



## MEETING MINUTES

**Sustainable Lab Practices Working Group  
NIH Environmental Management System (NEMS)  
Wednesday, March 21, 2007  
1:30 – 2:30 pm**

### Meeting Objective(s):

- Provide comments on the Waste Disposal Guide
- Provide comments on the waste container poster
- Identify roles and responsibilities for continued development of the lab standard operating procedures (SOPs)

### Attendees:

Swati Damle (ORF)	David Mohammadi (ORF)
Claudia Gerwin (NINDS)	Mariena Mattson (NIDDK)
Robin Hirschhorn (Booz Allen)	Kristen Peters (Booz Allen)
Sarah Kirk (NHGRI)	Wendy Rubin (ORS)
Charlyn Lee (ORF)	Manimekala Saravanan (NCI)
Carol Logun (CC)	Dawn Walker (NCI)
Luanne Lukes (NCI)	Don Wilson (ORF)

### Minutes:

#### NEMS Update

Ms. Robin Hirschhorn provided an update on the NEMS. The following issues were discussed.

#### *NEMS*

Since a number of new members were present, Ms. Hirschhorn provided a brief overview of the NEMS. The NEMS is NIH's approach to becoming a more sustainable organization. Several working groups have been organized to review the way the NIH conducts business and how these daily operations can be improved. The working groups are continuing to work toward approved objectives, which include developing SOPs and establishing green procurement program.

#### *NIH Earth Day Celebration*

The NIH Earth Day celebration is scheduled for April 26. During this event, the Division of Environmental Protection (DEP) will be collecting mercury thermometers (broken or intact). Working group members were encouraged to take and post copies

---

the Mercury thermometer collection poster (Attachment 1) and the Earth Day informative flyers (Attachments 2 and 3).

### **Status Review of Objectives**

The status of lab-related NEMS objectives were reviewed (Attachment 4).

Charlyn Lee informed the workgroup that no progress has been made on the goals and objectives related to chemical waste. DEP is waiting on CIT to identify the requirements for the Vertere chemical inventory system. Activity against these goals and objectives will be on hold until these requirements are received.

Don Wilson provided an update on the objectives related to reducing medical pathological waste. DEP is studying different technologies for on-site treatment, and two were identified: tissue digester and heat treatment process. The company that provides these technologies declared bankruptcy and subsequently was bought out by another company. DEP is hoping to reinstate negotiations with the new company once production is back on-line.

Wendy Rubin provided an update on the objectives related to reducing off-site disposal of liquid scintillation vials. The pilot of separating and disposing of non-radioactive vials as chemical waste continues. The solid waste is treated as radioactive waste while the liquid is treated on-site and then shipped out as chemical waste. This practice will expand to other buildings if deemed a success. A procedure will be distributed to the labs by Bob Zoon. Wendy Rubin took responsibility to assist Mr. Zoon with distributing the new separation procedure.

### **Waste Disposal Guide Revision**

The workgroup reviewed the Waste Disposal Guide (available online at <http://orf.od.nih.gov/Environmental+Protection/Waste+Disposal/>). Working group members provided the following comments:

- Cover: Change the red flammable solvents can to a white can.
- Cover: Add full phone numbers instead of the five digit extension.
- The guide includes a lot of text. Should try to simplify the text and include more graphics.
- Include more information about pollution prevention, waste minimization efforts, and recycling.
- The Waste Disposal Guide is a comprehensive reference that is hard to use when in “crisis mode.” A quick reference (e.g., the waste container poster) should be developed to supplement in the information in the Waste Disposal Guide.

The working group members were asked to continue to review the guide and provide additional comments to Charlyn Lee ([leecha@ors.od.nih.gov](mailto:leecha@ors.od.nih.gov)).

