



MEETING MINUTES

**Rockville Environmental Working Group
NIH Environmental Management System (NEMS)
Tuesday, June 10, 2008
11:00 am – noon**

Meeting Objective(s):

- Review and update, if necessary, NEMS documentation
- Identify status of current programs and teams and determine any support or resources needs
- Finalize 2008 objectives and targets
- Identify remaining implementation actions for rest of year

Attendees:

Maura Barr (Booz Allen)
Joan Becker (NCI)
Louise Davis (ORS)
Ray Dillon (OD)
Kenny Floyd (ORF)
Robin Hirschhorn (Booz Allen)
Bill Ketner (ORF)
Brian Kim (ORF)

Charlyn Lee (ORF)
Terry Leland (ORF)
Mark Marshall (ORF)
Mark Miller (ORF)
Kristen Peters (Booz Allen)
Nicole Rohloff (NEI)
Wendy Rubin (ORS)
Betsy Singer (NIDDK)

Minutes:

NEMS Greening Update

Terry Leland and Robin Hirschhorn updated the Implementation Team on the greening activities. They presented a briefing on the status of NEMS Greening (see Attachment 1), and highlights from this briefing are provided below.

- **Implementation Structure:** The structure for the NEMS implementation has been updated to reflect the establishment of a Rockville Environmental Working Group and the Institute/Center (IC) specific Green Teams. Like the existing working and advisory groups, these new groups will be integrated into the NEMS through representation on the Implementation Team.
- **Successes and Challenges:** The NEMS has numerous successes, including:
 - Another well-attended Earth Day celebration,

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- Increased support and participation from ICs with the creation of the Green Teams, and
 - The NEMS awareness training is available online through the NIH Training Center. The training is still available through the NEMS web site, but it will be soon replaced with instructions on how to access it through the NIH Training Center.

Despite these great successes, challenges still remain. Expanded membership and management support are still needed. While the creation of IC-specific Green Teams has increased participation, this also created the challenge of ensuring full integration into the NEMS, which would possibly result in competing objectives and duplicative or contrasting greening efforts.

- **NIH 5-Year Goals:** Ms. Hirschhorn described a sample of the 5-year goals. The annual objectives that working groups and Environmental Management Program (EMP) leads are working towards help to achieve the goals. These goals are more general and are not quantitative. The objectives are quantitative and monitored through performance measures. The objectives established by all working groups and teams under the NEMS must roll-up to accomplish the NIH 5-year goals.
- **Example of Success – NIH Cafeterias:** Ms. Hirschhorn provided an example of a NEMS success. The NIH cafeterias are greening their operations and offerings. NIH cafeterias offer sustainable seafood and reusable mugs for purchase. Cardboard and cans are recycled. Leftover food is shipped each week to DC Central Kitchen. Dining Services is exploring other greening efforts, including composting of food scraps and offering of biodegradable cups, trays, and utensils.
- **Green Teams:** While the NEMS has achieved success through functional working groups, continued improvement may be achieved if the NEMS is championed and implemented at the IC level. Green Teams have been established to ensure that every level of the organization be committed, aware, and participate in the system. Three Green Teams are actively greening the ICs and their activities. The Green Teams may use the NEMS web site to raise awareness of their activities. Representatives from each Green Team provided an update on their activities:
 - **NIDCD:** Since Catherine Langston could not attend the meeting, Ms. Hirschhorn provided the update on NIDCD Green Team activities. This team was established in April and has established objectives that are focused on a reduce-reuse-recycle theme.
 - **NIDDK:** Betsy Singer briefed the Implementation Team on the NIDDK Green Team's successes. The main goal that the team is working towards is encouraging awareness among employees. The team encouraged employees to take awareness training and provided a selection of awards for those who took the training. Within three days, 115 NIDDK employees had taken the NEMS Awareness Training. In

addition, the team is arranging IC-sponsored Green Hour events, including a viewing of *Peak Oil* and a walking tour of the NIH Campus.

- **NEI:** Nicole Rohloff provided an overview of the NEI Green Team activities. The team is working to supply recycle bins in each office. Extra light bulbs are being removed. An environmental awareness campaign was initiated with an email from the Executive Officer to employees about the NEMS and its initiatives. The Green Team is planning another email to encourage the participation in the online NEMS awareness training. In the future, the team will continue to raise awareness through quarterly newsletters, information on the NEI intranet, and global emails.

In addition to the IC Green Teams, the Children's Inn and CIT are greening their activities. The Children's Inn has created a list of possible greening actions that are currently under consideration.

- **Montgomery County Sites:** A working group dedicated to greening the activities occurring at NIH off-campus sites located in Montgomery County has been established. Joan Becker is the lead for this working group. They are currently working to improve recycling services at these sites. A pilot strategy is being developed to raise awareness of what can be recycled at Executive Plaza North (EPN). Once this strategy is piloted at EPN, the working group will expand the effort by providing building-specific information on recycling services.
- **Working Group Updates:** Representatives of the functional working groups briefed the Implementation Team members on their activities.
 - **Sustainable Lab Practices:** This working group is promoting green chemistry and is currently identifying target chemicals for priority reduction. Greener alternatives to the target chemicals also are being investigated. Additional input by the scientific community on the target chemicals list and the possible greener alternatives is needed.
 - **Sustainable Office Practices:** This working group is focused on greening the purchases made by those with purchase card authority. The group is working with Staples to provide a web-based, user-friendly green purchasing source. This source will function as a one-stop-shop for employees to buy green supplies, including office products and furniture. In addition, the working group is developing the Green Office Challenge, which is an informal, voluntary evaluation of how green an office suite or office floor or IC is. This evaluation tool intends to increase awareness among office staff. The Green Office Challenge worksheet is currently under review by DEP and will be distributed to the Implementation Team for comment.

Review and Update of NEMS Documentation

The Implementation Team reviewed and updated, where necessary, NEMS documentation and records. The team reviewed the NIH environmental policy, activity list, and aspect list (see Attachments 2-4). No changes or other updates were

identified during the meeting. The team suggested that the environmental policy become a manual issuance, and Kenny Floyd took responsibility for this action.

Finalization of 2008 Objectives and Targets

A list of the 2008 NEMS goals, objectives and targets were provided to the Implementation Team for review (see Attachment 5). Ms. Leland asked that everyone review the objectives and make any necessary updates. She also asked EMP leads to update their EMPs. Additionally, Kristen Peters will be available to help EMPs update their EMPs.

