



MEETING MINUTES

**Sustainable Lab Practices Working Group
NIH Environmental Management System (NEMS)
Wednesday, June 20, 2007
1:30 – 2:30 pm**

Meeting Objective(s):

- Provide status of chemical inventory system and pilot lab selection
- Provide status of unused chemical baseline report
- Provide status regarding the purchase of a tissue digester and liquid scintillation vial crusher
- Provide status update on the Lab Safety Refresher Training revision
- Discuss Top 10 Target Chemicals and Green Chemical Purchasing Fact Sheet
- Present most recent version of the “Where Do I Place My Waste?” Poster

Attendees:

Dr. Daniel Appella (NIDDK)
Chuck Carroll (ORF)
Tim Killian (Booz Allen)
Charlyn Lee (ORF)
Mariena Mattson (NIDDK)
Melissa Porter (NIAMS)

John Prom (ORF)
Andree Reuss (NINDS)
Ronda Sapp (NIDDK)
Roger Weidner (ORF)
Dawn Walker (NCI)
Don Wilson (ORF)

Minutes:

NEMS Update

Dawn Walker provided an update on the NEMS. The NEMS Implementation Team Meeting was held on Thursday, May 24. The Implementation Team is comprised of managers from the various NEMS Working Groups and DEP staff. Dawn mentioned her briefing on the status of the Sustainable Lab Practices Working Group that she gave at the Implementation Team Meeting. The NEMS Communication Advisory Group Meeting was held on Tuesday, June 12. The Communications Advisory Group discusses strategies to facilitate communications and outreach of the NEMS program across NIH. One of the issues discussed was the need for management support and participation.

Status Review of Objectives

The status of lab-related NEMS objectives were reviewed (Attachment 1).

Charlyn Lee, Roger Weidner, and John Prom provided an update on the goals and objectives related to chemical waste.

The proposed chemical inventory system is currently under review by CIT and awaiting approval. A demonstration will be provided next week of a chemical inventory system currently used by the military. Roger Weidner summarized the capabilities of this system and how bar codes would be placed on product container and scanned into the system. It is undecided who will conduct the inventory of the pilot study, but a statement of work is being drafted to for a contractor to perform the work. Ms. Lee is looking for 10 volunteer labs to participate in the study.

The baseline report on unused chemicals remains a work in progress. The report delivered to DEP by the contractor contained bugs, such as reading certain items twice). The data needs to be cleaned up and corrected to account for those bugs before a the report can be issued. Ms. Lee will brief the working group on the results of the baseline report during the next meeting.

Don Wilson provided an update on the objectives related to reducing medical pathological waste (MPW) and Radioactive Waste. DEP is trying to procure a tissue digester for on-site treatment of MPW. They are now looking at purchasing a tissue digester manufactured by PRI to install into Building #25. Drawings are being prepared to show that the unit will fit into Building #25. The tissue digester should be ordered and installed later in the year. Since the tissue digester will only be used for tissue and animal carcasses, outreach and training will be needed to ensure proper separation and management of those wastes from other MPW.

The liquid scintillation vial crusher remains in the design phase. Building renovation needs to take place to create space for the unit, and ventilation requirements need to be addressed. The unit will accept both glass and plastic vials, therefore segregation will not be needed.

Charlyn Lee and Chuck Carroll provided an update on the Lab Safety Refresher Training. The review and update has recently started and the comment received from the Working Group are still being incorporated. Once the update is complete the training will be presented to the Working Group.

Top 10 Targeted Chemicals and Green Chemical Purchasing Fact Sheet

Charlyn Lee and John Prom provided the working group with the NIH Top 12 Target Chemicals list based on NIH hazardous waste generation at NIH from June 2006 to May 2007 (Attachment 2). The Top 12 list was discussed in detail and questions were asked regarding where and how some of the chemicals on the list were used. Mr. Wilson added that a look at the top 50 would help identify chemicals to focus on for a top 10 list of chemicals to reduce the purchase and use of by labs. The top 10 list would consist of the targeted chemicals used most frequently by NIH labs in the greatest quantities. Ms. Lee added that the baseline report on unused chemicals

would support the identification of these 10 chemicals. Once the 10 chemicals are identified, the list should be distributed to the Lab Managers Interest Groups.