---

## Waste Container Poster Review

A “poster” of the different lab waste streams and their appropriate disposal containers was drafted to serve as a quick reference. The workgroup reviewed the first draft of the waste container poster (Attachment 5). Working group members provided the following comments:

- Title is too passive. Change to “Where Do I Place My Waste?”
- Add “Only Water Down the Drain” to image slashed-out drain image near title. Also make this image larger.
- Add large solvent bottle as a waste example under chemical waste.
- Remove waste example image under radioactive waste and replace with source vials.
- Remove left waste example under medical pathological waste (MPW) and replace with images of one or more of the following: tissue culture, animal carcass, bacterial waste, agar plates, flask, or blood.
- Add image of scalpels or razors as waste examples under MPW.
- Replace both container images under chemical waste and the stepcan under radioactive waste with images that show these containers with secondary containment.
- Replace images of MPW containers since they include radioactive tape label. These images should go under Multihazardous Waste.
- Add “mixed waste” to title of “Multihazardous Waste.”
- Add contact information.

Kristen Peters will update the waste container poster based on the comments received and will send out to the workgroup for additional review and comment once complete. The working group members were asked if the current waste categories met the needs of most labs or if multiple versions of the poster were necessary to meet the needs of different labs. The members agreed that only one poster was necessary and that the current version would be beneficial to most labs. Additional quick references will be identified as needed.

The drain image stimulated discussion on what substances, if any, besides water are allowed down the drain. The Waste Disposal Guide states that some substances may go down the wastewater drain; however, working group members stated the policy is that nothing but water is allowed down the drain. From the discussion, the group determined that there is no clear consensus or consistency on what can be disposed of down the wastewater drain. Ms. Hirschhorn will follow-up with Mark Miller and Ed Pfister on the wastewater requirements and determine if a SOP or policy is needed to address this issue.

The workgroup decided that a similar poster for the recycling containers was needed. Ms. Peters took responsibility in producing a draft poster that will be presented to the

group in an upcoming meeting. Mr. Wilson informed the group that DEP is planning building-specific outreach for the recycling program. The working group members were asked to send any ideas for building-specific recycling outreach to Don Wilson ([wilsondo@ors.od.nih.gov](mailto:wilsondo@ors.od.nih.gov)) or Gareth Buckland ([bucklandg@mail.nih.gov](mailto:bucklandg@mail.nih.gov)).

### Lab Managers Workgroup SOPs Status Update

The working group reviewed the SOP status matrix that was created by Sandra Thomas (Attachment 6) to determine which SOPs needed to be addressed by the group. The matrix identifies the SOPs that were needed and indicated the status of SOPs underdevelopment or complete. The working group determined a number of additional SOPs were needed, including:

- Electronics procurement
- Separation of liquid scintillation vials
- Lab moves
- How to use NBS
- Waste streams and disposal procedures
- Lab safety training

Due to time limitations, roles and responsibilities could not be determined during the meeting; Tim Killian will work with Dawn Walker to identify potential staff for priority SOPs. The proposed roles and responsibilities will be reviewed and discussed during the next meeting.

### Action Items:

Action Item	Responsible Person(s)	Due Date
1. Work with Bob Zoon to draft and distribute scintillation vial separation procedure	Wendy Rubin	Tuesday, April 17
2. Review Waste Disposal Guide ( <a href="http://orf.od.nih.gov/Environmental+Protection/Waste+Disposal/">http://orf.od.nih.gov/Environmental+Protection/Waste+Disposal/</a> ) and send comments to Charlyn Lee ( <a href="mailto:leecha@ors.od.nih.gov">leecha@ors.od.nih.gov</a> )	Workgroup	Friday, April 11
3. Incorporate comments on the waste container poster and send second draft out for review and comments	Kristen Peters	Friday, April 6
4. Follow-up with Mark Miller and Ed Pfister regarding wastewater requirements and determine if policy or SOP is need regarding substances disposed of down the wastewater drain	Robin Hirschhorn,	Friday, April 11
5. Draft recycling container poster	Kristen Peters	Tuesday, April 17