Remaining Implementation Actions

A number of implementation actions must be completed before the end of the calendar year. The Implementation Team reviewed the NEMS implementation schedule (see slides 11-12 of the presentation in Attachment 1). The NEMS awareness training is now available through the NIH Training Center. It will be the EO's responsibility to ensure all of their employees take the training. The EMPs will need to be updated to prepare for the internal audit that is scheduled for mid-October. Internal auditor training will occur in early October to create a pool of qualified auditors that can conduct internal NEMS audits. The self-declaration audit, which will be conducted by external parties, is scheduled for December.

Action Items:

Action Item	Responsible Person(s)	Due Date
1. Provide comments on the Green Office Challenge worksheet (emailed by Terry Leland on June 18)	All	Tuesday, June 24
2. Update goals, objectives and targets	EMP Leads	Thursday, July 3
3. Schedule a time to meet with Kristen Peters (peters_kristen@bah.com) to update EMPs	EMP Leads	Thursday, July 3

Next Meeting:

The NEMS Implementation Team will meet every other month. The next meeting is scheduled for Tuesday, August 12 at 2 PM. A meeting request with the specific location is forthcoming.



MEETING MINUTES

**Implementation Team Meeting
NIH Environmental Management System (NEMS)
Tuesday, June 10, 2008**

ATTACHMENT 1



NEMS Greening Update

NEMS Implementation Team Meeting
June 10, 2008

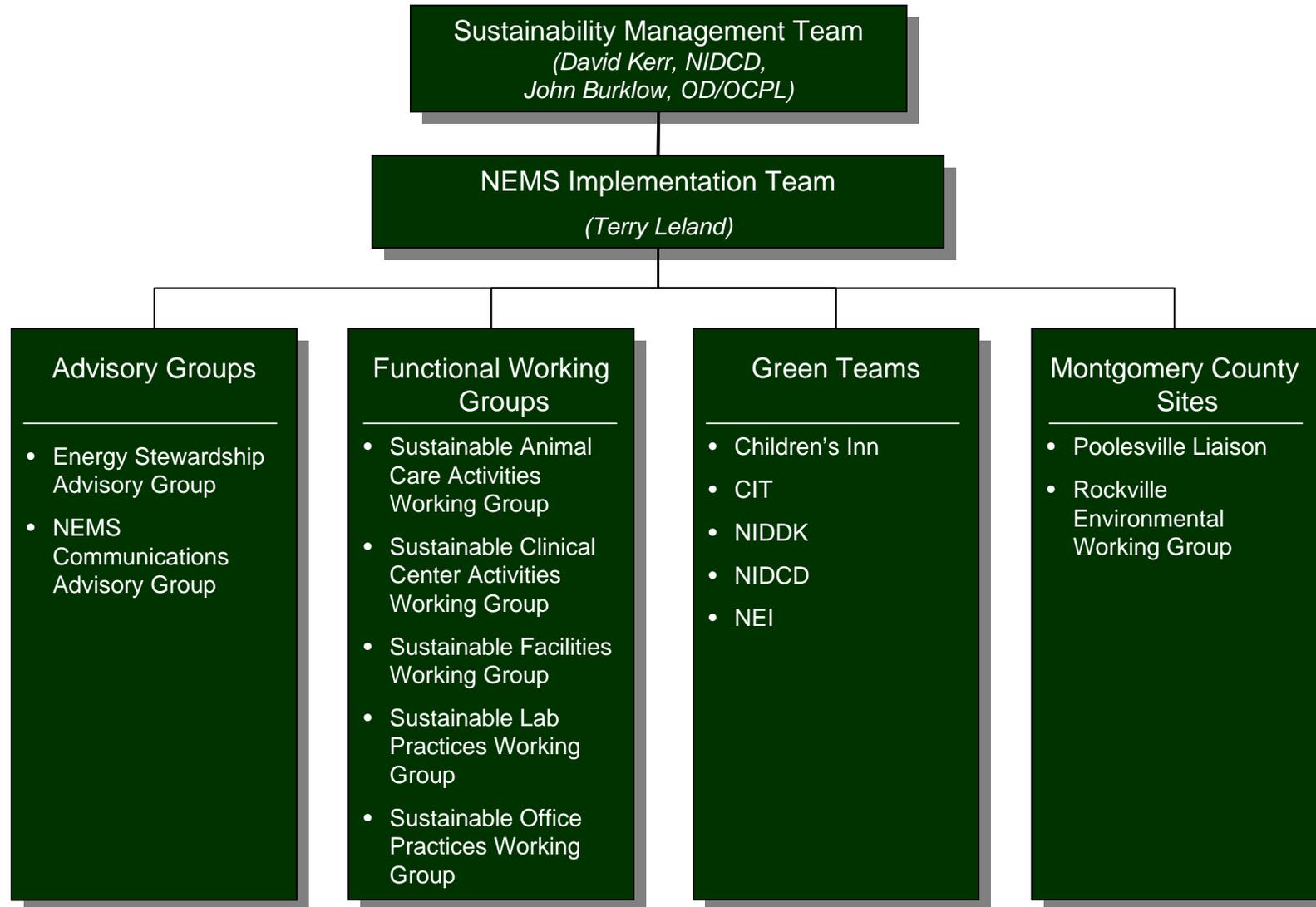


NEMS

To Protect the Future, Take Action Into Your Hands



NEMS Implementation Structure



Successes and Challenges

▶ Successes

- 2008 NIH Earth Day Celebration
- Green Teams
- Awareness Training on LMS
- Objectives being supported and progress made

▶ Challenges

- Membership
- Management Support
- Integrating efforts
- Deployment through complex organization

Campuswide NEMS 5-Year Greening Goals

- ▶ Implement NIH Green Purchasing
- ▶ Increase Electronics Recycling at NIH Campus and Purchase of Green Computers
- ▶ Reduce Energy Intensity
- ▶ Increase Recycling of General Solid Waste
- ▶ Expand Participation in the Transportation Programs
- ▶ Reduce Disposal of Unused Chemicals
- ▶ Reduce Disposal Rates of NIH Target Chemicals
- ▶ Improve Water Quality of Stormwater Discharges
- ▶ Reduce Water Consumption Intensity

Cafeteria Successes

- ▶ Only sustainable seafood used in NIH's dining facilities.
- ▶ Reusable mugs available to reduce the amount of Styrofoam cups. Employees receive a discount on the price of the beverage.
- ▶ NIH recycles the high volume of cardboard and cans from the dining kitchens, which is diverted from the waste stream.
- ▶ Each week, leftover food is shipped from NIH's kitchens to the DC Central Kitchen.
- ▶ Food scraps will be composted off site (summer).

