



MEETING MINUTES

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

Meeting Objective(s):

- Identify potential improvements to the environmental content of the Lab Safety Refresher Training
- Identify support needs for revising the Waste Disposal Guide
- Provide feedback on Lab Managers Working Group Standard Operating Procedures (SOPs)

Attendees:

Claudia Gerwin (NINDS)	Kristen Peters (Booz Allen)
Robin Hirschhorn (Booz Allen)	Andree Reuss (NINDS)
Tim Killian (Booz Allen)	Wendy Rubin (ORS)
Suzanne Krall (ORS/DOHS)	Dawn Walker (NCI)
Charlyn Lee (ORF)	Roger Weidner (ORF)
Terry Leland (ORF)	Delores Wilson (ORS)
Polly McCarty (ORS)	Don Wilson (ORF)
David Mohammadi (ORF)	

Minutes:

NEMS Update

Ms. Terry Leland provided an update on the NEMS, including:

Earth Day Event

Planning for the Earth Day event is currently underway. The event is scheduled for April 26. If you would like to participate in the planning, please contact Terry Leland (lelandt@ors.od.nih.gov) or Kristen Peters (peters_kristen@bah.com).

Sustainability Management Team Meeting

The Sustainability Management Team (SMT) met on January 30 to review the NEMS 2007 objectives. All objectives were approved with no comments.

Updates

A monthly update will be distributed to working group members to keep everyone informed of the activities and process of all NEMS working groups. In addition, 2 new

working groups will become active in the upcoming weeks; the Animal Care and Clinical Practices Working Groups which will likely be integrated into existing groups.

Status Review of Objectives

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

Charlyn Lee provided an update on the goals and objectives related to chemical waste:

- *Chemical Inventory System:* The Division of Environmental Protection (DEP) staff has 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. DEP will also have to identify the business requirements for the system before moving forward; this should be a simple task because the functionality is already known. Once the inventory system is acquired, a pilot will occur. In the future, this working group will need to suggest those who could participate in the pilot.
- *Unused and Target Chemicals:* David Mohammadi is working with a contractor to generate a baseline report on unused chemicals. The report should be complete in a few weeks. Once a baseline is established, a strategy to reduce unused chemicals will be developed. This strategy and any best management practices should be incorporated into the SOPs.

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. However, the company that provides these technologies has declared bankruptcy, forcing DEP to identify additional sources for these technologies.

Wendy Rubin provided an update on the objectives related to reducing off-site disposal of liquid scintillation vials:

- The required building renovations are scheduled. Once the renovation is complete, the treatment system can be installed. Building 21 is participating in a pilot to determine the success of separating and disposing of non-radioactive vials as chemical waste. This practice will expand to other buildings if deemed a success.

Lab Safety Refresher Training

Tim Killian facilitated the group's review of the environmental content of the Lab Safety Refresher Training (available at <http://www.ors.od.nih.gov/labsafety/>). This training is part of a series of required lab safety training; each new lab employee attends a classroom course and online course and completes this refresher training. The environmental content was written by DEP staff quite a number of years ago and needed to be updated as well as sustainability and best management practices integrated. The working group had agreed that revision of the content in the safety training would be more efficient than developing a separate training.

Group members discussed ways that the training could be improved so that lab activities are conducted in an environmentally sound manner. The following comments were made:

- All web links are broken.
- The size of the training viewer should be enlarged; currently it is small and static.
- A print feature should be added so that the training could be printed out and used as a reference.
- The training content needs to be reevaluated overall so that it meets the needs of the target audience. There is an abundance of information (e.g., list of regulations) that is either irrelevant to lab workers or not focused on what the user needs to know.
- Graphics should be added and the amount of text minimized.
- The discussion of the waste types should be reorganized so that multi-hazardous waste is discussed after chemical and radioactive wastes.
- The segregation of waste discussion should be broken down and have a screen committed to each waste type.
- Pictures of waste containers should be added to the waste collection procedure screen so that there are easy for the user to identify.
- The chemical waste tag screen needs to be updated. Currently, the image of the tag is too small to read. Additional information should all be provided, including instructions on how to obtain a tag and how to fill it out.
- Information stressing the importance of dating the labels of waste containers needs to be incorporated.
- An overview of common processes that result in the different waste streams would be helpful. In addition, images of disposal containers would be helpful when discussing the disposal of different waste streams.
- Information on less toxic alternatives should be incorporated.
- NIH's Mad Hatter campaign should be discussed in context of mercury minimization efforts. Also, alternative products should also be identified.
- Information on battery recycling and leak procedures should be incorporated.
- The procedures for empty chemical bottle procedures should be revised. Recycling should be stressed.
- The training content could be reorganized by waste type. Therefore, information on the segregation, storage, and disposal would be grouped and discuss in the context of each waste type.

