**K-State Laboratory/Studio/Research Site Reopening Plan: COVID-19**

PI or Lab Head Prof. J. Smith

Building/Room Numbers/Locations 102a-f Anderson Hall

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| **General Reopening Checklist (auto check boxes)** | | |
| **Consultations and Notifications** | | |
| YES | N/A |  |
|  |  | Department Head (required) |
|  |  | ADR or Dean’s Office (required) |
|  |  | University Research Compliance Office (for compliance issues, IRB, IBC, IACUC) |
|  |  | Animal Care (CMG, LACS, or other as appropriate) |
|  |  | Information Technology Services (for IT items) |
|  |  | EH&S (notification required) |
|  |  | Facilities (notification required to know that research is resuming in space) |
|  |  | Human Capital Services representative (if needed) |
| **Personnel & Safety** | | |
|  |  | Determine how physical distancing standards will be applied – include sketches of lab space and number of sq. ft. |
|  |  | Consider and identify, if needed, staffing teams and rotations |
|  |  | List PPE requirements specific to the research to be conducted, order more as needed |
|  |  | Identify source of masks (e.g. surgical masks) needed for work with others |
|  |  | Assign minimal staff to make media, set up cultures, etc. before beginning full research |
|  |  | Develop communication strategy for team members (email, notifications, etc.) |
|  |  | List disinfection protocols to be followed (disinfectant used, frequency, etc.) |
| **Supplies & Equipment** | | |
|  |  | List equipment that will need to be recalibrated/certified and serviced. Schedule such service before having anyone arrive on campus. Distancing needs to be maintained with service technicians in addition to regular lab members. |
|  |  | List reagents/media that need to be remade or reordered |
|  |  | List consumables that need to be ordered/re-stocked |
|  |  | Start-up/test computer-controlled equipment prior to initiating runs |
| **Experimentation** | | |
|  |  | Identify first planned experiments and who will perform them |
|  |  | Plan the necessary duration of the research |
|  |  | Identify any animals that will be required |
|  |  | Consider whether a staggered start might be implemented while media is made, cell lines are started, items are reordered, etc. |
|  |  | Consider whether the research be easily halted if another step-down is necessary |
|  |  | Consider whether the research can be performed with limited staff and/or rotating teams |