Green Teams

Team	Progress
NIDCD Catherine Langston	<ul style="list-style-type: none">▶ Green Team formed▶ Objectives set▶ Focus on reduce/reuse/recycle
NIDDK Betsy Singer	<ul style="list-style-type: none">▶ Green Team formed▶ Encouraging awareness training▶ Green events being held
NEI Nicole Rohloff	<ul style="list-style-type: none">▶ Green Team formed▶ Recycling bins distributed▶ Education and outreach▶ Removing extra light bulbs

Montgomery County Sites

	Progress
Rockville Environmental Working Group Joan Becker (NCI)	<ul style="list-style-type: none">▶ Team formed▶ Objectives set▶ Focus on recycling▶ Deployment and green activities at the offsite buildings

NEMS Sustainable Lab Practices Working Group

- ▶ *Mission:* To review lab activities and identify ways to conduct these activities in a more environmentally sound manner
- ▶ Meeting since October 2006
- ▶ Focus on minimizing use of toxic chemicals and replacing where possible with less toxic alternatives

NEMS Sustainable Office Practices Working Group

- ▶ *Mission:* To review office activities and identify ways to conduct these activities in a more environmentally sound manner
- ▶ Focus on Green Procurement
 - GP source
 - GP tracking
 - GP deployment
- ▶ Green Office Challenge

Environmental Program Leads

Environmental Management	Lead
Air Emissions	Mark Miller
Fleet Management	Mark Minnick
General Waste/Recycling	Bill Ketner
Medical Pathological Waste	Don Wilson
Tank Management	Jim Carscadden
Radioactive Waste	Wendy Rubin
Stormwater	Brian Kim
Sustainable Buildings	Ed Rau
Transportation	Louise Davis
Wastewater	Mark Miller
Energy and Water Conservation	Greg Leifer

Tools

► Outreach

- Fact sheets
- Reference Posters
- Website
- NIH Record articles
- Training



WANTED
DEAD OR ALIVE
(BROKEN OR INTACT)

YOUR MERCURY THERMOMETERS
WANTED FOR SPILLS CONTAMINATING LABS AND THE AIR ABOVE SAFE LIMITS; LAB DOWNTIME; BEING DIFFICULT AND EXPENSIVE TO CLEAN UP; AND A RISK TO HEALTH

REWARD
MERCURY-FREE WALLET CARD FEVER THERMOMETER FOR TURN-INS

NIH EARTH DAY
APRIL 25, 2007
10AM - 2PM
MAD HATTER'S BOOTH ON BUILDING 1 LAWN

DUE TO THE TOXIC NATURE OF THESE CULPRITS, TRANSPORT IN LEAK/BREAKAGE RESISTANT CONTAINERS SUCH AS PLASTIC WATER BOTTLES

FOR MORE INFORMATION
CALL NIH DEP 301-496-7775

WHAT CAN I RECYCLE?
RECYCLING INFO - CALL 301-496-7990

YOU CAN ALSO RECYCLE...

ELECTRONIC COMPUTERS, MONITORS, LAPTOPS, KEYBOARDS, SPEAKERS, AND PERIPHERALS
Call 301-482-6279 for collection

RECYCLED AND ALL RECHARGEABLE BATTERIES
Call 301-486-4718 for collection

CARDBOARD, TISSUE, AND PAPER TOWEL BOXES
DO NOT INCLUDE TISSUE PACKAGING
Flat tires and valves in container or loading dock

NIH Environmental Management System (NEMS)
To Protect the Future, Take Action Into Your Hands

NIH Labs Go Greener

What is the NIH Goes Greener Campaign?

The **NIH Goes Greener** campaign is a challenge to all NIH employees and contractors to conduct their activities in a "greener" or more environmentally sound manner. The NIH is a leader in environmental stewardship, but we can do even better. Each of us must carefully consider the environmental impacts of our day-to-day activities and take actions to conduct these activities in a manner that minimizes our impacts.

What is the NEMS?

As part of our NIH Goes Greener campaign, we are implementing the NIH Environmental Management System (NEMS). The NEMS is a management tool that helps us identify our most pressing environmental issues, set goals to address those issues, and improve our environmental performance.

How can we improve our environmental performance? Only with your help. Do you know how your daily activities impact the environment? Do you take actions to reduce those impacts? Not sure how? The NEMS Sustainable Lab Practices Working Group is developing guidelines and tools to help you "green" lab practices at the NIH. These will be posted at <http://www.nems.nih.gov/home/abn.htm> as they are developed.

Do my actions REALLY make a difference?

Yes! Our cumulative actions make NIH a leader in environmental stewardship. Thanks to your efforts, NIH has achieved:

- A 50% reduction in the generation of mixed (radioactive chemical) wastes compared to the mid 1990s.
- The elimination of unnecessary uses of mercury at NIH facilities through our "Mad as a Hatter Campaign."
- The participation of 5,300 employees in the Treasure Program.
- A recycling rate of approximately 85%. That means that 25,300 pounds of waste per day is not buried in the Montgomery County waste incinerator or buried in local landfills.

For more information about the NEMS, contact:
Terry Leland, NEMS Coordinator, 301-496-7778, lelandt@nhs.nih.gov
www.nems.nih.gov

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WHERE DOES MY WASTE GO?

CHEMICAL WASTE	RADIOACTIVE WASTE	MEDICAL/PATHOLOGICAL WASTE (MPW)	MULTIHAZARDOUS WASTE
All acids or unacid chemicals	Any waste that contacts or is contaminated with radioactive material	From sharps, non-sharps, biological, chemical, and blood or body fluids	Waste of more than one of the previous categories

BE SURE TO LOOK FOR THESE SYMBOLS!