Action Item	Responsible Person(s)	Due Date
6. Send ideas for building-specific recycling outreach events to Don Wilson ( <a href="mailto:wilsondo@ors.od.nih.gov">wilsondo@ors.od.nih.gov</a> ) or Gareth Buckland ( <a href="mailto:bucklandg@mail.nih.gov">bucklandg@mail.nih.gov</a> )	Workgroup	Friday, April 11
7. Propose roles and responsibilities for SOPs	Dawn Walker, Tim Killian	Tuesday, April 17

### Next Meeting:

The next meeting is scheduled for Wednesday, April 18 from 1:30 to 2:30 PM and will be focused on establishing roles and responsibilities for developing SOPs and reviewing draft of recycling container poster. A meeting request will be distributed via email once room location has been confirmed.

# 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 26, 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**



PRINTED ON RECYCLED CONTENT PAPER - PLEASE RECYCLE



To Protect the Future,  
Take Action Into Your Hands

# Earth Day 2007

**Date: April 26, 2007**

**10am – 2pm**

**1:30: Dr. Zerhouni Awards “Name IT”  
and Children’s Contest Winners**

**Building 1 Lawn**



**Food, Giveaways  
& Entertainment**

**Children’s Interactive  
Activities**

**Nature Walks and Composting Demo**

**Check Out Alternative-Fueled Vehicles**

**Come Meet Montgomery County’s Rocco the Recycling Dog**

**Donate Clothes, Bikes, Cell Phones, and Eye Glasses**

**Learn About NIH’s Green Roof, Forest, and Stream Restoration Project**

[www.nems.nih.gov](http://www.nems.nih.gov)



For more information about the NEMS, contact:  
Terry Leland, NEMS Coordinator, 301.496.7775, [lelandt@mail.nih.gov](mailto:lelandt@mail.nih.gov)



Printed on Recycled Content Paper





To Protect the Future,  
Take Action Into Your Hands

# Earth Day 2007

**Date: April 26, 2007**

**10am – 2pm**

**1:30: Dr. Zerhouni to Award "Name IT"  
and Children's Contest Winners**

**Building 1 Lawn**

**Food, Giveaways  
& Entertainment**

**Children's Interactive  
Activities**

**Nature Walks and Composting Demo**

**Check Out Alternative-Fueled Vehicles**

**Come Meet Montgomery County's Rocco the Recycling Dog**

**Donate Clothes, Bikes, Cell Phones, and Eye Glasses**

**Learn About NIH's Green Roof, Forest, and Stream Restoration Project**

**[www.nems.nih.gov](http://www.nems.nih.gov)**

**For more information about the NEMS, contact:  
Terry Leland, NEMS Coordinator, 301.496.7775, [lelandt@mail.nih.gov](mailto:lelandt@mail.nih.gov)**



Printed on Recycled Content Paper

## Selected NEMS Objectives: Lab Activities

As of March 21, 2007

ENVIRONMENTAL ASPECT	5-YEAR GOAL	OBJECTIVE	LEAD	STATUS
<b>Chemical Waste</b>	1. Develop/Improve/ Update Program Management Tools.	a. Identify a chemical inventory system for a pilot study.	Charlyn Lee	DEP met with the IT group to discuss supporting the Vertére Inventory Manager system. The IT group is still evaluating Vertére and helping to identify other systems. Once the inventory system is acquired, a pilot will occur.
	2. Reduce Disposal of Unused Chemicals by 30% by 2009.	a. Generate baseline and develop strategy for reducing unused chemicals.	Charlyn Lee / David Mohammadi	David Mohammadi is working with a contractor to generate a baseline report on unused chemicals. The report should be complete in a few weeks.
	3. Reduce Disposal Rates of NIH Target Chemicals.	a. Generate baseline and develop strategy to reduce disposal rates of target chemicals.	Charlyn Lee	Awaiting baseline report.
		b. Conduct feasibility study to identify opportunities to reduce lab equipment with mercury components.	Charlyn Lee	Awaiting baseline report.
<b>Medical Pathological Waste</b>	1. Reduce Medical Waste Shipped for Off-Site Incineration by 75% by 2009.	a. Gain approval and funding for purchase of on-site treatment equipment.	Don Wilson	DEP is studying different technologies for on-site treatment, and two were identified: tissue digester and heat treatment process. However, the company that provides these technologies has declared bankruptcy, forcing DEP to identify additional sources for these technologies.
		b. Initiate acquisition process for equipment.	Don Wilson	Awaiting purchase of equipment.
		c. Plan for educational outreach to train users of new sorting, labeling, and packaging procedures required for use of the new system.	Don Wilson	Awaiting purchase of equipment.