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| **Specific Detailed Infrastructure/Safety Checklist**  **Add Additional Items as Applicable** | | |
| YES | N/A |  |
|  |  | Conduct visual inspection of entire laboratory and associated storage areas. Report any damage or lost materials to Assistant VP for Risk Compliance (with estimates of cost/value). |
|  |  | Review any ongoing experiments that were running during the hibernation that could have been affected by loss of electricity, water, or other services. |
|  |  | Ensure chemical fume hoods are functioning properly as per SOPs.   * If the fume hoods are on a schedule, confirm everyone in the laboratory understands the schedule |
|  |  | Ensure biological safety cabinets are functioning properly as per SOPs.   * If the biosafety cabinets are on a schedule, confirm everyone in the laboratory understands the schedule. |
|  |  | Ensure that all refrigerators, freezers, and incubators are functioning properly as per SOPs/manuals. |
|  |  | Ensure any essential equipment that was on emergency power is functioning properly. |
|  |  | Ensure any sensitive electrical equipment that was shut off and unplugged is functioning properly. |
|  |  | Review equipment operation safety.   * Review equipment manuals for safe startup instructions. * Review equipment state and safely release any stored-up energy sources. |
|  |  | Ensure any unplugged non-essential electrical devices particularly heat-generating equipment such as hot plates, stir plates, vacuum pumps, or ovens are functioning properly. |
|  |  | Confirm all glassware on the benchtops or stored in cabinets is still secured. |
|  |  | Confirm Dewar flasks and cryogen containers that were used for sample storage and critical equipment are still filled. |
|  |  | Confirm that storage of perishable items that used alternate cooling methods (e.g. liquid nitrogen, dry ice, etc.), vulnerable items put in storage units that have power backup systems, or items that were stored in duplicate locations are still secured and safe. |
|  |  | Check containers of chemicals, biohazardous, radioactive materials, and hazardous waste are still properly labeled, closed, not expired, and secured in appropriate storage areas. Arrange waste pick-up for expired materials or other waste. |
|  |  | Check infectious material and toxins that were put away for storage are still secure. |
|  |  | Review inventory of hazardous materials and controlled substances to ensure no losses/theft. Report any losses. |
|  |  | Check all gas cylinders to ensure that they are still secured and valves closed.  Ensure regulators are still not attached and caps are still in place on cylinders.  Ensure natural gas lines in the laboratory are still closed. |
|  |  | Ensure that all water sources (e.g. circulating water baths, aspirators, etc.) are not leaking. |
|  |  | Check eye wash stations and flush for at least 10 mins to ensure any bacteria that built up have been removed. Document on test log record. Report malfunctioning units. |
|  |  | Pour water down any dry floor drains or traps. |
|  |  | Check all disinfectants and appropriately discard any that have expired. |
|  |  | Return any elevated equipment, supplies, electrical wires, or chemicals that were off the floor to protect against flooding from broken pipes. |
|  |  | If necessary, restore any backed up secure data and turn on non-essential/non-critical computers and equipment. Return any secured laptop computers or other easy to remove electronic devices. |
|  |  | Remove “Notice of Hibernation”. |
|  |  | Review safety procedures.   * Review/update any internal laboratory hazard analysis. * Review/update the Chemical Hygiene Plan, Radiation Safety Manual, Biosafety Manual, and any other Standard Operating Procedures. |
|  |  | Review any shared facilities, such as microscopy areas, analytical laboratories, etc., for any use restrictions.   * Delays due to start-up procedures. * May have restricted schedules to accommodate social distancing. |
|  |  | Prepare for supply chain disruptions and limited availability.   * Recognize that order placement may be slower as the volume of requests increases. * Plan for limited sales of high demand items. * Plan for limited Personal Protective Equipment availability (including N95s, face shields, and gloves). * Plan for some reagents having limited availability. * Plan for some consumables having limited availability. |
|  |  | Update laboratory registration, chemical inventory, and lab signage [submit revised lab form or send to safety@ksu.edu email]. https://www.k-state.edu/safety/lab/labsafety/commissioning/registration.html |
|  |  | Confirm that any IACUC, IBC or IRB protocols have not expired. |
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# **(SAMPLE I) Plan for Reopening**

PI/Director J. Smith

Building/Room Numbers/Locations 102 a-f Anderson Hall

**Staffing:**

1. Essential personnel

* J. Smith (PI) – 555-1212
* F. N. Stein, postdoc – 555-1234
* M. Curie, graduate assistant – 558-4209
* V. Impaler, graduate assistant – 867-5309

2. Other personnel

* Phase I: As above + N. Abram
* Phase II: Phase I + K. O’Connor
* Phase III: Phase II + T. Silva

3. Continuity of Authority

In the event that the PI is out, these are people to contact for assistance:

* PI designee #1– F. N. Stein. 555-1234, franknstein@madeupemail
* PI designee #2 – V. Impaler. 867-5309, tommy2tone@madeupemail

**Communication:**

* Smith will email the group with updates about any Phase changes and dates
* Look for postings on the group Facebook page
* Zoom meetings will be scheduled for each Wed. noon (invitations by email) and one-on-one mentoring sessions in the office (102 a) will be on and as-needed basis

**Research Priorities:**

1. Phase I: Stein and Curie will have priority access for their NSF project since a report is due in July. Impaler is finishing work on the DOE project and is scheduled to finish in September to start a postdoc at the DOE lab and Abram is learning to frame new experiments. Phase II: O’Connor will finish the review chapter and begin working on the NSF project. Phase III: Silva will start working on the DOE project and is expected to be a GTA in the fall 2020.

2. Research priority is given to Stein and Curie through the summer and as supplies last since they need to finish using the Radiometer before the next annual rebuild – Abram will help with this. Resume projects for O’Connor (new Radiometer experiments) when we have resupplied the flux capacitor. Silva needs to start growing the dilithium crystals for the next experiments that need to start in October.

