Department of Chemistry On-Campus Research General Considerations

I. Overview
Researchers in the Department of Chemistry occupy the Chemistry Building and the Chemistry Research Building. The Chemistry Building (CHEM1) is shared with the Art Department (CLA) and Chemical and Biological Engineering (WSCOE). The Chemistry Research Building (CHEMR) is occupied by Chemistry only. Because of this arrangement, the department has assembled the following plan to address overall safety due to the current pandemic as well as monitoring workforce occupancy.

The Chemistry Department created a template for researchers to use to create their own individualized safety/personnel plans. At least two members of the department executive committee review each plan, along with the department Chair, and resolve concerns/questions with the PI before the plan is submitted to Kauli.

To address workforce effort, each PI answers the following two questions, and answers will be assembled into a broader department/college document:
- Daily estimate or employees returning to on-site work
- Total number of personnel returning

Each PI is also required to put forth an initial plan that maintains less than 30% of the lab’s workforce on site at any one time.
- Prioritization of projects within the research groups
- Establishment of a work schedule that minimizes worker density while maintaining “normal” safety for chemistry research projects

As of May 2020, there are approximately 225 researchers associated with Chemistry, including PIs, students, postdocs, and scientists associated with startup companies. The 30% ceiling is nominally ~70 researchers occupying Chemistry-controlled space. More pertinent to researcher safety and physical distancing requirements is the distribution of workers in the various labs. Because of the variety of spaces and procedures for research in Chemistry, we have determined that this distribution of personnel is to be managed at the level of individual PIs and research groups. The Department will maintain a shared list of occupants and shift schedules to ensure that we stay below the University-directed ceilings. In addition, department insistence that PIs craft their own plans (using the template) promotes acceptance of the established limits on worker density.

II. Chemistry lab safety plan
Below contains department-approved general language. All members of research groups returning to labs under these plans will read, understand and follow the procedures and instructions herein.

A. General approach
Our goal is to safely ramp up our access to the laboratories while adhering to University directives, Larimer County and State of Colorado rules, and CDC guidelines for maintaining researcher health in a sustainable manner. The current safety plan takes into account the best information currently available; and may change as circumstances require. The primary guiding principle of this return-to-work plan is to maximize safety for researchers and the broader CSU community.
- All work that can be done remotely will be performed outside of the lab space and researcher office space on campus.
• Researchers who do not feel comfortable resuming research in the laboratory will communicate with their supervisor (they do not need to give details); they will continue to work from home, without penalty while CSU has workforce restrictions in place.
• Unless otherwise directed, we will not have more than 30% workforce in the lab/office spaces at any time.
• In addition, researchers will adhere to physical distancing guidelines in all lab and office spaces.
• Researchers must take appropriate training and provide informed consent before they can work in the lab.
• Researchers will wear appropriate personal protection equipment (PPE) when they are working on campus, including face masks as directed.
• Researchers will follow physical distancing guidelines and practice appropriate sanitation and disinfecting protocols using appropriate sanitizer and disinfectant.
• Researchers who feel ill will not come into the lab; they will self-quarantine and report appropriately to their supervisor. Researchers will remain quarantined for 10 days after the onset of symptoms, or 3 days after symptoms end, whichever is longer. In no case will they return to the lab earlier than 14 days after symptom onset. The Chemistry Department will follow CDC guidelines for researchers that have been exposed to COVID in their households.

B. Additional general guidance
The following portion of the safety plan lists practices that will be in place across the Chemistry Department community during the initial phases of reopening the research enterprise under CSU COVID workforce restrictions:

• **Physical distancing in lab/office spaces** – PIs will schedule the use of labs based on physical distancing parameters required currently. A 6 ft. radius of physical distance must be maintained around researchers at all times. However, in order to account for space occupied by typical office furniture, laboratory furniture, laboratory equipment, and instruments, PIs will allow for 225 sq. ft. per person when scheduling their workforce. In addition, all Chemistry laboratories and offices are set to maintain 7-11 full volume air exchanges per hour, independent of the number of air ducts in a given space. Thus, air flow will not be used as a justification to increase workforce capacity in a given space.

• **Personal protection equipment** – All workers will wear facemasks in buildings where masks are required, including but not limited to hallways, stairwells, bathrooms, laboratories, and multi-worker office spaces. There is some leeway for taking masks off in single-use spaces like faculty/staff offices, but that is the exception, not the rule. In principle, the University will provide face masks, however, the immediate sourcing of these face masks is not readily available at this moment. Groups and/or individual researchers will provide their own until the University has established a stable supply of facemasks. Researchers will not wear gloves outside of the laboratories in keeping with safety protocols maintained by the Department of Chemistry Safety Committee. Instead workers will wash their hands often with soap for 20 seconds.

• **Disinfectants and sanitization**—All Faculty and unit managers will order disinfectants and hand sanitizer for personnel to use in the laboratories and offices through the Chemistry Department Point of Contact (POC), Stockroom Manager Ben Shupe. The Chemistry Department POC will order the appropriate disinfectant from CSU Building Services Manager, Jamie Cardenas. The Chemistry Department POC will order CSU-made hand sanitizer from Karen Dobos. If these disinfectants and hand sanitizers are not available, the Chemistry Department POC will order these items from an alternative CSU-approved vendor.