Implementation

Status of NEMS Implementation			
Step	Activity	Milestone Date	Status
	Implementation Training/Kick-Off (if needed)	2/29/08	Complete
	Review Environmental Policy and Self-declaration Protocol	2/29/08	Complete
	Review NEMS Implementation Team Membership	2/29/08	Complete
	Update Activities, Products and Services	2/29/08	Complete
	Update Legal and Other Requirements	2/29/08	Complete
	Update Significant Environmental Aspects and Impacts	2/29/08	In progress
	Review and Update Objectives and Targets	2/29/08	Finalizing
	Update Environmental Management Programs	2/29/08	In progress

Implementation (continued)

	Develop Operational Controls	7/31/08	In progress
	Revise NEMS Procedures	7/31/08	In progress
	Conduct Awareness Training	10/1/08	--
	Conduct Competence Training	10/1/08	In progress
	Conduct Internal EMS Audit	10/15/08	--
	Prepare Audit Report and Corrective Action Requests	10/22/08	--
	Conduct Management Review	12/15/08	--
	Receive Self-Declaration Audit	12/1/08	--
	Self-Declare Conformance to E.O. 13423	12/28/08	--



MEETING MINUTES

**Implementation Team Meeting
NIH Environmental Management System (NEMS)
Tuesday, June 10, 2008**

ATTACHMENT 2



2008 OBJECTIVES AND TARGETS ROLLUP

ENVIRONMENTAL ASPECT	5-YEAR GOAL	OBJECTIVE	OBJECTIVE COMPLETION DATE	OBJECTIVE LEAD	WORKING GROUP (WG) OR TEAM	TARGET(S)	TARGET COMPLETION DATE	TARGET LEAD
Multiple Aspects	1. Improve the NEMS	a. Issue NIH Environmental Policy as Manual Issuance	December 2008	Terry Leland	Sustainability Management Team	None.	N/A	N/A
		b. Define and Document NEMS Communications Procedures	October 2008	Terry Leland, Dennis Coleman	---	None.	N/A	N/A
		c. Stand up Working Groups for Clinical and Animal Care Activities	December 2008	Terry Leland	---	None.	N/A	N/A
	2. Deploy and maintain the NEMS	a. Document Facilities Operations and Maintenance Procedures with SOPs	December 2008	ORF	---	None.	N/A	N/A
		b. Revise Waste Disposal Guide	December 2008	Charlyn Lee	Sustainable Lab Practices WG	(1) Publish new Waste Disposal Guide	December 2008	Charlyn Lee
		c. Develop and deploy office-specific awareness program	October 2008	Ray Dillon, Carl Henn	Sustainable Office Practices Working Group	(1) Develop and conduct a green office evaluation/audit	July 2008	Terry Leland, Dennis Rodrigues
		d. Integrate the Rockville facilities into the NEMS	October 2008	Joan Becker	Rockville Environmental WG	(1) Establish working group	February 2008	Joan Becker
						(2) identify working group mission, charter and objectives	March 2008	Joan Becker
						(1) Develop Rockville-specific awareness program	October 2008	Joan Becker, Laura Dillon
						(2) Identify the process and responsibilities for communicating environmental issues and information	October 2008	Facility Managers
		e. Develop and execute IC-specific Green Team Pilots	October 2008	Terry Leland	---	(1) Establish NIDDK Green Team	May 2008	Betsy Singer
						(2) Establish NIDCD Green Team	May 2008	Catherine Langston
						(3) Establish CIT Green Team	May 2008	TBD
						(4) Establish Children's Inn Green Team	July 2008	TBD
f. Develop and deploy environmental awareness strategy at NIDCD	December 2008	Catherine Langston	NIDCD Green Team	(1) Develop a communications plan	December 2008	Catherine Langston		
				(2) Develop awareness training	December 2008	Catherine Langston		
				(3) Brief top management	December 2008	Catherine Langston		
				(4) Conduct baseline assessment of green office practices	December 2008	Catherine Langston		
Air Emissions	1. Decrease NOx emissions by 20%.	a. Develop policy is appropriate control for the use of natural gas during Ozone Depleting Season to eliminate use of fuel oil #2.	December 2008	Mark Miller	---	(1) Obtain agreement to use natural gas in order to proceed.	October 2008	Mark Miller
						(2) Draft policy	December 2008	Mark Miller
	2. Controlling Ethylene Oxide Emissions throughout the NIH campus.	None.	N/A	N/A	---	None.	N/A	N/A
3. Reducing NOx Emissions	a. Conduct and report on study of the	December 2008	Mark Miller	---	(1) Develop contract	October 2008	Mark Miller	

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ENVIRONMENTAL ASPECT	5-YEAR GOAL	OBJECTIVE	OBJECTIVE COMPLETION DATE	OBJECTIVE LEAD	WORKING GROUP (WG) OR TEAM	TARGET(S)	TARGET COMPLETION DATE	TARGET LEAD
	from Emergency Generators.	potential use of natural gas for emergency generators (conversion and new units) and Fuel Cells – potential application on the CIT project (bldg 12).				(2) Award contract	November2008	Mark Miller
						(3) Complete study	December 2008	Mark Miller
		b. Draft policy for use of natural gas.	December 2008	Mark Miller	---	None.	N/A	N/A
	4. Reducing CO Emissions.	a. Conduct and report on study of potential reductions in CO and identify appropriate % reduction goal.	December 2008	Mark Miller	---	(1) Develop contract	October 2008	Mark Miller
						(2) Award contract	November2008	Mark Miller
5. Reduce Ozone Depleting Substances Emissions.	None.	N/A	N/A	---	(3) Complete study	December 2008	Mark Miller	
					None.	N/A	N/A	
Air Emissions & Natural Resource and Raw Material Consumption – Fossil Fuels	1. Expand procurement and use of Alternative Fuel Vehicles (AFV) so that a majority of the NIH fleet are AFVs	a. Reduce petroleum base fuel consumption by 2% annually.	October 2008	Mark Minnick	---	None.	N/A	N/A
		b. Increase alternative fuel use by 10% annually.	October 2008	Mark Minnick	---	None.	N/A	N/A
		c. Order at least 75% of new vehicles as alternative fuel.	October 2008	Mark Minnick	---	None.	N/A	N/A
	2. Expand Participation in the Transportation Programs.	a. Conduct or participate in 6 transportation outreach events.	December 2008	Tom Hayden, Louise Davis	---	(1) Conduct commuting seminar	February 2008	Louise Davis
Chemical spills/leaks to water or ground, Air Emissions, & Ecological Disturbance	1. Maintain compliance for underground storage tanks	a. Address deficiencies identified by assessment	December 2008	Daryl Moore	---	None.	N/A	N/A
Chemical Waste	1. Develop/Improve/ Update Program Management Tools.	a. Conduct pilot of inventory system (Vertere) in 10 labs.	June 2008	Charlyn Lee	Sustainable Lab Practices WG	(1) Complete inventories for the 10 volunteer pilot labs. (2) Prepare summary report for Phase 1 of the pilot project.	June 2008 July 2008	Roger Weidner
		b. Determine future implementation efforts for chemical inventory tracking.	December 2008	Charlyn Lee	Sustainable Lab Practices WG	(1) Develop strategy for Phase II of the pilot project. (2) Identify additional labs to participate in Phase II. (3) Investigate feasibility of integrating the chemical inventory system with the NBS.	June 2008 June 2008 December 2008	Roger Weidner
		c. Perform laboratory surveys as part of waste management outreach initiative	December 2008	John Prom	Sustainable Lab Practices WG	(1) Perform laboratory surveys	December 2008	John Prom
		d. Integrate EnviroWare Waste Management Data with GIS	December 2008	Stephen Fields	Sustainable Lab Practices WG	(1) Develop prototype GIS system	September 2008	Stephen Fields
	2. Reduce Disposal of Unused Chemicals by 30% by 2009.	a. Develop strategy for reducing unused chemicals.	October 2008	Charlyn Lee	Sustainable Lab Practices WG	(1) Establish focus group to develop strategy	August 2008	David Mohammadi

