

MEMORANDUM

To: Assistant Deans of the Schools and the College

From: Joe Higgins, Vice President for Campus Services and Stewardship
Tim Jamison, Associate Provost

Date: August 16, 2021

Re: Committee for Renovation and Space Planning (CRSP)
Policies on Lab Departmental Equipment

Attached you will find the updated CRSP-approved policies on equipment with regard to CRSP Lab Renovation Projects. One of the sections in this document references the responsibilities of Departments, Labs, Centers, and Institutes (DLCIs) for maintaining and operating DLCIs equipment once the projects are complete.

Two areas of focus for your teams we would like to bring your attention to:

- 1. Testing of Toxic Gas Monitoring Systems**, annual testing and calibration is required for these systems and reports are to be submitted to EHS central by June 30th each fiscal year. Please confirm this through your local EHS Coordinator.
- 2. Documented Safety Protocols are required for the maintenance of DLC electric equipment**, including Energy Control Procedures and training for Lockout Tagout, a program to safeguard people from the unexpected startup of machinery and equipment, or the release of hazardous electrical energy during maintenance activities. Please confirm this through your local EHS Coordinator.

These responsibilities are also in effect for all existing equipment, whether they were or were not part of a previous project including capital projects. Please note that DLCIs have ongoing responsibility for maintenance, testing, safety, repair and replacement of lab and departmental equipment. Replacement of lab and department-specific equipment should continue to be budgeted and planned for within DLCIs as has been the Institute standard practice. CRSP should not be considered as a funding source for replacement equipment.

With very best wishes,



Tim



Joe

Lab Equipment Purchase and Maintenance Responsibilities

DLC, Project, Department of Facilities, and EHS

This document is intended to specify the parties responsible for the purchase and maintenance of various items of laboratory and facility equipment that are normally integrated as part of a CRSP or Capital Project. Attempts have been made to categorize all known pieces of equipment, but it is inevitable that new or unanticipated items will arise. If there is a question regarding the responsible party for such items, it is recommended that the project team return to CRSP for guidance.

Purchase - DLC Responsibility (DLC funded)

- Isolation Air Tables, including rigging expenses
- Inertia Tables, including rigging expenses
- Laminar Flow Tables
- BioSafety Cabinets – ducted or not ducted. Initial certification by project
- Vented Equipment Enclosures
- Local Water Polishers (e.g., MilliQ, Barnstead), in cases where a central building system is present
- Autoclaves – benchtop size
- Pumps (associated with specific lab equipment)
- Glove boxes (Non-vented or indirect vented)
- Miscellaneous stand-alone equipment (ie: analytical, diagnostic, testing)
- Microscopes, hot plates, etc
- Refrigerators and Freezers, including undercounter models
- Equipment Specific Chilled Water Cooling Systems (e.g., Neslab)
- Ice Machines for a lab
- Non-vented or indirect vented freestanding flammable and acid storage cabinets
- Local UPS systems (associated with lab equipment)
- Undercounter Glasswashers
- All dewars and cylinders
- IT Connectivity - IS&T Infrastructure. (IS&T purchases charges back)
- Security systems and devices - IS&T Infrastructure. (IS&T purchases charges back)
- Door hardware, keypad and pushbutton type locksets on doors.

Purchase - Project Responsibility (Project Funded)

- Provide building services to support equipment purchased by DLC's (ie: Mechanical. Electrical. Plumbing, Fire Alarm, and Fire Sprinkler System)
- Process gas piping connecting equipment from the point of the nearest distribution shut-off - including required gas manifolds, regulators, and shut-offs.
- Gas manifolds and regulators
- Necessary exhaust abatement systems equipment (e.g., scrubbers)
- Card Reader Access
- Fume Hoods (purchase, installation, and ASHRAE 110 commissioning)
- Autoclaves – larger units; floor mounted
- Controlled Environment Rooms (cold rooms, warm rooms, clean rooms)
- Clean Rooms
- Ice Machines in common areas available for shared laboratory use
- Gas monitors systems (e.g., toxic gas, oxygen depletion, flammable gases including H₂)
- Direct vented gas cabinets
- Flammable and acid storage cabinets integrated into fume hood bases
- Special localized exhaust and exposure control devices (ECD's) such as canopies, snorkels, slot hoods.
- Eye wash and safety showers and sinks
- Connection of Lab sink to Lab waste system
- Laser safety system (ie: interlock; laser curtains; alarms; signage)
- IT Communications provided is compliant with IS&T Design Standards, Division 27.
- Security systems provided is compliant with IS&T Campus Safety and Security Infrastructure Standards, Division 28.

- Hoists and associated structural support; initial installation requires an inspection/certification (depending on type) by a third party.

Maintenance, Repair and Replacement – DLC Responsibility (DLC Funded)

- Water Polishers (e.g., RO/DI, MilliQ, Barnstead)
- Clean steam generators that support lab specific localized systems (autoclaves, washers and humidification)
- All lab purchased hoods and equipment associated with hoods
- Biosafety Cabinet annual certification and testing and repairs (internal filters and fans)
- Biosafety Cabinet replacement
- Fume hood - replacement; any damage to doors and hoods
- Local and tabletop Autoclaves
- Pumps associated with specific lab equipment
- Equipment Specific Chilled Water Cooling Systems (e.g., Neslab)
- Controlled Environment Rooms (cold rooms, warm rooms, clean rooms)
- Local UPS systems
- HEPA filters on laminar flow exhaust hoods and bio safety cabinets
- Special localized exhaust and exposure control devices (ECD's) such as canopies, snorkels, slot hoods
- Toxic Gas Monitoring Systems (TGMS) – annual testing, calibration, repair and replacement
- In-House Vacuum Systems
- IT Connectivity - IS&T Infrastructure.
- Security systems and devices - IS&T Infrastructure.
- Door hardware, keypad and pushbutton type locksets on doors.
- Specialty Lighting Systems and Special Window Treatment Systems
- Specific equipment (i.e. animal bedding etc)
- Decontamination and Decommissioning Lab Spaces / Equipment
- Hoists - on-going maintenance and periodic inspections (by a third party)

Maintenance of DLC electric equipment, including documentation for the Energy Control Procedures and training for Lockout Tagout, a program to safeguard people from the unexpected startup of machinery and equipment, or the release of hazardous electrical energy during maintenance activities.

Department of Facilities (DoF)– Repair & Maintenance (R&M) Responsibility

- Fume Hood Repair – exhaust systems, fume hood sashes
- Biosafety Cabinet – external fans and filters only.
- Steam Services to and from large autoclaves
- Controlled Environment Rooms (cold rooms, warm rooms)
- Ice Machines
- Emergency Power for Safety and Critical Equipment

EHS Provided Services

- Fume Hoods Certifications
- Periodic testing of Exposure Control Devices (ECD) Certifications (ie: snorkels; drops; canopies, etc)
- Support for DLC-funded lab and equipment decontamination and decommissioning
- Support for a Model Energy Control Program (ECP) for use by DLCs that perform Lockout Tagout including sample ECP templates, periodic inspection requirements, training requirements, DLC sponsored work (equipment maintenance, renovation projects) and coordination with R&M DoF.