The comments collected stressed the importance of focusing on what the target audience needs to know. Suzanne Krall of the Division of Occupational Health and Safety is now responsible for this training and informed the group that this training is

scheduled to be updated. The group agreed to provide revised content on the environmental section.

Waste Disposal Guide Revision

DEP initiated the revision the Waste Disposal Guide (<http://orf.od.nih.gov/Environmental+Protection/Waste+Disposal/>). Small teams are working to improve the guide. At the next meeting, Charlyn Lee will provide a status update and inform the working group on how it may assist DEP in completing this task.

Lab Managers Workgroup SOPs

Members of the Lab Managers Interest Group are developing SOPs on a variety of topics. Tim Killian and Terry Leland have been working with Dawn Walker and other lab managers to review the SOPs and make recommendations to “green” the SOPs. The working group reviewed five SOPs that have been drafted by the Lab Managers Workgroup (see Attachment 2). The SOPs reviewed during the meeting provided examples of the recommended revisions to ensure activities are conducted in an environmentally sound manner.

Working group members provided a few comments on the SOPs, including:

- *Ergonomics*: Remove Nerhosshia Davis-Smith’s name in the Resources section and replace with just a title
- *Centrifuges*: In the Resources section, use “Division of Occupational Health and Safety”
- *Outside Sources*: Add the Manual Chapter as a reference and include information on required sources

NIH Acquisitions staff should review the procurement SOPs. Kristen Peters will coordinate with Ray Dillon and Carl Henn to provide feedback on the procurement SOPs.

These SOPs are still underdevelopment. If you would like to become involved in SOP development, please contact Dawn Walker (walker@dce41.nci.nih.gov).

Action Items:

Action Item	Responsible Person(s)	Due Date
1. Contact Terry Leland (lelandt@ors.od.nih.gov) or Kristen Peters (peters_kristen@bah.com) if you would like to participate in Earth Day event planning	Working Group	Wednesday, Feb. 28
2. Contact Dawn Walker (walker@dce41.nci.nih.gov) if you would like to be involved in developing the Lab Managers Manual SOPs	Working Group	Prior to next meeting

Action Item	Responsible Person(s)	Due Date
3. Kristen Peters will contact Ray Dillon and Carl Henn to coordinate comments on procurement SOPs	Kristen Peters	Friday, March 2

Next Meeting:

The next meeting is scheduled for Wednesday, March 21 from 1:30 to 2:30 PM and will be focused on the SOP development, including the waste calendar and whether there is a need for supporting documents that might be more lab-specific. A meeting request will be distributed via email once the meeting date and time has been confirmed.

Selected NEMS Objectives: Lab Activities

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.	ORF:DEP Sustainable Lab Practices Working Group	Will require participation from the NIH scientific community to be successful.
	2. Reduce Disposal of Unused Chemicals by 30% by 2009.	a. Generate baseline and develop strategy for reducing unused chemicals.	ORF:DEP Sustainable Lab Practices Working Group	Baseline under development, success of reduction will require participation from the NIH scientific community.
	3. Reduce Disposal Rates of NIH Target Chemicals.	a. Generate baseline and develop strategy to reduce disposal rates of target chemicals.	ORF:DEP Sustainable Lab Practices Working Group	Baseline under development will require participation from the NIH scientific community.
		b. Conduct feasibility study to identify opportunities to reduce lab equipment with mercury components.	ORF:DEP Sustainable Lab Practices Working Group	Will require participation from the NIH scientific community.
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.	ORF	
		b. Initiate acquisition process for equipment.	ORF	
		c. Plan for educational outreach to train users of new sorting, labeling, and packaging procedures required for use of the new system.	ORF	Will require participation from all NIH staff to be successful.
Radioactive Waste	1. Reduce off-site disposal of liquid scintillation vials	a. Install system to treat vials when required building renovation is complete.	ORS: RSB	In progress.
		b. Investigate potential for procuring treatment system for treating liquid at NIH.	ORS: RSB	In progress.
NEMS Improvements	NEMS Deployment and Maintenance	Document Laboratory Procedures with SOPs	Sustainable Lab Practices Working Group	In progress.