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ENVIRONMENTAL ASPECT	5-YEAR GOAL	OBJECTIVE	OBJECTIVE COMPLETION DATE	OBJECTIVE LEAD	WORKING GROUP (WG) OR TEAM	TARGET(S)	TARGET COMPLETION DATE	TARGET LEAD
	3. Reduce Disposal Rates of NIH Target Chemicals.	a. Generate baseline and develop strategy to reduce disposal rates of target chemicals.	December 2008	Charlyn Lee	Sustainable Lab Practices WG	(1) Identification of chemicals targeted for minimization complete. Need to rank and distribute to labs. (2) Develop action plan for reduction of target chemicals.	June 2008	John Prom
		b. Eliminate mercury use from NIH facility, lab and clinical operations	December 2008	Charlyn Lee	Sustainable Lab Practices WG	(1) Implement NIH wide policy to restrict/ban mercury use. Manual issuance has been developed. Final publication is pending. (2) Identify facility, lab and clinical equipment that are known to contain mercury. (3) Implement an outreach/awareness program to train NIH community on where mercury is located and procedures for reducing/eliminating it.	July 2008 December 2008 December 2008	Stephen Fields
Ecological Disturbance	1. Maintain compliance with NEPA and mitigate the NIH's environmental impacts from actions it initiates.	a. Perform follow-up inspections of mitigation measures that the NIH commits to in its EAs or EISs.	October 2008	Terry Leland	---	None.	N/A	N/A
Energy Consumption	1. Reduce energy intensity every year by 3% up to a cumulative 30% reduction by the end of FY 2015.	a. Cascade energy goals to the Executive Officers of each IC.	December 2008	OD	---	None.	N/A	N/A
		b. Audit 10% of auditable square footage on campus.	December 2008	Greg Leifer	---	None.	N/A	N/A
		c. Improve energy conservation in work spaces	December 2008	Ray Dillon, Carl Henn	Sustainable Office Practices WG	(1) Purchase electronic products such as computers, copiers, electronic equipment, etc. that are EPA Energy Star® compliant.	December 2008	Ray Dillon, Carl Henn
						(2) Establish and maintain operational and maintenance controls of computers in compliance with EPA's Energy Star requirements of 1500 computers.	December 2008	Don Wilson, Bill Ketner
						(3) Establish implementing a "sleep mode".	December 2008	Don Wilson, Bill Ketner
						(4) Conduct training on the conservation of energy using workstations.	December 2008	Don Wilson, Bill Ketner
		d. Review potential for the back-up power project for Building 12 to use fuel cells to provide energy for this facility.	December 2008	Greg Leifer	---	None.	N/A	N/A
e. Continue to participate in PEPCO's Voluntary Load Reduction Program.	December 2008	Greg Leifer	---	None.	N/A	N/A		
f. Improve energy conservation at NIDCD offices.	December 2008	Catherine Langston	NIDCD Green Team	(1) Implement policy to turn off lights and computers at night	December 2008	Catherine Langston		
				(2) Enable Energy Star features on employee computer systems	December 2008	Catherine Langston		

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ENVIRONMENTAL ASPECT	5-YEAR GOAL	OBJECTIVE	OBJECTIVE COMPLETION DATE	OBJECTIVE LEAD	WORKING GROUP (WG) OR TEAM	TARGET(S)	TARGET COMPLETION DATE	TARGET LEAD
	2. Increase purchase of renewable energy to 7.5% by 2013.	a. Purchase at least 3% of all electricity consumption derived from renewable sources.	December 2008	Greg Leifer	---	None.	N/A	N/A
	3. Reduce source energy.	a. Commission a steam driven electrical generating turbine in the Mark O. Hatfield Clinical Research Center facility to convert steam pressure reduction energy to electricity that would otherwise be wasted.	December 2008	Greg Leifer	---	None.	N/A	N/A
General Waste	1. Increase Recycling of General Solid Waste – Recycle at least to 50% of solid waste	a. Conduct on-site solid waste assessment in 2008	October 2008	Don Wilson, Bill Ketner	---	None.	N/A	N/A
		b. Conduct outreach to increase recycling in labs and offices in 2008	December 2008	Bill Ketner, Janie Lee	---	None.	N/A	N/A
		c. Continue construction debris recycling in 2007.	December 2008	Bill Ketner	---	(1) Conduct outreach and education on construction debris recycling for project managers in 2008 (2) Develop contract language for project manager use (3) Define funding mechanism for funding construction debris recycling	March 2008 December 2008 March 2008	Bill Ketner Bill Ketner Bill Ketner
		d. Identify contractor for animal bedding composting	December 2008	Bill Ketner	---	None.	N/A	N/A
		e. Identify contractor for cafeteria food waste composting	December 2008	John Crawford	Sustainable Office Practices WG	None.	N/A	N/A
		f. Negotiate use of biodegradable utensils and paper/plastic dinnerware	December 2008	John Crawford	Sustainable Office Practices WG	None.	N/A	N/A
		g. Participate in major outreach events including Earth Day and America Recycles Day in 2008	November 2008	Bill Ketner	---	(1) Participate in Earth Day (2) Participate in America Recycles Day	April 2008 November 2008	Bill Ketner Bill Ketner
		h. Improve recycling compliance at Rockville sites	December 2008	Don Wilson	Rockville Environmental WG	(1) Develop process for collecting and addressing complaints (2) Communicate complaint reporting process to AOs	June 2008 October 2008	Don Wilson Pam Sellman
		i. Integrate green language into new leases for Rockville facilities	December 2008	Don Wilson	Rockville Environmental WG	None.	N/A	N/A
		j. Reduce waste at NIDCD.	December 2008	Catherine Langston	NIDCD Green Team	(1) Provide training to employees on how to use the scanner and the print to PDF function. (2) Based on initial baseline assessment, decrease paper consumption by XX%	December 2008 December 2008	Catherine Langston Catherine Langston
		k. Reuse materials at NIDCD.	December 2008	Catherine Langston	NIDCD Green Team	(1) Promote the use of water bottles and mugs rather than using Styrofoam cups.	December 2008	Catherine Langston
		l. Recycle materials at NIDCD.	December 2008	Catherine Langston	NIDCD Green Team	(1) Identify source of desk recycling bins so that each employee may have their own recycling container. (2) Increase paper recycling by XX% from initial baseline assessment.	December 2008 December 2008	Catherine Langston Catherine Langston