## Selected NEMS Objectives: Lab Activities

As of March 21, 2007

ENVIRONMENTAL ASPECT	5-YEAR GOAL	OBJECTIVE	LEAD	STATUS
Radioactive Waste	1. Reduce off-site disposal of liquid scintillation vials	a. Install system to treat vials when required building renovation is complete.	Wendy Rubin	The required building renovations are scheduled. Once the renovation is complete, the treatment system can be installed.
		b. Investigate potential for procuring treatment system for treating liquid at NIH.	Wendy Rubin	Building 21 is participating in a pilot to determine the success of separating and disposing of non-radioactive vials as chemical waste.
NEMS Improvements	1. NEMS Deployment and Maintenance	a. Document Laboratory Procedures with SOPs	Dawn Walker	In progress.
		b. Revise and implemented Lab Safety Refresher Training	TBD	Comments and suggested improvements were collected during 2/21 meeting.
		c. Revise Waste Disposal Guide	Charlyn Lee and Don Wilson	In progress.

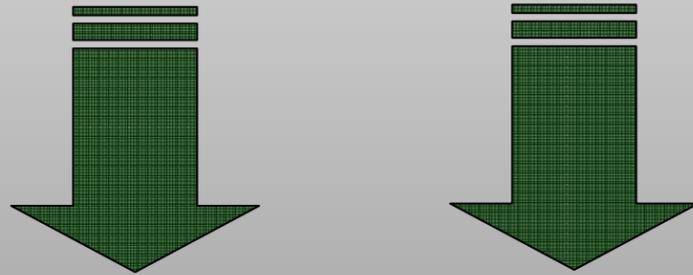


# WHERE DOES MY WASTE GO?



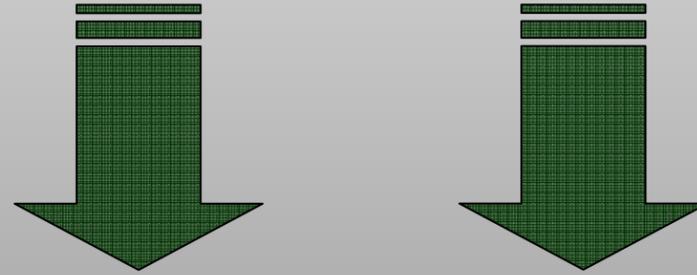
## CHEMICAL WASTE

All waste or unused chemicals



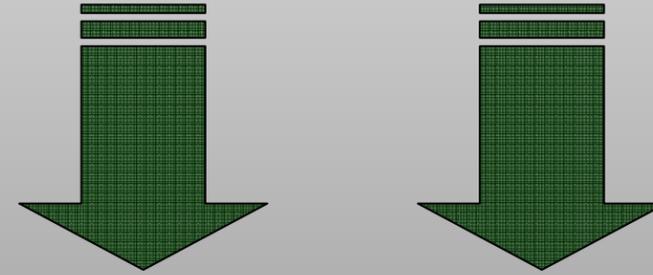
## RADIOACTIVE WASTE

Any waste that contains or is contaminated with radioactive material



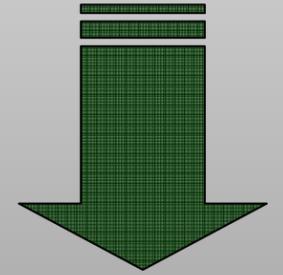
## MEDICAL PATHOLOGICAL WASTE (MPW)

Waste which may contain pathogenic agents that cannot be decontaminated and then disposed of as general waste



## MULTIHAZARDOUS WASTE

Waste of more than one of the previous categories



BE SURE TO LOOK FOR THESE SYMBOLS!