CHAPTER: Safety

TOPIC: Centrifuges

Objective: To provide a reference for the safe use of centrifuges.

Key words: centrifuges, ultracentrifuges, rotors

Description of Process:

Information on rotor safety, including determining whether or not the rotor is safe to use and when rotors should be retired, can be found at:

<http://www.nih.gov/od/ors/ds/pubs/index.html>.

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. Please include any information regarding the composition of the rotor (e.g., titanium, aluminum, etc.).

You may be able to trade-in retired Beckman rotors. The value of the trade-in may be small, but it may be worth asking. Contact Laurent Baxley, the Beckman Coulter rep (see contact information below).

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

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.

In addition, a pipet tip loader easily fills a rack with tips while avoiding the space and material waste of multiple tip boxes.

Comment [TK1]: Janet Dipasquale questioned whether this belonged here, 1/18/07

Related Subjects: recycling retired rotors

Resources: <http://www.nih.gov/od/ors/ds/pubs/index.html>

Division of Safety, 301-496-2346

To recycle retired rotors contact: NIH recycling at 301-402-6036

Beckman Coulter sales rep: Laurent Baxley, lbaxley@beckman.com, or 202-821-9102 (cell phone)

Terms/Definitions:

Chapter: Safety

Topic Title: Ergonomics

Objective:

- Obtain answers to questions pertaining to ergonomics
- Learn where to find laboratory equipment that is ergonomically designed

Key Words: ergonomics, work-related injuries, repetitive motion injuries

Description of Process: 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 Nerhosshia Davis-Smith, the ergonomic program manager (301-496-3353), for assistance in making your work space more ergonomic.

Go to the *Ergonomics Web site* (my.nih.gov; look under “E” in Information for Employees or www.nih.gov/od/ors/ds/ergonomics/index.html). This Web site has information on ergonomically correct equipment, with links to manufactures Web pages, stretches and exercises, and more.

Procure ergonomic office equipment that meets the EPA Recommended Recovered Material Content Ranges for office furniture.

Related Topics: safety

Resources:

- NIH safety specialist (301-496-2346)
- Nerhosshia Davis-Smith, the ergonomic program manager (301-496-3353)
www.nih.gov/od/ors/ds/ergonomics/index.html

The EPA Recommended Recovered Material Content Ranges for office furniture are available at the following URL:

<http://www.epa.gov/epaoswer/non-hw/procure/products/furniture.htm>

Terms/Definitions:

CHAPTER: Forms

TOPIC TITLE: Forms

Objective: To find out where forms can be accessed

Key Words: Forms

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

It is helpful if you know the form number. To obtain hard copies of forms, including NIH, PHS, HHS, SF, and OF forms, first, check the NIH Stock Catalogue, available in administrative offices. For forms not listed there, call the NIH Forms Officer for information on (301) 496-8155.

To inquire about establishing new NIH forms or to revise existing NIH forms, contact the NIH Forms Officer for information at (301) 496-8155 or email [Joanne Eater](mailto:Joanne.Eater@nih.gov).

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

Related Subjects:

Resources:

All NIH forms are available at the following Web site: <http://forms.nih.gov>

Standard forms (SF) Web site, managed by Office of Personnel Management:
<http://www.opm.gov/forms/html/sf.asp>

Optional forms (OF) Web site, managed by Office of Personnel Management:
<http://www.opm.gov/forms/html/of.asp>

Forms for Retirement & Insurance Services and Office of Personnel Management:
<http://www.opm.gov/forms/html/opm.asp>

Federal Employees Group Life Insurance Forms:
<http://www.opm.gov/forms/html/fe.asp>

CHAPTER: Parking Permits/Transhare Program

TOPIC TITLE: Parking Permits

Objective: To obtain a parking permit

Key Words (Search List): parking, permit, public transportation, shuttles, carpools, bicycle

Description Of Process:

For information on permit renewal, types of permits offered, and general parking information, see this Division of Travel & Transportation Services website:
http://dttts.ors.od.nih.gov/parking_permits.htm

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 Transhare Program; an application to enroll in Transhare is available at Transportation Services or online at <http://dttts.ors.od.nih.gov/transhare.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://dttts.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://dttts.ors.od.nih.gov/ridefinders.htm>) and Vanpool Openings Web site (<http://dttts.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.