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	2. Increase Electronics Recycling at NIH Campus and Purchase of Green Computers by Participating in the Federal Electronics Challenge	a. Establish a directive where all computer purchases and life cycle management activities are within FEC compliance guidelines	December 2008	Don Wilson, Bill Ketner	Sustainable Office Practices WG	None.	N/A	N/A
		b. Provide procurement specialists with training regarding FEC and EPEAT standards.	December 2008	Don Wilson, Bill Ketner	Sustainable Office Practices WG	None.	N/A	N/A
		c. Implement EPEAT standard for purchase of NIH computers and monitors in NITAAC ECS III	December 2008	TBD	Sustainable Office Practices WG	(1) Identify and research all purchasers of all new computers and peripherals.	December 2008	Don Wilson, Bill Ketner
		d. Meet FEC End-of-Life Criteria for Electronic Assets, increase/improve NIH electronic waste recycling	December 2008	TBD	Sustainable Office Practices WG	(1) Track all computers and peripherals turned back into Property Management under excess. (2) Establish tracking and recording of the reutilization and recycling of all these items.	December 2008	Don Wilson, Bill Ketner
	3. Create Zero Waste Event Program at NIH	a. Promote Zero Waste Program through outreach activities and Special Events Notifications Process.	December 2008	Bill Ketner, Janie Lee	---	None.	N/A	N/A
	4. Implement NIH Green Purchasing	a. Identify a green purchasing source that could be promoted for use at NIH.	December 2008	Ray Dillon, Carl Henn	Sustainable Office Practices WG	None.	N/A	N/A
		b. Produce a Best Practices listing providing proven green products being used at NIH.	December 2008	Ray Dillon, Carl Henn	Sustainable Office Practices WG	None.	N/A	N/A
		c. Develop an outreach program to deploy the Green Purchasing Program throughout NIH.	December 2008	Ray Dillon, Carl Henn	Sustainable Office Practices WG	None.	N/A	N/A
		d. Explore the appropriate means for tracking green purchasing and the resulting benefits through development of a database program or modifying current systems.	December 2008	Ray Dillon, Carl Henn	Sustainable Office Practices WG	None.	N/A	N/A
		e. Increase sale of 13423 compliant products in NIH self-service stores and through NIH Stock Catalog	December 2008	Lonnie Winley/Aleta Allmond	Sustainable Office Practices WG	None.	N/A	N/A
f. Green NIH Commercial leases to require full recycling services and to be 13423 compliant		December 2008	Melissa Richardson/ Pat Rice	Rockville Environmental WG	(1) Identify green language to integrate into new leases for Montgomery County facilities			
g. Green NIH construction contracts and achieve maximum construction debris recycling		December 2008	Melissa Richardson	---	None.	N/A	N/A	
h. Green NIH cafeteria contracts to include maximum recycling, composting, 13423 compliance and biobased products use		December 2008	John Crawford	Sustainable Office Practices WG	None.	N/A	N/A	
	i. Green NIH custodial contracts to support maximum NIH recycling and use of environmentally preferable products	December 2008	Ed Bain, Henry Primas	Sustainable Office Practices WG	None.	N/A	N/A	

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ENVIRONMENTAL ASPECT	5-YEAR GOAL	OBJECTIVE	OBJECTIVE COMPLETION DATE	OBJECTIVE LEAD	WORKING GROUP (WG) OR TEAM	TARGET(S)	TARGET COMPLETION DATE	TARGET LEAD	
		j. Create and Launch NIH Green Purchasing Portal	December 2008	Don Wilson	Sustainable Office Practices WG	None.	N/A	N/A	
						None.	N/A	N/A	
Liquid Discharges to Surface and/or Groundwater (Stormwater) & Soil Erosion	1. Provide Awareness for Voluntary Stormwater Pollution Prevention Activities	a. Conduct Four (4) Strategic Community Outreach Activities in 2008.	December 2008	Brian Kim	---	(1) Participate in NIH Earth Day (2) Participate in Federal Environmental Symposium (3) Participate in America Recycles Day (4) Participate in Community Liaison Council meetings	April 2008 June 2008 November 2008 December 2008	TBD TBD TBD TBD	
		2. Improve Water Quality of Stormwater Discharges from NIH	a. Complete the stencils design	December 2008	Ryan Marshall	---	(1) Coordinate with Lynn Mueller and establish hotline number (set up response call procedure)	December 2008	Ryan Marshall
			b. Plan stencil location using the inventoried stormwater drains	December 2008	Ryan Marshall	---	(1) Prepare a map (GIS) showing the locations of the stormwater drains and appropriate stencils.	December 2008	Ryan Marshall
			c. Start reviewing and finalize the current NIH Spill and Pollution Prevention Plan to reflect the current NPDES permit and requirements	December 2008	Brian Kim		(1) Prepare a draft for the revised NIH SPPP.		
	3. Decrease Quantity of Stormwater Discharge	a. Improve NIH Storm Water System through capital improvements.	December 2008	Jim Carscadden	---	(1) Use removal of existing impervious areas throughout the campus to meet the projects stormwater management requirements. (2) Recommend and coordinate for Greening the existing structures to reduce stormwater run-off. – Provide comments to the National Library of Medicine 'green roof' project.	December 2008 December 2008	TBD TBD	
			December 2010	Jim Carscadden	---	None.	N/A	N/A	
	4. Continue monitoring and maintain compliance of legacy sites	b. Continue to provide financial assistance for Track V Landfill cleanup	December 2010	Jim Carscadden	---	None.	N/A	N/A	
		c. Obtaining formal closing of Sabana Seca	December 2010	Jim Carscadden	---	None.	N/A	N/A	
	Medical Pathological Waste	1. Reduce Medical Waste Shipped for Off-Site Incineration by 75% by 2010.	a. Plan for educational outreach to train users of new sorting, labeling, and packaging procedures required for use of the new on-site treatment system.	December 2009	Don Wilson	Sustainable Lab Practices WG	None.	N/A	N/A
Natural Resource and Raw Material Consumption - Water	1. Reduce water consumption intensity by 2% annually through FY2015	a. Audit 10% of facilities for water conservation and retrofit as appropriate.	December 2008	Greg Leifer	---	None.	N/A	N/A	
Radioactive Waste	1. Reduce off-site disposal of liquid scintillation vials	a. Investigate potential for procuring treatment system for treating liquid at NIH	December 2008	Wendy Rubin	Sustainable Lab Practices WG	None.	N/A	N/A	