In addition, Tim Killian provided an updated working draft of the green chemical procurement fact sheet (Attachment 3). This fact sheet is intended to help lab staff identify environmentally friendly lab products and chemicals. Mr. Killian suggested that the working group continue to review the fact sheet and identify additional chemicals to add or alternative products to suggest.

Additional comments on the fact sheet and the targeted chemical list should be sent to Tim Killian (killian_timothy@bah.com).

Do Not Dump Chemicals Down the Sink

During the discussion of the Top 10 Targeted Chemicals List the issue regarding disposal of chemicals down the sink was initiated. One suggestion was presented in lieu of a 100% ban on sink disposal this suggestion was for the creation of a list to be posted above all laboratory sinks. This "Do Not Dump Down the Sink!" list would include all laboratory chemicals that should not go down the drain. Some members of the Working Group remained in favor of avoiding walking to the sink with chemicals altogether. There were no action items for the development of this list.

"Where Do I Place My Waste?" Poster

The most recent version of the "Where Do I Place My Waste?" Poster was presented to the group. Mr. Killian requested that Ms. Lee provide an alternate image of a source vial, since the current one was grainy.

Additional comments on the poster should be sent to Charyl Lee (leecha@ors.od.nih.gov) and/or Tim Killian (killian_timothy@bah.com).

Lab Managers Workgroup SOPs Update

The first four Laboratory SOPs are finalized and have been delivered to Dawn Walker. Mr. Killian provided the Working Group with copies of these SOPs Those SOPs are:

- Forms (Attachment 4);
- Parking Permits (Attachment 5);
- Ergonomics (Attachment 6); and
- Centrifuge Rotors (Attachment 7).

In addition, Mr. Killian provided an update on the Carpet Purchasing SOP, briefly detailing the information that was received from Mary Lee.

Action Items:

Action Item	Responsible Person(s)	Due Date
1. Review list of targeted chemicals and Green Chemical Fact Sheet to identify a top 10 list of chemicals. Send comments to Tim Killian (killian_timothy@bah.com).	Workgroup	Friday, July 13
2. Provide comment on "Where Do I Place My Waste?" Poster	Workgroup	Friday, July 13
3. Provide electronic copy of NIH Top 12 Target Chemicals List	Charlyn Lee	Friday, June 29
4. Provide debrief on unused chemical baseline report	Charlyn Lee	Wednesday, July 18
5. Schedule meeting with Polly McCarty to discuss Lab Moving SOP	Tim Killan	Friday, July 13
6. Provide new images of source vials for "Where Do I Place My Waste?" Poster	Charlyn Lee	Friday, June 29

Next Meeting:

The next meeting is scheduled for Wednesday, July 18 from 1:30 to 2:30 PM in Building 50 , Room 1328/1334. **PLEASE NOTE THE CHANGE IN LOCATION.** The working group will continue to identify the top 10 targeted chemicals and related outreach options and discuss the status of lab SOPs.

Selected NEMS Objectives: Lab Activities

As of June 20, 2007

ENVIRONMENTAL ASPECT	5-YEAR GOAL	OBJECTIVE	LEAD	STATUS
Chemical Waste	1. Develop/Improve/ Update Program Management Tools.	a. Identify a chemical inventory system for a pilot study.	Charlyn Lee	The proposed chemical inventory system is currently under review by CIT and awaiting approval. CIT is still considering the Vertere Inventory Manager or a new Oracle based system. This should be finalized in the next week. The pilot study should start in July 2007, and Ms. Lee is looking for 10 volunteer labs to participate in the study.
	2. Reduce Disposal of Unused Chemicals by 30% by 2009.	a. Generate baseline and develop strategy for reducing unused chemicals.	Charlyn Lee / David Mohammadi	The report should be complete in prior to the June 20 meeting.
	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.
Medical Pathological Waste	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 trying to procure a tissue digester for on-site treatment of MPW..
		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.
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	Construction contractors have been shown the area where the machine will be installed. Construction will begin soon.