The NIH Employee Transportation Services office is located in Building 31, Rm B3B04. The office phone number is 301-496-5050.

Related Subjects:

Resources: http://dtts.ors.od.nih.gov/parking_permits.htm

Terms/Definitions: N/A

CHAPTER: Procurement

TOPIC TITLE: Outside Sources

OBJECTIVE: Procurement of supplies, equipment and services from commercial sources outside the US Government.

KEY WORDS (search list): procurement, order, vendor, buy, BPA, contract, purchase, supplies, chemicals, services, purchasing agent, purchase order

DESCRIPTION OF PROCESS:

Procurement Process: The requestor defines the item/service that they need, including description, units, quantity, price and supplier(s). Once defined, the requestor either orders it by credit card (see Credit Card Purchase) or communicates the information to the purchasing department. The purchasing department determines the best mechanism to place the order, and may request additional information from the requestor to make the purchase. The item/service arrives, the requestor signs and dates the packing slip, and returns it to purchasing. Purchasing records receiving, and the vendor receives payment. The following sections define these steps, and offer additional information to make the process happen as efficiently as possible.

Purchasing Mechanisms:

Credit Card – used by requestor for < \$2500, subject to restrictions, PA for higher amounts, (see Credit Card Purchase chapter)

Indefinite Delivery Contracts (IDC) - for fixed time period, with deliveries over time.

Purchase Order - (PO) involves contract officers, and additional controls, by convention the order number starts with 3 numbers - M a second letter, followed by 5 numbers.

Purchase Order-Invoice-Voucher (SF44) – for vendor who will only accept checks, for limited amounts (<\$1500 for AO, <\$2500 for higher groups)

Records of Call – (ROC) used for Blanket Purchase Agreement vendors, for Indefinite Delivery Contracts (IDC), by convention, the order number starts with “N”

Mandatory Sources: Once the decision is made to purchase something, the requestor must attempt to obtain the item/service from NIH mandatory sources, including the NIH Central Stores. The NIH Central Store has supplies, chemicals, freezer programs and media, so it is worth the time to explore (NIH Stock Catalog, online link, Self Service stores).

When those options have been exhausted, the requestor should identify the catalog

number, description, price and outside vendor for the item/service. The purchase can be made by Government credit card, if available, or through the purchasing department. The credit card purchase is covered in “Credit Card Purchase”.

Communication with Purchasing: There are many tools at the NIH for giving the ordering information to the purchasing agent (PA). Form NIH 1861-1 is the standard form, usually filled out by hand and signed off by approving officials before sending to the PA. Some institutes have computer based and web based programs that transmit the ordering information electronically between the requestor and PA. These often have interactive features, and allow for tracking of orders. Whatever the mechanism, the function is to facilitate the exchange of information, to ensure that all purchases are legitimate and approved, and to make the purchase happen.

Competition: Most items/services are available from multiple sources, and the requestor should include 3 price quotes for orders over \$2500. These quotes can be for 3 sources of the same item/service, 3 alternatives to meet the purchase requirements, or a combination of both. For example, 2% milk from Safeway, Giant and 7-11, or 2% milk from Safeway in Chevy Chase, Wheaton and Rockville.

Justifications: Justifications are required for certain orders, based on what is purchased, and the dollar amount for the order. There is some variation between departments, so it helps to get clarification from purchasing.

The basic guidelines are:

any emergency – needs justification

<\$2500 – no justification needed

>\$2500 – justification required

Personal Preference items –justification required (computer, radio)

The formats for justifications vary, so getting a template from purchasing is wise. The justification should include what is needed, why it is needed, including a protocol number if available, when it is needed by and an explanation of how the item/service will meet the need.