**Standard Operating Procedures (SOP)**  
**Suggested Topics for Manual**  
 Status Report  
 3/21/2007

SOP Library #	Topic	Status <sup>1</sup>	Assigned Staff
------------------	-------	---------------------	----------------

**Human Resources**

6	Employee Assistance Program (Worklife)	<b>Completed/Reviewed</b>	
25	Equal Employment Opportunity Program	<b>Draft</b>	
	Conflict Resolution		
	Human Resources (NIH)		
	Personnel Policies and Records		
	Work and Family Center (NIH)		
	I.D. Cards (NEDS)		
	Keys & Locks		
17	Parking Permits	<b>Completed/Reviewed</b>	
	New Employee Orientation Checklist		
	Ombudsman		

**Procurement**

	Central Storeroom, NIH Supply Catalog, DELPRO, Self-Service Stores		
24	Purchasing a Biosafety Cabinet (BSC)	<b>Draft</b>	
	Purchasing		
2	Outside Sources	<b>Completed</b>	<b>C. Henn and R. Dillon reviewing</b>
33	IntraMall	<b>Draft</b>	
20	Purchasing Carpet, New	<b>Draft</b>	
15	Scientific Equipment Rental and Sales	<b>Completed/Reviewed</b>	

**Computer Hardware, Software and Maintenance**

	Computer Services (Center for Information Technology (CIT) contact information)—help desk, phone, email		
28	Help Desk Information Lines		

<b>SOP Library #</b>	<b>Topic</b>	<b>Status<sup>1</sup></b>	<b>Assigned Staff</b>
	Property-addition, loan, transfer, loss/damage = surplus, passes, inventory, storage (of equipment in warehouses)		

**Emergencies**

10, 35-36	Emergency Management Plan	<b>Draft</b>	
18	Emergency Employees	<b>Completed/Reviewed</b>	
	Evacuation Procedures		
	Fire Department-Emergency (emergency preparedness)		
	Fire Monitor		
	Emergency phone numbers, non-emergency phone numbers, emergency listings, & emergency backup telephone system		
	Make-up Fire & Emergency Evacuation Drill Evaluation		
	Emergency Shower Stations		
	NIH Emergency Management/Continuity of Operation		
14	NIH Police Services	<b>Completed/Reviewed</b>	
34	Non-Emergency Police Services	<b>Draft</b>	

**LABORATORY: Safety**

	Safety Committee Members		
	Police—contact phone number, who to call to open doors if locked out		
	Red Alert Staff		
	GAS-CO2, N2, etc.		
5	Centrifuges	<b>Completed/Reviewed</b>	
21	Chemical Hygiene Plan	<b>Draft</b>	
	CHEMICAL STORAGE: Flammable; acids/bases; organics/ where & how high you can put things; shelves, access ways, hallways		
	Chemical waste information		
	Containers available		
	Electrical & Equipment Safety		

SOP Library #	Topic	Status <sup>1</sup>	Assigned Staff
	Environmental		
7	Ergonomics	<b>Completed/Reviewed</b>	
11	Compressed Gas Cylinders		
	Introduction		
	Laboratory facilities & physical safety		
	Latex Program		
9	Occupational Medical Services	<b>Draft</b>	
	Occupational Safety & Health Administration		
	Other Equipment		
	Pest		
	Polarity and Ground Checks		
	Safety Equipment & Personal Protection Equipment		
	Standard Practices		
	Waste Disposal		
	Formaldehyde Fact sheet & Training Aid		
	Eyewash test worksheet		
	Memo: Proper Management of Chemical Waste in Laboratories		