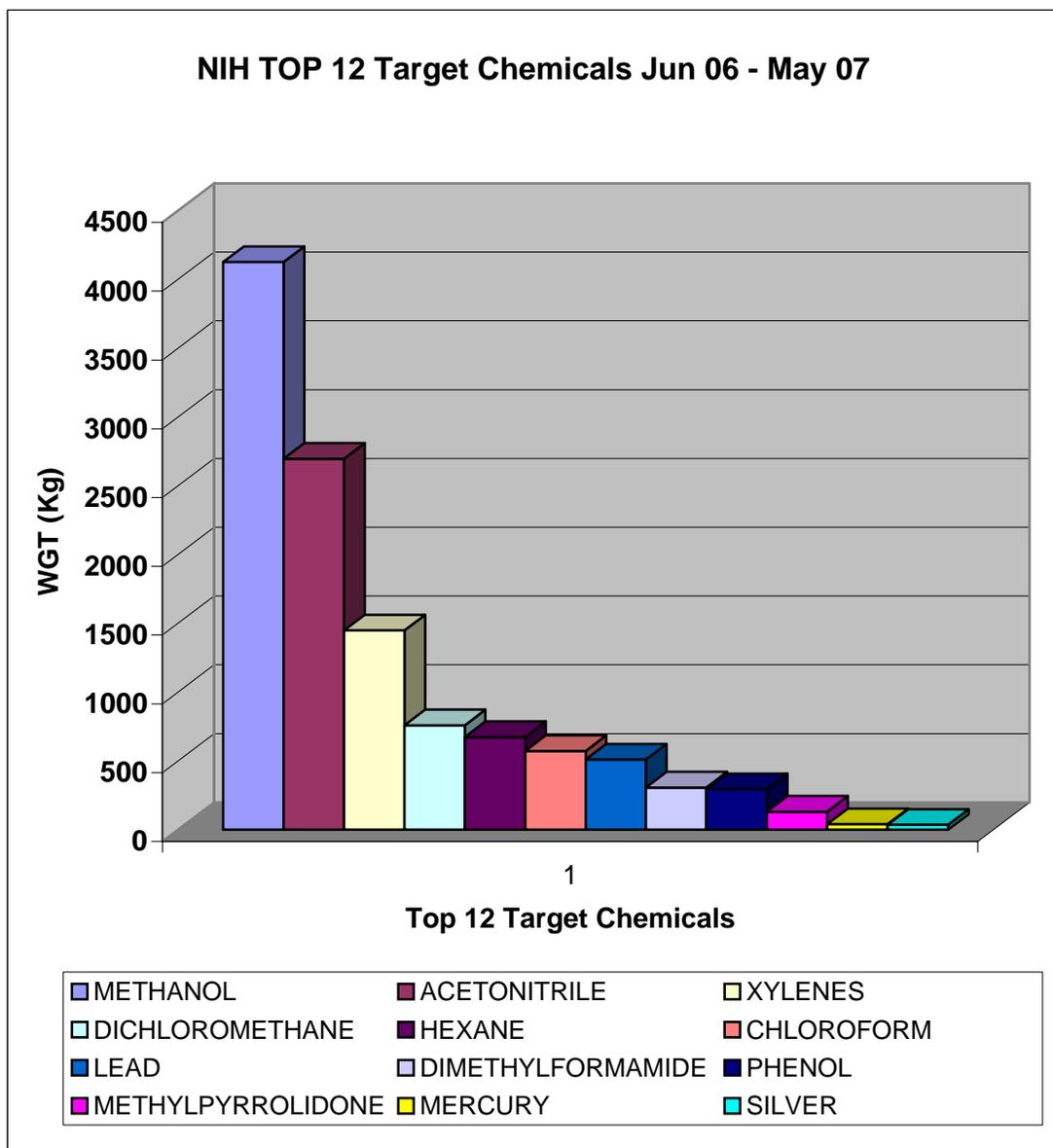
Selected NEMS Objectives: Lab Activities

As of June 20, 2007

ENVIRONMENTAL ASPECT	5-YEAR GOAL	OBJECTIVE	LEAD	STATUS
		b. Investigate potential for procuring treatment system for treating liquid at NIH.	Wendy Rubin	A proposal will be written and it will be reviewed by management for comments. This new procedure will take time to implement since it impacts multiple contracts and modifications may need to be done to contracts before it is put into practice.
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.

NIH TOP 12 TARGET CHEMICALS JUN 06 - MAY 07

CHEMICALS	WEIGHT (KG)	PERCENTAGE
METHANOL	4127.18	35.58
ACETONITRILE	2697.18	23.25
XYLENES	1449.41	12.49
DICHLOROMETHANE	759.75	6.55
HEXANE	674.18	5.81
CHLOROFORM	572.57	4.94
LEAD	510.69	4.40
DIMETHYLFORMAMIDE	307.2	2.65
PHENOL	294.49	2.54
METHYLPYRROLIDONE	131.52	1.13
MERCURY	39.88	0.34
SILVER	35.9	0.31
TOTAL	11599.95	100.00



NIH Green Chemical Procurement Fact Sheet

The NIH Department of Environmental Protection (DEP) has created this fact sheet to assist the NIH laboratories with the identification and use of “environmentally friendly” laboratory products and chemicals.