Sole Source Justification: There are items/services that are only available from one source, and these require a Sole Source Justification. In addition to the information in a regular justification, the unique properties/capabilities of the item/service should be described, along with a brief description of products/services from other suppliers that do not meet the needs. There may be challenges to Sole Source orders, so it is important to have good reasons that hold up to scrutiny. Some good reasons are patents (include the Patent Number, if available), and additional parts for existing equipment (include NIH property decal numbers). This may take several drafts, and coordination with purchasing/contracts.

Statement of Work: A Statement of Work (SOW) is required for services >\$10K. The formats vary, but there are 4 basic questions that should be answered.

- *What needs to be done?*
- *When must it be done?*
- *What should the final output or product/service be?*
- *How will you know if the final output is acceptable?*

The SOW should be as detailed as possible, because it is the basis for preparing the contract with a vendor. The more defined parameters included, the more likely the successful outcome, both for awarding the contract to the best vendor, and for obtaining the best product/service.

Once the request is defined and communicated to purchasing, there are several pathways the request can take. The Acquisition web site, <http://www.olao.od.nih.gov/Acquisitions/>, is a good resource, and has more details than are given below.

Receiving: Once the item/service is delivered, the requestor should verify the receipt, and sign the packing slip provided by the vendor. If the documentation is unavailable, a substitute form should be signed and dated (work with PA on this). If the purchase was made by credit card, the completed form should be returned to the card holder. For all other packing slips, the signed forms should be given to the person designated to enter the receiving into DELPRO (often a secretary, or AO office staff). The forms should then be forwarded to the PA for their records.

This is the first step in the process of paying the vendors, and it is important to process the packing slips as soon as possible.

Vendor Payment: Once the receiving is done in DELPRO, the monies are released for potential payment. This completes the requestor's involvement with the order. The vendor submits invoices against the ROC, or PO to Accounts Payable (NIH, Commercial Accounts, 2115 East Jefferson Street, MSC 8500, Bethesda, MD 20892) This office has moved off campus, but maintains the Bethesda zip code for mail deliveries.

If a vendor has difficulty in getting paid, there are two key functions that can be investigated. The first step is verifying receipt of the item/service, where the staff responsible for entering receiving into DELPRO should be able to verify the receiving date. The next step is registering the invoice in the NIH Commercial Accounts department. The customer service number for Commercial Accounts is 301-496-6088. The vendor needs the ROC, PO or contract number to investigate a request. The customer service staff will check up to three numbers and can answer questions about receiving, whether the invoice has been received, and entered into the system, and give an estimate for payment.

Environmentally Preferable Purchasing: Environmental considerations should be integrated into the procurement procedures outlined above. NIH requires employees to purchase and use products manufactured with the maximum practicable amount of recovered materials, especially post-consumer recycled materials.

Environmentally preferable purchasing (EPP) is the procurement of products or services that have a lesser or reduced effect on human health and the environment when compared with competing products or services that serve the same purpose. The product or service comparison may consider raw materials acquisition, production, manufacturing, packaging, distribution, reuse, operation, maintenance, or disposal. EPP considers the environmental characteristics of a product or service, in such areas as energy or water efficiency, low-toxicity, bio-based, and recycled-content.

RELATED SUBJECTS: IMPAC credit card, NIH Stock ordering, Statement of Work, Contracts, Administrative Management Branch (AMB), Scientific Equipment Rental and Sales

RESOURCES: NIH Portal, under Acquisitions, Purchasing, for example, <http://www.olao.od.nih.gov/Acquisitions/>

For more information on environmentally preferably purchasing visit EPA's EPP Web site at the following URL: <http://www.epa.gov/opptintr/epp/>

TERMS/DEFINITIONS:

Acquisition - process of obtaining supplies and services,

AMB - Administrative Management Branch - responsible for procurement

AO - Administrative Officer - AMB staff member supervising purchasing agents

DELPRO - computer program used to process procurement transactions at NIH

IDC - Indefinite Delivery Contract - contract for services and/or supplies for fixed time period, with deliveries over time

PA - Purchasing Agent - AMB staff member that processes purchase requests

PO - Purchase Order - document requesting services and or supplies from a vendor

ROC - Record of Call - number assigned to a specific purchase