Appendix G: Moving a Laboratory Reference Information.

Begin planning your move by reviewing what you have on hand and disposing of chemicals you no longer need.

Your Facilities Director / Manager should contact your school’s EH&S Coordinator to notify them of your move.

- Biological Sciences- David Melitz
- Engineering – Joe Rizkallah
- College of Medicine- Hamid Arabzadeh
- Physical Sciences- Rama Singh

- Complete the Moving out of a Lab Checklist (attached).
- Dispose of all hazardous waste.
- Make sure all chemicals you will be moving are properly labeled and that the containers are safe to handle. Broken or disintegrating containers of chemicals should be repackaged or disposed.
- Contact your EH&S Coordinator for specific moving requirements for freezers. These will be handled on a case by case basis.

- Costs:

Whole lab move:

EH&S will not charge for clearance testing and analysis of a whole lab move. This is defined as the entire lab being cleared in one visit by EH&S while the lab is closed and no operations are ongoing. EH&S will continue to return to the lab and recheck equipment for clearance at no charge while the entire lab is closed in the case of equipment that may need further attention to achieve clearance.

Staged Lab Move:

When a lab wishes to move in multiple stages, the sponsoring party (PI or Department) will be billed at $65.00 per hour, one hour minimum per visit, by EH&S clearance staff (Industrial Hygiene, Radiation Safety and Biosafety technician groups, not School Coordinator time).

- Advance Notice:

If reasonable (one week or more) notice is provided, lab clearances can be scheduled in as short as a 4 hour window to clear an entire lab.
EH&S will conduct lab clearances with as little as 48 hours prior notice. However, a 48 hour window will be required for short notice lab moves to accommodate EH&S personnel schedules.

- Fire codes limit the quantity of flammable liquids stored and regulate the type of container used. In general, no more than 10 gallons of flammable liquids may be stored in the open lab. Quantities in excess of ten gallons must be stored in flammable liquid storage cabinets. Prudent laboratory practice dictates that flammable liquid storage in the lab should be kept to a minimum. No single container of flammable liquids larger than 2-1/2 gallons (10 liters) is allowed.

- Bio-safety cabinets need to be professionally decontaminated prior to moving and re-certified after a move. Make arrangements for this work well in advance to allow contractors sufficient time to meet your schedule.

- Repair old or damaged equipment or contact EH&S to arrange appropriate disposal prior to the move.

- Equipment that could possibly be contaminated with radioactive, chemical or bio-hazardous material needs to be cleaned and cleared by EH&S.

- Broken refrigerators and freezers must be recycled or disposed of by EH&S because of the refrigerants (e.g., Freon) used in the units.

- Waste should be scheduled for pickup by request on http://www.ehs.uci.edu/programs/enviro or contact EH&S for instructions.

- Universal waste including batteries, cathode ray tubes (computer monitors), consumer electronic devices, mercury container devices, and fluorescent lamps must be collected for recycling and/or disposal by the EH&S Hazardous Waste Group. Please visit http://www.ehs.uci.edu/programs/enviro and fill out the appropriate universal waste collection form.

- Plan where equipment will go in your new laboratory. Identify any renovations, such as electrical outlets or seismic restraints, and have them addressed prior to the move. Contact your facility manager for assistance.

- Are you moving to an off-campus location? If so, special permits might be required. Contact EH&S for special assistance to determine which permits need to be obtained. Provisions will also need to be made for the handling and disposal of hazardous wastes at off-campus locations.
Packing Chemicals to be Moved

- Wear personal protection appropriate for the materials being handled (e.g., safety glasses, lab coat, gloves, closed-toed shoes, etc.). Make certain chemical containers are properly labeled and are not likely to leak in transport.
- Do not move unlabeled ("unknowns") or leaky containers. [Unknowns cannot be disposed of until the contents are categorized.]
- Separate chemicals into compatible groups and provide separate, labeled boxes for each group. This is extremely important to prevent serious mishaps should boxes be dropped or damaged in transport.
- Keep an inventory of the chemicals as you pack.
- Plan for segregated storage in your new lab. See the Chemical Hygiene Plan, Chemical Storage section for more details on inventory and segregation.
- Use the following guidelines to transport chemical containers:
  - Sturdy partitioned boxes, which may be borrowed from EH&S;
  - Leave enough room to completely close the box;
  - Do not allow bottle necks or stems to protrude from the boxes;
  - Limit the box size to approximately 18" per side;
  - Do not make any one box too heavy to lift;
  - Check containers for expiration dates; and signs of corrosion or crystallization.
- Peroxide-forming materials should be handled using the following guidelines:
  - Do not move to the new laboratory if the container has been opened and is more than six months old, or if it has not been opened and is more than one year old. Dispose of it properly by filling out the appropriate hazardous waste form at http://www.ehs.uci.edu/programs/enviro, or contact EH&S;
  - Dispose of the chemical(s) by the expiration date listed by the supplier; and
  - Refer to your Chemical Hygiene Plan for more information.

Moving the Packaged Chemicals

- Please do not move chemicals outside of buildings. Contact the EH&S Hazardous Waste Group at EH&S for assistance with moving hazardous materials between UCI buildings or off campus.
- EH&S can provide a truck and a technician to assist with the move for a fee which will be recharged to the department. A well-organized move averages only one to two hours of EH&S time at a labor rate of $65.00 per hour.
- Do not use personal vehicles to transport hazardous chemicals.
- Always use proper lifting techniques as described in the Back Injury Prevention Plan.
Packing and Moving Biological Materials

- Biological materials including all etiologic agents, human and animal tissues, blood, blood products, and other body fluids, excreta, etc. must be packaged in both primary and secondary containers.