CHEMICALS TO AVOID

The following is a brief description of chemicals to avoid when planning laboratory experiments for research, analytical or instructional purposes:

- Eliminate or reduce the use of **reactive** chemicals, where possible, for safety and to avoid the generation of hazardous waste. If wastes from laboratory work are reactive, deactivate their reactive characteristic(s) as one step in the experiment.
 - A reactive material is one that can undergo a chemical reaction under certain specified conditions. Generally, reactive chemicals are substances that undergo a violent or abnormal reaction in the presence of water or under normal ambient atmospheric conditions.
 - Reactive chemicals include materials that react vigorously with moisture and other substances. Common reactive solids include the metals sodium, potassium, and lithium metals; acid anhydrides and acid chlorides.
- Eliminate or reduce the use of **halogenated solvents**, where possible. Many halogenated solvents are carcinogens or suspected carcinogens.
 - Halogenated solvents refer to solvents that contain halogen atoms (e.g., fluorine (F), chlorine (Cl), bromine (Br), iodine (I), and astatine (At))
 - Examples of common halogenated solvents include: tetrachloroethylene, trichloroethylene, methylene chloride, 1,1,1-trichloroethane, and carbon tetrachloride.
- Eliminate or reduce the use of **non-halogenated flammable solvents**, where possible. Try to find nonflammable, biodegradable substitutes.
 - Examples of non-halogenated flammable solvents include xylene, acetone, ethyl acetate, ethyl benzene, ethyl ether, methyl isobutyl ketone, n-butyl alcohol, cyclohexanone, and methanol.
- Reduce or eliminate the use of arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver where possible. If silver must be used, recover for reclamation.
- Eliminate or reduce the use of oxidizers, where possible.
- Eliminate or reduce the use of highly toxic chemicals, where possible. Refer to the following table.

Alternative, environmentally preferable laboratory products that do not contain hazardous or highly toxic chemicals are presented in the following table. In some cases, specific product options are included.

ALTERNATIVE, ENVIRONMENTALLY PREFERABLE LABORATORY PRODUCTS

Laboratory Activity	Instead of ...	Use ...	Specific Product Options
Glassware cleaning	<ul style="list-style-type: none"> Chromic-sulfuric acid solutions Alcoholic potassium hydroxide 	<ul style="list-style-type: none"> Laboratory detergents Enzymatic cleaners Aqueous solvents 	<ul style="list-style-type: none"> Alconox Lab Cleaner Powder Pierce RBS 35 FL 70 Concentrate Detergent HaemoSol No Scrub Cleaner Linbro 7X Lab Glass Cleaner RBS35 General Purpose cleaner Nochromix
Density determination	Methanol solution	<ul style="list-style-type: none"> Sugar water 	
Organic synthesis	<ul style="list-style-type: none"> Chromate ion Ethyl ether 	<ul style="list-style-type: none"> Hypochlorite ion Methyl t-butyl ether 	
Qualitative test for heavy metals	Sulfide ion	<ul style="list-style-type: none"> Hydroxide ion 	
Molecular weight determination by freezing point lowering methods	Benzene	<ul style="list-style-type: none"> Cyclohexane 	
Temperature measurement	Mercury thermometers Mercury thermostats	<ul style="list-style-type: none"> Red alcohol filled thermometers Mineral spirit filled thermometers Biodegradable green liquid thermometers All metal thermometers Digital thermistor/thermocouple Electronic/Digital thermostats Snap switch thermostats 	