3. Research activities involving data analysis or writing should be done from home. 102 b, c (student office spaces) should be limited to one person at a time for social distancing, so Curie, Impaler have priority to finish their work, but writing can be done at home. In Phase II, Abram and O’Connor can return to using the offices, but minimize time when they are full. If you need to be there, wear a face mask and be sure to clean your desk surfaces (face masks have been ordered, Clorox wipes are in the office). Desks should be configured to maximize distances between them.

**Lab facilities/operations at different risk levels:**

**1. Operation with heightened risk (Phase I).**

Labs/offices staffed during very limited hours

* 102 e (Radiometer lab) time running experiments should be maximized with minimum number of people (one at a time)
* Stein, Curie, Impaler should use the sign-up sheet for usage of Radiometer
* Working remotely is strongly encouraged – minimize your time in the offices/labs
* Abram can cycle in as needed to learn new techniques. One person per fume hood (102 d).
* Lab safety is critical. Be sure to use the buddy system (never alone in the lab).
* Wipe off surfaces with Clorox wipes (this follows through Phase III)
* Wear a face mask when in 102 b-f with others (this follows through Phase III)

**2. Operation with moderate risk (Phase II).**

Labs/offices staffed during limited hours.

* O’Connor will start in lab with Stein, Curie – finishing sample analyses in 102 d
* Minimize time in offices (102 b,c) and use data analysis software at home
* Impaler will start to prep samples for Silva; Silva will work on a literature review for his thesis
* Flux capacitor may need to be resupplied – check levels daily
* Group meetings will continue by Zoom, one-on-one with Curie to finish her thesis.

**3. Operation with limited risk (Phase III).**

Labs/offices staffed during business hours and some after-hours activities.

* Silva learns to grow dilithium crystals by shadowing Impaler. Check that if there may be a Phase change in 2 days, do not start a new crystal growth.
* Office space will allow more time for students, postdoc but continue social distancing. Wear a face mask if you are not able to distance 6’ in the office (check mask inventory daily and reorder as needed.)
* Particular vigilance for your colleagues – look for signs of illness and look after each other
* Group meetings in 201 c will resume every Wed. face-to-face

**4. Operation as normal or Phase Out**

Labs/offices staffed during business hours and after hours. Meetings in person. Continue to follow good public health practices.

**Inventory of SOPs for Minimizing community spread:**

Current SOPs in the spaces require daily surface sterilization of work spaces using 70% EtOH, and frequent hand washing. In addition, we will implement the following steps to minimize the possibility for virus transmission:

1. We will strictly enforce *access to all laboratory spaces to authorized personnel only*. All other personnel entering laboratory spaces must seek permission by either the PI or designee, first. This includes facility personnel, as well as personnel from external contractors. Exceptions are emergency situations that pose immediate risk, such as fire.

2. Occupancy of all labs that are assigned to or shared by the PI will be limited to ensure adequate distancing to 6 ft, as currently recommended by the CDC. Specifically:

a. 102 b, c, Anderson Hall: 2 persons

b. 102 e, Anderson Hall: 1 person (buddy system in place)

c. 102 d Anderson Hall: 2 persons

d. 102 f Anderson Hall: 2 persons

3. Only healthy personnel, regardless of the level of symptoms and research priority, are allowed to enter the lab spaces.

4. Upon entering any laboratory space, personnel must wash hands immediately and in accordance of CDC guidelines, before touching any surfaces.

6. Working surfaces will be sterilized with Clorox wipes prior to assuming work and after completing work. 70% ethanol or isopropanol solutions may substitute for Clorox wipes

7. In-person activities will use at least 6 feet distancing.

8. Face masks may need to be worn in room 102 b, c if social distancing cannot be maintained. Face masks may be procured from 3M. If you have not received face mask training, you must request it from EH&S: <https://www.k-state.edu/safety/covid-19/training/>

9. If sick, you should call Lafene Health Center 532-6544 (or 911 for an emergency) and not report to work. Communicate with Smith or Stein.