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	2. Reduce the amount of dry active waste sent offsite for disposal	a. Increase use of decay-in-storage program by holding dry active waste containing very short lived radionuclides	December 2008	Wendy Rubin	Sustainable Lab Practices WG	None.	N/A	N/A
Wastewater (Liquid Discharges to Sanitary System)	1. Improve quality of Waste Water discharge from NIH Bethesda Campus	a. Complete water chemistry modeling.	December 2008	Mark Miller	---	None.	N/A	N/A
		b. Install and maintain neutralization/equalization systems as lab projects are implemented.	December 2008	Mark Miller	---	None.	N/A	N/A
Wellbeing of Building Occupants & Energy Consumption & Construction Debris & Liquid Discharges to surface and/or groundwater	1. Design an affirmative procurement program for acquisition of sustainable, high performance leased facilities.	a. Review procedures for acquisition of leased facilities and applicable procurement regulations to determine when and how sustainability and performance criteria can be used as factors for lease selection.			---			
		b. Review lease management program to determine how performance and sustainability provisions of established leases can be enforced.			---			
		c. Develop sustainability and performance selection criteria for use in acquisition of leases.			---			
	2. Implement an affirmative procurement program for acquisition of sustainable, high performance leased facilities.	None.			---			
	3. Measure the performance of the Program for Preferential Leasing of Sustainable and High Performance Facilities.	None.			---			
	4. Design program to ensure that facility alteration and deconstruction projects are performed in a manner that is protective of health, safety and the environment.	a. Publish documents on a website accessible to Project Officers.			---			
5. Implement a program to ensure that facility alteration and deconstruction projects are performed in a manner that is protective of health, safety and the environment.	a. Improve the room clearance process to ensure that labs integrate this process prior to renovation.			---				
6. Maximize recovery (salvage, reuse and recycling) of	a. Determine the baseline for the amount of recovery.			---				

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	construction and demolition (C&D) wastes, ensuring that an average of least 50 percent of wastes are recovered from all projects agency wide.	b. Increase recovery by at least 50%, compared to the baseline, of all C&D wastes generated by these projects.			---			
	7. Refine the NIH-wide design and construction of new facilities activity to improve the process quality and implement sustainable and high performance buildings practices.	a. Issue revised NIH Design Policy and Guidelines incorporating all HHS requirements and NIH program criteria.			---			
		b. Develop NIH criteria, life cycle assessment procedures and rating system for sustainability features in specialized facilities e.g., labs, high containment facilities and vivaria. (2010)			---			
		c. Develop NIH policy and procedure for assigning minimum requirements for new facilities e.g., LEEDs Silver, Gold or Platinum			---			
		d. Incorporate sustainability requirements into NIH Design Policy and Guidelines.			---			
		e. Incorporate sustainability requirements into Fit Out Guidelines.			---			
		f. Complete a process mapping of the project budgeting and approval process. Support and verify that sustainability is addressed and facilitated in the current or revised process.			---			
	8. Implement a NIH-wide Program for Design and Construction of Sustainable and High Performance Buildings.	a. Place new NIH Design Policy and Guidelines on ORF website and notify all stakeholders of availability.			---			
		b. Improve project officer awareness of new program requirements.			---			
		c. Designate at least one new facility for development under new sustainability requirements, the LEEDs certification goal for the facility initiate design process.			---			
		d. Complete a process mapping of the project development and approval process. Support and verify that sustainability is addressed and facilitated in the current or revised process.			---			
	9. Measure the Performance of the NIH-wide Program for Design and Construction of Sustainable and High Performance Buildings.	None.			---			

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MEETING MINUTES

**Implementation Team Meeting
NIH Environmental Management System (NEMS)
Tuesday, June 10, 2008**

ATTACHMENT 3

**ENVIRONMENTAL POLICY
NATIONAL INSTITUTES OF HEALTH**

As the steward of medical and behavioral research for the Nation, the National Institutes of Health (NIH) leads the way in the pursuit of knowledge about living systems and the application of that knowledge to extend healthy life and to reduce illness and disability. In support of this goal, the NIH is committed to the protection of the environment and to the responsible use of natural resources. As proactive stewards of the environment and public health, the NIH community embraces pollution prevention and sustainable development while continually seeking to reduce resource consumption.

Specifically, the NIH is committed to:

- Complying with all Federal, State, and local environmental laws and regulations, as well as Executive Orders.
- Preventing pollution by minimizing the generation of wastes where possible, reducing and recycling materials, and, where necessary, disposing of wastes in an environmentally responsible manner.
- Integrating environmental and health considerations into decision-making processes through the implementation of the NIH Environmental Management System (EMS).
- Continual improvement of the EMS to better our environmental performance by setting environmental goals, measuring progress, taking corrective action when necessary, and communicating the results to NIH management and staff.

All employees of NIH are responsible for being aware of the environmental and health impacts of their jobs and for continually striving to minimize these impacts as set forth in this policy. We will review this policy annually and update it as necessary.



