt to utilize EPA's GreenScapes recommendations to reduce the need to replace landscaping materials and high maintenance plants, work towards reusing landscape materials where possible, recycle organic materials and make decisions to specify and purchase products that are environmentally preferable. The Hospital will consult with EPA's GreenScapes Tip Sheets and Rebuy Checklist to develop its own written GreenScapes program. The Program will keep records of Waste, Energy, Fertilizers, Pesticides and Climate Change activities related to its grounds keeping efforts.

Status Reporting

HackensackUMC will submit a status report to EPA twice per year starting six months after the official signing of the MOU. The report will include an update on the various activities identified in the agreement. EPA will use this data to determine the environmental benefits associated with HackensackUMC's "green" activities.

IV. Terms and Conditions

Notwithstanding anything to the contrary in this MOU or otherwise, this MOU is not a contractual or a financial obligation instrument; it is a statement of cooperation only. Nothing in this MOU shall obligate EPA or HackensackUMC to expend any funds or make any appropriations or to enter into any contract or other obligation or be cited as the basis for the promise or transfer of funds or be interpreted to require HackensackUMC to make any purchase, take any action or refrain from taking any action that deems to be in its interest. Collaboration under this MOU shall be in accordance with applicable statutes and regulations.

This MOU does not restrict EPA or HackensackUMC from participating in similar activities or arrangements with other entities or Federal agencies. Either Party may unilaterally withdraw at any time from this MOU by transmitting a signed written notice to that effect to the other Party. By mutual agreement, which may be either formal or informal, each party may modify the list of intended activities set forth above, and/or determine the practical manner by which the goals, purposes and activities set forth in this MOU will be accomplished. Modification to other written parts of this MOU must be made in writing and signed by either the Parties or their designees.

Nothing in this MOU shall be construed to authorize or permit any violation of any Federal, State or local law, including, but not limited to, any environmental law administered and/or enforced by EPA. Access to all documents generated pursuant to the activities set forth in this MOU that constitute agency records for purposes of the Freedom of Information Act (“FOIA”), 5 U.S.C. §552, shall be governed by the provisions of the FOIA.

HackensackUMC and EPA each agrees that it does not expect, nor will it ever seek to compel from the other in any judicial forum, the payment of money, services or other thing of value from the other based upon the terms of this MOU. The foregoing provision does not in any way affect any legal rights accruing to HackensackUMC by virtue of any other law, contract and/or assistance agreement.

HackensackUMC understands and acknowledges that EPA's relationship with HackensackUMC in no way affects, alters or otherwise constrains EPA's right to provide similar (or identical) services to, or establish similar (or identical) relationships with, any other entity. HackensackUMC understands that EPA's participation in this MOU does not constitute an endorsement, express or implied, of (a) any policy advocated by HackensackUMC or (b) any goods or services purchased, offered or sold or utilized by HackensackUMC in the accomplishment of any of the objectives of this MOU.

The parties agree that any copyrightable subject matter, including but not limited to journal articles, training, educational or informational material or software, created jointly by the parties from the activities conducted under the MOU may be copyrighted by HackensackUMC hereby grants to the government a royalty-free, nonexclusive, irrevocable right to reproduce, distribute, make derivative works, and publish or perform such work(s) publicly, or to authorize others to do the same on its behalf.

This MOU does not authorize HackensackUMC to use any EPA logo, trademark or other intellectual property without prior approval of EPA. This MOU does not authorize EPA to use any HackensackUMC logo, trademark or other intellectual property without the prior approval of HackensackUMC.

The EPA enters into this MOU under the authority of Section 103 of the Clean Air Act, 42 U.S.C. §7403, Section 104 of the Clean Water Act, 33 U.S.C. §1254, and Section 8001 of the Solid Waste Disposal Act, 42 U.S.C. §6981, Section 6604 of the Pollution Prevention Act, and Section 324A of the Energy Policy and Conservation Act, which provide EPA with authority to undertake cooperative efforts with private organizations to promote the coordination and acceleration of research, studies, training, and other efforts to prevent, reduce and eliminate pollution.

This MOU does not create any right or benefit, substantive or procedural, enforceable by law or equity against HackensackUMC or EPA, their officers or employees, or any other person. This MOU does not direct or apply or provide any benefit to any person, aside from EPA and HackensackUMC.

V. Effective Date and Administration

This MOU will become effective upon signature by the Regional Administrator of EPA Region 2 and the Administrative Director of HackensackUMC or their designees. It may be modified or amended by written agreement between the parties. This MOU will terminate at the end of five (5) years from the date of signature unless revised or extended at that time by written agreement of the parties. This MOU may be terminated at any time by either party without cause upon the issuance of a written notice to the other party. The Parties will review annually the provisions of this MOU and its implementation.

Signed:

Judith A. Enck
Regional Administrator
U.S. EPA Region 2

Robert C. Garrett
President
Chief Executive Officer
HackensackUMC