Laboratory Activity	Instead of ...	Use ...	Specific Product Options
Pressure measurement	Mercury manometers	<ul style="list-style-type: none"> Pressure transducers Electronic pressure gauges Oil-based manometers 	
Biocide solutions	Mercuric chloride	<ul style="list-style-type: none"> Sodium hypochlorite 	
Storage of biological specimens	Formaldehyde	<ul style="list-style-type: none"> Ethanol or other preservatives 	
In-phase change and freezing point depression	Acetamide	<ul style="list-style-type: none"> Stearic acid 	
Qualitative test for halide ions	Carbon tetrachloride	<ul style="list-style-type: none"> Cyclohexane 	
Measurement of vapor pressure-temperature by isotenscope	Carbon tetrachloride	<ul style="list-style-type: none"> Isopropyl alcohol 	
Acid-base experiments	<ul style="list-style-type: none"> Conventional acids Conventional bases 	<ul style="list-style-type: none"> Vinegar Ammonia 	
Nucleic acid gel stain	Ethidium bromide		<p>GelRed™ Precast Gel Stains</p> <p>SYBR Green and SYBR Red</p>
Isolation and purification of DNA	Phenol chloroform		<ul style="list-style-type: none"> Promega Corporation, Magic Preps Stratagene, Lambda DNA Purification Kit

Laboratory Activity	Instead of ...	Use ...	Specific Product Options
Radioactive tracer studies	Xylene or toluene based liquid scintillation cocktails	<ul style="list-style-type: none"> Nonhazardous proprietary liquid scintillation cocktails 	<ul style="list-style-type: none"> National Diagnostics
Clearing agents in histology (e.g., dewaxing tissue sections)	Xylene	<ul style="list-style-type: none"> Histo-Clear 	<ul style="list-style-type: none"> National Diagnostics
In phase change and freezing point depression	Acetamide	<ul style="list-style-type: none"> Stearic acid 	
Polymer catalyst	Benzoyl peroxide	<ul style="list-style-type: none"> Lauryl peroxide 	
Test for halide ions	Carbon tetrachloride	<ul style="list-style-type: none"> Cyclohexane 	
Biological specimen storage	Formaldehyde Formalin	<ul style="list-style-type: none"> Ethanol “Formalernate” (Flinn Scientific) 	
Parts washers or other solvent processes	Halogenated solvents	<ul style="list-style-type: none"> Nonhalogenated solvents 	
Heavy metals analysis	Sulfide ion	<ul style="list-style-type: none"> Hydroxide ion 	
Kjeldahl digests	Mercury salts	<ul style="list-style-type: none"> Mercury-free catalysts (e.g., CuSO₄, TiO₂, K₂) 	
General substitutions	Benzene Chloroform Carbon tetrachloride Picric acid Sodium dichromate Toluene Wood’s metal	<ul style="list-style-type: none"> Alcohol 1,1,1-trichloroethane 1,1,1-trichloroethane 1,1,2-trichlorotrifluoroethane ??? Sodium hypochlorite Simple alcohols and ketones Onion’s fusible alloy 	

NIH Standard Operating Procedure

CHAPTER: Laboratory (General)

SUBJECT: Forms

OBJECTIVE:

To provide guidance on where and how to obtain electronic and hard copy versions of NIH and other government forms, and how to revise an existing NIH form or how to establish a new NIH form.

DESCRIPTION OF PROCESS:

How to Obtain Electronically Available Forms?

For a listing of all NIH forms (by number or title), please see NIH Electronic Forms Web site at: <http://forms.nih.gov/>

Knowing the form number will help you identify the proper file to access.

Electronic versions of other government forms are available at the following web sites:

- Standard forms (SF) Web site, managed by the Office of Personnel Management (OPM): <http://www.opm.gov/forms/html/of.asp>
- Optional forms (OF) Website, managed by OPM: <http://www.opm.gov/forms/html/of.asp>
- Forms for Retirement and Insurance Services and OPM: <http://www.opm.gov/forms/html/opm.asp>
- Federal Employees Group Life Insurance Forms: <http://www.opm.gov/forms/html/fe.asp>

How to Obtain Hard Copies of NIH forms?

To obtain hard copies of forms, including NIH, PHS, HHS, SF, and OF forms:

1. Check the NIH Stock Catalogue, available in NIH administrative offices.
2. For forms not listed there in the NIH Stock Catalogue, call the **NIH Forms Officer** for information at (301) 496-8155.

How to establish a new NIH form or revise an existing NIH form?

To inquire about establishing new NIH forms or to revise existing NIH forms, contact the **NIH Forms Officer** for information at (301) 496-8155.

Printing Electronically Available Forms

All forms should be printed on paper with at least 30% post-consumer recycled fiber content. In addition, all forms should be double-sided.

Remember that all waste forms printed on white office paper should be placed in the red *Mixed Paper* bins.