**LABORATORY: Specimen Collection, Handling and Transportation**

	Specimen Collection		
	Specimen Handling		
	Radioactive Specimens		
	Specimen Transportation		
	Specimens received from outside NIH		
	Resolution of Problems with Specimen Procurement, Transportation, and Handling		
	Packaging and Shipping Laboratory Specimens to Outside Locations		
	Marking and Labeling		
	Federal Express Small Package Delivery (including non-infectious diagnostic		
	Federal Express Domestic Non-infectious Diagnostic Material that is not shipped with carbon dioxide, solid (dry ice) or liquid nitrogen		
	Domestic U.S. Postal Service		
	Radioactive Specimens		

SOP Library #	Topic	Status <sup>1</sup>	Assigned Staff
	Freight Forwarding Section		
	Training Requirements for Parking and Shipping		
	References		
	Shipping Diagnostic Specimens Training Evaluation		

**Animal Care/Animal Use In Research**

	Animals-Services (transport in and out), protocols, ordering, training, etc.		
23	Laboratory Animal Allergy Prevention Policy (LAAPP)	<b>Draft</b>	
	Laboratory Animal Allergy Prevention Policy (LAAPP) for Work with Small Animals in the Laboratory Setting	<b>Draft</b>	

**Equipment**

	Equipment rental, repair, etc.		
	Glassware Washing		
	Ice (dry, etc.)—ordering, etc.		
	Moving (equipment)—necessary clearances		

**Laboratory Maintenance**

	Maintenance and Function Checks		
	Building & Engineering Services—contact phone numbers for maintenance problems, work requests, maintenance		

**Protective Gear**

	Management, protective clothing, radiation safety (including monitoring, dosimetry), waste handling & disposal, Certification of safety equipment, certification of labs		
--	--	--	--

SOP Library #	Topic	Status <sup>1</sup>	Assigned Staff
---------------	-------	---------------------	----------------

**Laboratory (General)**

	Laboratory Information System		
	Housekeeping-contracted company, contact project		
	Reference Laboratories		
8	Forms	<b>Completed/Reviewed</b>	

**EDUCATION - Continuing Education**

22	<b>Continuing Education</b>	<b>Draft</b>	
16	Foundation for Advanced Education in the Sciences (FAES)	<b>Completed/Reviewed</b>	
12	Workshop and Lectures	<b>Completed/Reviewed</b>	
19	Buying Books	<b>Draft</b>	
1	NIH Library Electronic Resource Classes	<b>Completed</b>	
3	Health and Human Services (HHS) University	<b>Completed</b>	
	<b>Training</b>		
28	Ethics	<b>Draft</b>	
	Computer Security		
	Animals		
	General lab		
	Purchase Card (credit card training)		
	Shipping		
	Controlled substances		
4	Center for Information Technology (CIT) Training		

**Miscellaneous Topics**

	Art Services - poster, slides, etc.		
	Division of International Services (DIS) (Fogarty)		
	Ethics - consultation, etc.		
13	Government Forms (reference NIH Web site)	<b>Completed/Reviewed</b>	
	Medical Art Services-posters, slides, etc.		
	References		

<b>SOP Library #</b>	<b>Topic</b>	<b>Status<sup>1</sup></b>	<b>Assigned Staff</b>
	NIH Phone Book		
	Delpro Instructions (on-line)		
	Existing manuals		
	Shipping material-how to, regulations, etc.		
	Telephone service		
	Transport		
	Travel		
	Recycling Program		
32	Records Management	<b>Draft</b>	
	Technology Transfer –		
29	Licenses	<b>Draft</b>	
30	Patents	<b>Draft</b>	
31	Technology Transfer Agreements	<b>Draft</b>	

— 1 The Status of each SOP is either 1) Completed/Reviewed, 2) Completed, or 3) Draft.