• **Use of cameras** – Historically we have kept cameras out of labs but allowed them in hallways and other public parts of Chemistry space under limited conditions. Some have expressed well-intended interest to include lab cameras to improve safety for researchers working alone. We do not recommend such use, both because of privacy concerns and the fact that such use cannot improve safety unless someone is constantly watching the video in real time. Notwithstanding, use for monitoring equipment (e.g., instruments, gauges, gloveboxes) might be warranted in some cases, if described by PIs in section D.3. of the safety plan.

• **ADA compliance** – Asking employees if they are immuno-compromised or have a chronic condition is a disability-related inquiry subject to the Americans with Disabilities Act (ADA) restrictions. If an employee voluntarily discloses a specific medical condition or disability that puts them at increased risk of influenza...
or covid complications, this information must be kept confidential. All health information will be maintained as a confidential medical record.

- **Common spaces** – Lounges and kitchen-type areas will be closed, at least in the early phases of return to research. Furniture use in common areas will be avoided. The department will announce conditions under which those areas may be used in the future.

- **Research ecosystem coordination** – Besides minimizing density in individual labs, we recognize that occupation of subareas of the buildings also needs to be considered so as to minimize contact. Individual groups will maintain schedules of researchers on site, and will communicate with neighboring groups to minimize contact. This information will be made available to the department in case contact tracing is necessary.

- **Worker occupancy indicators** – All internal window coverings that are put up only for privacy will be removed. Additional possibilities are listed here, including but not limited to: adding signs (e.g., hanging on doorknobs) indicating presence of a researcher in lab; physical or electronic in/out lists. Note: the research restart working group has indicated that all rooms with hoods/specialized ventilation must keep doors closed.

- **Current COVID Projects**—All PIs currently leading critical research projects as designated by the University, will also complete the Kuali-based return to research safety checklist and will also provide a safety plan narrative. The workforce associated with the PIs’ “critical” research projects will be included in their overall 30%-level workforce calculation.

C. Floor plan or lab listing

Individual PIs will describe spaces that will be used or left vacant in order to maintain appropriate physical distancing. Where appropriate, PIs will mark traffic flow that will maximize physical distancing.

D. Plan to maintain health and safety of the research group

Part 1 below is mandatory for all chemistry researchers. Parts 2-4 will be modified by PIs as necessary to account for group- and space-specific concerns.

1. **Understanding Infectious Disease**: All researchers will take CSU-directed training on-line in order to gain a better understanding of the spread of pathogens and appropriate disinfection procedures. Online training will also include the proper use of CSU provided PPE. Combinations of the following on-line resources will be used for safety training by chemistry department researchers until CSU-produced COVID safety training is available:
   - Preventing the spread of disease: YouTube video from AgSafe.org to minimize spread
     https://www.youtube.com/watch?v=lUBVFekc95w#action=share
   - How to wash our hands effectively: https://www.youtube.com/watch?v=nEzJ_QkJT14
   - How to wear PPE and common dos and don’ts: https://www.youtube.com/watch?v=4xFY3aPF7E4
   - How to use disinfectants. https://www.youtube.com/watch?v=BVvb-_d6gfQ
   - CSU BSL-2 training (optional at this time): http://www.ehs.colostate.edu/WTrainReg/ClassSignUp.aspx

2. **Physical distancing**: All groups will answer the following questions individually to show how they will maintain physical distancing in each of the assigned spaces (office area, individual lab spaces or field sites)
   a. How many people could be in any given space at any time?
   b. What personnel “shifts” are needed to maintain physical distancing?
c. What data can be collected on-campus then processed remotely? What data must be processed on site.
d. What is the frequency that a particular researcher needs to be on campus to collect data?
e. What access does the researcher need to the various research sites? How do we address researchers who move around campus?

3. **Safety:** how is safety maintained in the research space?
   a. It is recommended that researchers do not work alone or they have a contact/check-in person so that someone knows when people are entering/leaving the space.
      i. How will access be monitored for safety?
      ii. With less activity in the building, how will “regular” lab safety be maintained?
   b. Researchers need to have the appropriate personal protective equipment (PPE) for their activities.
      i. Does the researcher have access to the needed PPE (i.e., gloves, masks, eye protection)?
      ii. Are researchers trained in using the PPE?
   c. Researchers who are immune compromised or do not feel comfortable coming to campus will be encouraged to continue to work remotely without penalty.

4. **Sanitation** – how are spaces sanitized based on decreasing the spread of disease?
   a. Have all researchers completed the on-line infection/sanitation training module?
   b. How will each space be cleaned/sanitized before and after use?
   c. If samples/instruments/keyboards are shared – how will they be treated between users to ensure safety?
   d. Is University-provided hand-sanitizer placed at the entrance to every research building and space?