RELATED SUBJECTS:

Recycling

ADDITIONAL INFORMATION:

Recycling: For more information or to schedule a pickup, please call 301-496-7990.

Additional information is also provided on the NEMS web site:

<http://www.nems.nih.gov/aspects/waste/programs/recycling.cfm?origin=waste>

NIH Standard Operating Procedure

CHAPTER: Human Resources

SUBJECT: Parking Permits

OBJECTIVE:

To provide guidance on where and how to obtain a parking permit.

DESCRIPTION OF PROCESS:

General Parking Information

Parking information for the NIH campus is available at the following Division of Travel & Transportation Services (DTTS) web site: http://parking.nih.gov/parking_info.htm

Parking Permit Information

Parking permits may be obtained at the Employee Transportation Services Office (ETSO), located in Building 31, RM B3B04.

Employees must present a valid NIH identification card, valid registration certificate (or copy) for each vehicle (maximum of 3), and a valid driver's license.

For additional information regarding permit renewal and the types of permits offered visit this DTTS web site:

http://parking.nih.gov/parking_permits.htm

Alternative Commuting Options

In addition to providing parking permits, the Division of Travel & Transportation Services offers alternative commuting options, including:

- *Public Transportation:* Federal employees may receive up to \$105 per month to use public transportation by participating in the Transshare Program; an application to enroll in Transshare is available at Transportation Services or online at <http://dtts.ors.od.nih.gov/transshare.htm>. Metro's Medical Center station is conveniently located just outside the South Drive gates, and Bethesda Campus shuttles transport employees from the station to their building. Also, free parking is available at the East Lot of the Metro's New Carrollton station and at the Mid-Pike Plaza Commuter Park-N-Ride. For more information on these satellite parking options, visit the following Division of Travel & Transportation Services web site: <http://parking.nih.gov/>.
- *NIH Shuttles:* Shuttles at the Bethesda Campus transport employees through the campus via varied routes. Employees may ride the NIH shuttle from the Metro's

Medical Center station to their building. The Mid-Pike Plaza Shuttle takes employees to/from the satellite parking lot and the Bethesda Campus. Other shuttles follow off-campus routes and transport employees between Executive Blvd. and Rock Springs facilities and the Bethesda Campus. Shuttle maps and schedules are available online at the following URL:
http://dtts.ors.od.nih.gov/NIHShuttle/scripts/shuttle_map_live.asp.

- *Carpools and Vanpools:* Employees can find a carpool or vanpool through the NIH Ridefinders Network. Carpools and vanpools are able to use the HOV traffic lanes and provided reserved parking spaces. The guaranteed ride home service can be used in case of emergencies. For more information on joining a carpool or vanpool, visit the Ridefinders Network Web site (<http://dtts.ors.od.nih.gov/ridefinders.htm>) and Vanpool Openings Web site (<http://dtts.ors.od.nih.gov/vanpool.htm>).
- *Bicycle Facilities:* Bike racks are located outside more NIH buildings. Bicycle commuters are able to use the shower and locker facilities located throughout the Bethesda Campus (see <http://www.ors.od.nih.gov/orf/parking/showermap.cfm> for specific locations). The NIH Bicycle Commuter Club Web site (<https://www.recgov.org/r&w/nihbike>) provides information on routes, showers, and biking advice.

Where is the NIH Employee Transportation Services Office Located?

The NIH Employee Transportation Services office is located in Building 31, Rm B3B04. The hours of operation are from 7:30 a.m. until 4:30 p.m. Monday through Friday, excluding holidays. The office phone number is 301-496-5050.

RELATED SUBJECTS:

Energy Conservation

ADDITIONAL INFORMATION:

Energy Conservation: For more information on the NIH energy conservation program, visit the NEMS web site:

http://www.nems.nih.gov/aspects/energy/programs/energy_conservation.cfm?origin=energy

NIH Standard Operating Procedure

CHAPTER: Laboratory Safety

SUBJECT: Ergonomics

OBJECTIVE:

To provide a reference for questions pertaining to ergonomic in laboratories and where to find laboratory equipment that is ergonomically designed.

DESCRIPTION OF PROCESS:

Repetitive Motion Stress Injuries

The practice of ergonomic principles in the lab can help prevent injury. If you are having problems with repetitive motion stress injuries or other work-related physical stress problems, contact:

- your **safety specialist** (301-496-2346); or
- the **ergonomic program manager** (301-496-3353)

for assistance in improving the ergonomics of your work space.