Elias A. Zerhouni, M.D.
Director
National Institutes of Health

11/13/05
Date



MEETING MINUTES

**Implementation Team Meeting
NIH Environmental Management System (NEMS)
Tuesday, June 10, 2008**

ATTACHMENT 4



NIH ACTIVITIES LIST

ANIMAL CARE

Animal Husbandry
Animal Surgery
Bedding Storage, and Disposal
Cage Washing
Feeding
Food Storage

BIOMEDICAL ENGINEERING

Instrument Fabrication
Instrument Loaner and Maintenance Operation

BULK CHEMICAL STORAGE/ GAITHERSBURG WAREHOUSE

Receiving and Distribution of Chemicals
Onsite Storage

CLINICAL CENTER/HOSPITAL

Biological Materials Use, Storage and Transportation
Chemical Use, Storage and Transportation
Imaging (x-ray, CAT scans, etc.)
Morgue and Autopsy
Occupational Medicine Services
Patient Care
Patient Transportation
Radioactive Isotope Use, Storage, and Transportation
Surgery
Testing
Vaccine Programs

CONFERENCE SERVICES

FACILITY CONSTRUCTION/RENOVATION/DECOMMISSIONING

Campus Master Planning
Decommissioning
Demolition
Laboratory moves
New Building Construction
New Building Design
Pre-Project Planning
Renovation
Site Work (digging, grading, paving, etc.)
Toxic Material Removal (asbestos, lead-based paint, etc.)
Use of Port-a-potties and trailers
Utilities Work

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FACILITY OPERATIONS

Building Maintenance
HVAC for NIH Campus
HVAC for residences
Operation of Buildings
Operation of Co-generation Unit
Operation of Utility Plant
Substations
Use of Boilers
Use of Chillers
Use of Cooling Towers
Use of Emergency Generators (portable/stationary)

FIRE ACTIVITIES

Detonation Chamber Use
Emergency Response Activities
Evacuation
Explosion
Fire Fighting
Fire Training
Haz Mat Response and Clean-Up
Maintenance of fire equipment and systems
Vehicles (washing, etc.)

FOOD SERVICE AND SALES

Cleaning
Cooking
Dish Washing
Grease Storage and Traps
Heating
Receiving to Loading Docks
Refrigeration
Styrofoam Use

FUEL STORAGE AND TRANSFER

Bulk Fuel Storage (USTs, ASTs, and temp tanks)
Bulk Fuel Transfer During Fill/Dispensing Operations
Re-Fueling of Vehicles

JANITORIAL SERVICES

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LABORATORIES

Bio-containment (Levels 2, 3 & 4)
Biological Materials Use, Storage and Transportation
Chemical Use, Storage and Transportation
Computer Use
Decontamination and sterilization
DI System (Deionized Water)
Equipment Cooling
Fume Hood Use
Heavy Metals Use (dental lab)
Human Tissue Pathology/Histology
Imaging (x-ray, CAT scans, etc.)
Lab Equipment Purchase and Use
Maintenance of equipment
Photodevelopment
Radioactive Isotope Use, Storage, and Transportation
Refrigeration
Tissue Culture
Use of electromagnetic radiation equipment
Vacuum pumps
Waste Handling

LANDSCAPING AND GROUNDS MAINTENANCE

Forest Conservation
Ice and Snow Control
Irrigation
Landscape Construction and Plantings
Parking Lot Maintenance
Pest Management
Storm Water Management (structures)
Stream Bank Stabilization
Tree and Stump and Removal
Turf Maintenance

MAIL SERVICES/SHIPPING

Animal Shipping and Receiving
Biological Screening
Magnatometer/X-ray
Package Shipping and Receiving
Use of Vehicles

MOTORPOOL/USE OF VEHICLES

Commercial Vehicle Inspection
Parking of Vehicles
Transportation within NIH
Transportation to NIH
Use of Construction Vehicles and Equipment

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NIH Environmental Management System (NEMS)

Document Number: TBD

Date Revised: 12/13/06

Revision Number: 1

Sunset Date: 12/13/07

OFFICES

Use of Bathrooms

Use of Office Equipment (computers, copiers, fax machines, printers)

PERSONAL PROPERTY MANAGEMENT

Moving Furniture and Equipment

Receiving and Surplusing of Furniture and Equipment

Store and Process Furniture and Equipment

PHARMACY

Drug Dispensing Operations

PROCUREMENT

Procurement of Chemicals

Procurement of Computers

Procurement of Equipment

Procurement of Office Supplies

RENTAL BUILDINGS

Real Estate Acquisition and Leasing

SECURITY

Dog Care

Vehicle Inspection

Weapons Cleaning

SHOP ACTIVITIES

Electrical Work

Fabrication

Metal Working

Painting

Plumbing

Refrigeration

Solvent Use

Woodworking

WASTE MANAGEMENT

Management of Hazardous Waste (chemical)

Management of Medical Pathological Waste (MPW)

Management of Multihazardous Waste

Management of Nonhazardous Waste (general)

Management of Radiological Waste

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MEETING MINUTES

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ATTACHMENT 5



Environmental and Health Aspects

1. **Air Emissions** (ODS, VOCs (fugitive emissions from vehicle fueling operations and painting activities), criteria pollutants (facility emergency generators), dust, vehicle exhaust, odor, drug residue)
2. **General Waste** (scrap, pallets, cardboard, paper, plastic)
3. **Chemical Waste** (spent solvents, used oil, hazardous batteries (lead-acid, lithium, NiCd), empty chemical containers, fluorescent bulbs, and unused lab chemicals, pesticides)
4. **Construction Debris** (used building materials including drywall, concrete)
5. **Radioactive Waste** (radioactive solutions, contaminated animal carcasses)
6. **Multihazardous Waste** (vacuum pump oil contaminated with radioactive material, chemical wastes containing blood products)
7. **Medical Pathological Waste** (sharps, biohazard contaminated materials, autoclave wastes, animal carcasses)
8. **Chemical spills/leaks to water or ground** (fuel, hydraulic leaks, POL, storage tanks, etc.)
9. **Toxics releases** (PCBs, asbestos, lead based paint, mercury)
10. **Wastewater** (discharges to the sanitary sewer including: contributions from operations such as the labs, gray water, and sewage)
11. **Liquid discharges to surface and/or groundwaters** (NPDES and stormwater-including surcharges)
12. **Energy consumption** (electricity)
13. **Natural resource and raw material consumption-Water**
14. **Natural resource and raw material consumption -Paper**
15. **Natural resource and raw material consumption-Fossil Fuels**
16. **Ecological disturbance** (hydrological alteration, vegetation alteration, habitats, wetlands, threatened and endangered species)
17. **Cultural resource disturbance** (historic properties)
18. **Generation of noise, heat or nuisances** (vibration, visual impairment)
19. **Soil erosion** (construction activities)
20. **Wellbeing of Building Occupants** (indoor air emissions, light, toxic substance exposure, noise, drinking water, mold/dander, thermal, rad)