

April 2020

Updated COVID 19 Standard Operating Procedures (SOPs) for INSTAAR Stable Isotope Lab, Radiocarbon Lab, Atmospheric Research Lab with specific guidelines for working with NOAA flasks

Background.

As we continue to operate our labs with designated essential personnel we must take steps to maximize the safety of every individual during this COVID19 pandemic. By choosing to maintain the NOAA Greenhouse Gas Measurements and/or other tasks that we deem mission critical, we are literally walking the line between keeping the science going and the associated health risks. These risks include those to ourselves, to those we live with or care for, and to those at NOAA and cognate SEEC labs who are also handling the flasks and interacting with us both directly and indirectly.

NOAA has prepared SOP's for their wide range of operations, and the CCGG-specific SOP's are attached as a separate document. CCGG have outlined specific details re: flask handling, analysis, pick up and deliveries between labs, and movement within NOAA. Below we list specific items that concern our operations within and between our labs at SEEC.

By now, many of these precautions are common sense, but we list them here to remind us.

1. General Operations.

- a. To access SEEC, please use the door closest to the your lab area (east door if possible for SIL).
- b. When working in a confined area limit the number of personnel to ONE whenever possible.
- c. Maintain 6 ft. person-to-person separation when working in any area (instrument bay, flask distribution area, etc.).
- d. Stagger shifts whenever possible, with minimal overlap as needed.
- e. Wear lab-gloves whenever possible –to protect yourself from surfaces, surfaces from you, and to encourage you to avoid touching your face.
- f. Wash hands frequently: upon arrival and departure; when using the 'coffee' area for any reason (discouraged); before and after using the restroom; before donning and after removing removing gloves.
- g. Let others know when you are working in the lab alone
- h. Communicate immediately with your supervisor or others in the lab about any changes in your health
- i. Monitor your temperature on a daily basis and DO NOT come to SEEC if you are feeling ill by any measure (fever, cough, sore throat, etc.)
- j. Wipe down surfaces at least twice per day – coming and going (see lab specific list below)
- k. Use the restroom closest to your work area, and don't wander the building.

- l. DO NOT enter or occupy areas not needed for your work.
- m. Those without specific tasks in the Optical Instrument (upper carpeted level) of SIL may not enter that area. ARL and 14C personnel may not enter this area.

2. Workplace care and sanitation.

- a. Keep track of what days and hours you are in the lab, in case you need to back track that information later.
- b. Wipe down the following areas at least twice a day including all likely “touch surfaces” in these areas:
 - i. Door handles inside and out, to rooms S195 (East and west); S185; Flask Room. Include likely places on door where hands might land.
 - ii. Key lock box outside of S195
 - iii. S195 coffee area: all sink handles; all buttons on espresso machine; microwave controls and door.
 - iv. Limit food preparation while at the lab
 - v. Instrument keyboards and mice of all shared instruments
 - vi. Commonly used tools (LN2 wrenches; Allan keys; etc.)
 - vii. Liquid Nitrogen filling station area including: Power switch inside; door handles to fill area; keypad for fill station, etc.
- c. If you see someone who you don't know as a designated essential worker, or anyone who you think might not be aware of these protocols in the area, stop and ask them (politely of course!) why they need to be there.

3. Flask Specific Operations.

- a. Precautions taken to prevent virus spread
 - i. Only one person at a time whenever possible. If there are multiple people, maintain 6 ft. person-to-person spread.
 - ii. When entering the lab, wash or disinfect hands with hand sanitizer and don gloves. A box of gloves will be available at the entrance of the laboratory, as well as hand sanitizer.
 - iii. After the analysis, wipe down PFP touch surfaces and flask valves (to the extent possible without risking flask breakage) before transfer to next lab or handler.
 - iv. When finished, remove and properly dispose of gloves and wash/ sanitize hands before moving on to next work area or task.

4. Staging of flasks, tanks and PFPs.

- a. Deliveries to and from NOAA are staged at the SIL loading dock. Completed samples can come from the C14 and VOC labs directly to the area near the LN2 filling station if SIL personnel are present. Completed samples can also go to the flask room if SIL is closed. DO NOT enter upper SIL Optical Instrument/carpeted area in order to access SIL loading dock or LN2.
- b. Samples for SEEC distribution (VOC, C14, SIL) will be staged in the flask room as normal.

- c. Please coordinate flask movements with SIL staff. Maintain physical distance.
- d. Follow sanitation guidelines above (section 3), i.e., don gloves, wipe touch surfaces before and after.

5. Flask pickup and delivery at SEEC.

- a. Deliveries made to the small SIL loading dock in coordination with NOAA.
- b. Leave flask boxes/cleaned PFPs on the SIL dock when accessible. If not accessible, notify SIL/14C/VOC personnel as to alternate location (Flask Distribution area) of completed flasks and PFPs.
- c. Do not open the door to talk to the delivery person – give a friendly wave instead!

6. Liquid Nitrogen Filling.

- a. PLAN AHEAD. Arrange for access to SIL LN2 fill station. DO NOT enter upper SIL Optical Instrument/carpeted area in order to access SIL loading dock or LN2.
- b. Adopt sanitation protocols outlined under items 2 & 4 above.