Ergonomic Lab and Office Equipment

Ergonomically designed lab equipment includes:

- pipettes;
- microscope accessories;
- anti-fatigue matting;
- adjustable tables & edge guards with padding;
- automatic microtomes;
- automatic and adjustable cryostats; and
- laboratory stools.

References and contact information for suppliers of ergonomic laboratory equipment are available at the DOHS Web site: <http://dohs.ors.od.nih.gov/labequip.htm>

Procurement of Ergonomic Laboratory Equipment

Procure ergonomic office equipment that meets the EPA Recommended Recovered Material Content Ranges for office furniture. To conserve natural resources and reduce waste, NIH procurement staff and purchase card holders will:

- Obtain furniture from NIH or other federal surplus source by contacting NIH Property Utilization Branch for information.

- Purchase furniture with the minimum post-consumer recycled content as outline in the table below:

Furniture Product	Minimum Post-consumer Recycled Content
Fabric	100%
Plastic	70%
Steel	16%
Wood or Wood Composite	Greater than 0%

RELATED SUBJECTS:

Safety, Procurement, Scientific Equipment Rental and Sales,

ADDITIONAL INFORMATION:

Ergonomics For additional information regarding ergonomics laboratories visit the DOHS Ergonomic web site: http://dohs.ors.od.nih.gov/ergonomics_home.htm

EPA Comprehensive Procurement Guidelines of Office Furniture: The EPA recycled content recommendations for office furniture are available at the following EPA web site: <http://www.epa.gov/epaoswer/non-hw/procure/products/furniture.htm>

Green Purchasing: For more information on the NIH green purchasing program, visit the NEMS web site: http://nems.nih.gov/aspects/nat_resources/programs/green_purchasing.cfm?origin=nat_resources

NIH Standard Operating Procedure

CHAPTER: Laboratory Safety

SUBJECT: Centrifuge Rotors

OBJECTIVE:

To provide a reference for the safe use of and the proper management of centrifuge rotors.

DESCRIPTION OF PROCESS:

Rotor Safety

Centrifuge rotors present a unique lifting hazard in the laboratory. The following are recommended for control of ergonomic hazards associated with lifting centrifuge rotors:

- Use a second person to assist with the lift. Use a cart to transport rotors. Look for manufacturers' which produces lighter weight rotors.
- Implement a pulley system, which would attach to the ceiling directly above the centrifuge.

Recycle Retired Centrifuge Rotors

Please recycle rather than dispose of any retired centrifuge rotors. For information regarding recycling retired rotors, contact NIH recycling (*see contact information below*).

Rotors being sent for recycling should be “clean”. For the purposes of this SOP, clean is defined as being free of any chemical or biological contamination. When contacting NIH recycling, please include any information regarding the composition of the rotor (e.g., titanium, aluminum, etc.).

Trade-in Retired Centrifuge Rotors

You may be able to trade-in retired Beckman Coulter centrifuge rotors. The value of the trade-in may be small, but it may be worth contacting the Beckman Coulter representative (*see contact information below*).

How To Save Energy In Your Lab?

In order to save energy, be sure and turn off the centrifuge when not in use. Even in stand-by mode, centrifuges and other equipment in NIH labs consume energy.

Purchase Centrifuge Tubes In Bulk

When purchasing centrifuge tubes, avoid the Styrofoam by purchasing in bulk. Money will be saved and the annoyance associated with the bulky Styrofoam racks will be avoided.

RELATED SUBJECTS:

Procurement, Scientific Equipment Rental and Sales, Ergonomics, Recycling

ADDITIONAL INFORMATION:

Recycling: For more information or to schedule a pickup of your retired centrifuge rotors, please call 301-496-7990. Additional information is also provided on the NEMS web site: <http://www.nems.nih.gov/aspects/waste/programs/recycling.cfm?origin=waste>

Beckman Coulter Sales Representative: 202-821-9102 (cell phone)

Energy Conservation: For more information on the NIH energy conservation program, visit the NEMS web site:

http://www.nems.nih.gov/aspects/energy/programs/energy_conservation.cfm?origin=energy

Green Purchasing: For more information on the NIH green purchasing program, visit the NEMS web site:

http://nems.nih.gov/aspects/nat_resources/programs/green_purchasing.cfm?origin=nat_resources