- Primary containers must be tightly sealed to prevent leakage. Take care to avoid contamination of the container's exterior. Examples of primary containers are test tubes, vacutainers, IV bags, or culture flasks. Surround the primary container with absorbent packing material.

- Use the following guidelines when transporting biological materials:
  - Use rigid, sealable and break-resistant containers, such as sealable pans, closed metal ice chests, or cardboard or plastic mailing tubes as secondary containers;
  - Label primary and secondary containers with the international Biohazard symbol, including the type of material, the name and phone number of the PI;
  - Labels should be legible and indelible; and
  - If moving off-campus, consult with EH&S for specific inter/intrastate or international shipping regulations.

Radiation Safety

- Before packaging or moving any radioactive materials or radiation-generating equipment, call the EH&S Radiation Safety Division for information and instructions.

- Contact EH&S to have your Radiation Use Authorization amended to allow radioisotopes at the new location.

- New lab areas must be properly posted before radioactive materials are brought in. Call EH&S Radiation Safety Division if postings are missing from your new lab.

- Immediately report all spills of radioactive materials on campus to EH&S during office hours (8:00 am to 5:00 pm), or after hours to the Campus Police at 949-824-5222.

- The PI is responsible for complete decontamination and removal of radioactive materials from the vacated lab. EH&S will conduct a radiation closure survey only after all radioactive materials have been removed. This survey is required before any construction is conducted or prior to anyone moving into the vacated lab space.

- To facilitate evaluation of your new installation and to maintain an accurate inventory, send a list of non-ionizing radiation producing equipment (e.g., lasers and x-ray generators) to the Radiation Safety Group at EH&S (Zot Code 2725).

Biohazard Safety

- Authorized users of biohazardous materials must update their Biological Use Authorization (via amendments) to include their new locations. Call EH&S for the most up-to-date information.

- Access doors to regulated areas must be posted with warning signs.
• Biological safety cabinets require professional decontamination prior to moving and re-certification after the move. Make arrangements for this work well in advance to allow contractors to meet your schedule.

**Compressed Gases**

• Make sure the valve cap is securely in place before moving any cylinder.

• Transport cylinders on a wheeled cart, carefully secured in an upright position to prevent them from falling. Never move a cylinder by rolling it across the floor.

• Do not leave a cylinder unattended in the corridor. Never drop cylinders or bang them against each other or another object.

• Report all suspected leaks immediately to EH&S or call 911 after hours. If the material in the tank is toxic, evacuate everyone from the area. Leaking gas cylinders should be put in the fume hood, if possible.

• Empty cylinders should be labeled "empty." Call the vendor for disposal.

• Contact EH&S if you have a cylinder with unknown contents.

**Hazardous Materials in Laboratory Equipment**

Certain laboratory equipment items may contain component materials or chemicals that are potentially harmful to human health or the environment. These may include:

- **Asbestos**
  - Autoclaves, Ovens, Furnaces,
  - Gloves, Curtains, Fume Hoods,
  - Gaskets, Insulation, Floor tiles

- **Mercury**
  - Manometers, Thermometers,
  - Barometers, Silent Switches,
  - Diffusion pump components,
  - Sphygmomanometers

- **PCBs**
  - Large Batteries, Power Supplies, High Voltage Systems, Capacitors, Transformers, Hydraulics (used in high temperature applications)

- **Acids**
  - Batteries (wet), Blueprinting components

- **Compressed Gases**
  - Internal cylinders, Ampoules, Canisters, Compressor tanks, Aerosol cans

- **Solvents**
  - Degreasing Equipment

- **Radioactivity**
  - Glow in the dark components, Self-illuminating exit signs, Anti-static devices

- **Oils**
  - Pumps, Engines, motors, hydraulics

- **Infectious Agents**

- **General**
Diagnostic & medical equipment, Used air filters
Used liquid filters, Acid neutralization traps, Scrubber components, Used HEPA filters, Used lab equipment, Used glassware, Darkroom equipment

- Asbestos containing materials cannot be used. Substitute materials are available for most applications. Call EH&S for more information.
- Exercise care in preparing this equipment for transport. Items that contain or are connected to damaged asbestos products must be moved under the direction of EH&S.

**Getting Your New Space Ready**

- Refer to the attached Moving into a New Lab Checklist to help get your new space ready.
- Post required warning signs (radioactive materials, biohazard, MSDS poster, hazardous waste guidelines, emergency notification information, etc.) in your new lab location.
- Review the location of safety showers, emergency eyewashes, fire extinguishers, and all available means of exit from your laboratories and the building.

**Handling Chemical Emergencies**

For Emergency Medical Assistance:
- **UCI Campus** - Call 911 or 949-824-5222

For Chemical Spills During Work Hours:
- **UCI Campus** - Call 949-824-6200

For Chemical Spills After Work Hours:
- **UCI Campus** - Call 911 or 949-824-5222

**Reporting Injury or Illness**

In the event of an injury or illness, immediately notify Workers' Compensation at 949-824-7008.