MRL SEF Operations During the Research Ramp-Up 3

MIT On-Campus Research Ramp-Up Stages

- March 2020: Pre-COVID-19
- May 18: Critical experiments
- June 15: Pilots
- July 27: Ramp up Phase 1
- Oct 14th: Ramp up Phase 2
- Oct 14th: Ramp up Phase 3

MRL Staff
Materials Research Laboratory at MIT
10/28/2020
EMSEF – Building 13

10 people in entire suite
EMSEF – Building 24

464 SQ FT
2 people

190 sq ft

Entrance station
XRDSEF – Building 13

Pinch point

Entrance station

6 people in 4027 and 4040

6 people in 4027 and 4040
ASEF – OTC and Surface – Building 13

839 SF
OTC
5 people

424 SF
OTC
3 people

407 SF
Surface (AFM)
3 people

675 SF
Surface (XPS)
3 people

Entrance station
Entrance station
### Phased plan for MRL SEFs (1)

<table>
<thead>
<tr>
<th>PPE requirement</th>
<th>Cleaning policy and protocol</th>
<th>Instrument training protocol</th>
</tr>
</thead>
</table>
| **MIT Phase RR1**  
(June 15th – July 27th)  
≤ 25% capacity on campus | **MIT Phase RR2**  
(July 27th – Oct 14th)  
≤ 50% capacity on campus | **MIT Phase RR3**  
(Oct 14th)  
New normal |
| 1. All users must wear gloves in the facility, as well as facemasks that meet MIT guidelines.  
2. Used PPE must be properly disposed of in the designated trash bin.  
3. Replace the plastic covering on the computer workstation peripherals after your session.  
4. Safety glasses are not shared. PI’s required to issue individual safety glasses.  
5. Replace gloves upon finishing tasks involving chemical residues to avoid contamination of equipment. | 1. All users must wear gloves in the facility, as well as facemasks that meet MIT guidelines.  
2. Used PPE must be properly disposed of in the designated trash bin.  
3. Black misting bottles used to sanitize peripherals. No more plastic covering.  
4. Safety glasses are not shared. PI’s required to issue individual safety glasses.  
5. Replace gloves upon finishing tasks involving chemical residues to avoid contamination of equipment. | 1. All users must wear gloves in the facility, as well as facemasks that meet MIT guidelines.  
2. Used PPE must be properly disposed of in the designated trash bin.  
3. Black misting bottles used to sanitize peripherals. No more plastic covering.  
4. Safety glasses are not shared. PI’s required to issue individual safety glasses.  
5. Replace gloves upon finishing tasks involving chemical residues to avoid contamination of equipment. |
| 1. Users must use provided alcohol to wipe down contacted surfaces on the instrument and inside the room before and after each session.  
2. Lab staff to wipe down high touch surfaces in afternoon prior to leaving facility.  
3. Periodic decontamination services will be scheduled to ensure clean high traffic areas. | 1. Users must use provided alcohol to wipe down contacted surfaces on the instrument and inside the room before and after each session.  
2. Lab staff to wipe down high touch surfaces in morning upon arrival and afternoon prior to leaving facility. | 1. Users must use provided alcohol to wipe down contacted surfaces on the instrument and inside the room before and after each session.  
2. Lab staff to wipe down high touch surfaces in morning upon arrival and afternoon prior to leaving facility. |
| 1. In-person training must be suspended during RR1, except in cases of exceptional need (requiring pre-approval by the CF Leader, the user’s PI and their DLC head).  
2. Efforts will be made to provide virtual instrument refresher training on a case by case basis for trained novice users.  
3. Training sessions for data analysis software packages will continue as scheduled, but will be performed using remote videoconferencing tools. | 1. In-person training for MIT users of SEF instrumentation will be 2 people (lab manager and trainee). Remote instruction augmented by hands-on training with social distancing protocols.  
2. Training sessions for data analysis software packages will continue as scheduled but will be performed using remote videoconferencing tools (Zoom). | 1. In-person training for MIT users of SEF instrumentation will be 2 people (lab manager and trainee). Remote instruction augmented by hands-on training with social distancing protocols.  
2. Training sessions for data analysis software packages will continue as scheduled but will be performed using remote videoconferencing tools (Zoom). |
| Lab occupancy limits at any one time | Phase RR1  
(June 15th – July 27th)  
≤ 25% capacity on campus | Phase RR2  
(July 27th – Oct 14th)  
≤ 50% capacity on campus | Phase RR3  
(Oct 14th 2020)  
New normal |
<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>ASEF – Surface (2 rooms)</td>
<td>Max 2 users per room</td>
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</tr>
<tr>
<td>ASES – OTC (2 rooms)</td>
<td>Max 2 users per room</td>
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</tr>
<tr>
<td>EMSEF (entire suite)</td>
<td>6 users (1 per bay) (+1 user in Bldg 24)</td>
<td>EMSEF (entire suite)</td>
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</tr>
<tr>
<td>XRDSEF (one room)</td>
<td>Max 4 users</td>
<td>XRDSEF (one room)</td>
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</table>
| Reservation policies                | 1. High demand tools have limits on total reservation time in a 2 week horizon.  
2. 1 hour delays between users in electron microscope rooms  
3. No walk up usage. Must make reservations 24 hrs in advance.  
4. Reservations will be monitored by staff for spatial and temporal distancing. | 1. High demand tools have limits on prime time (9A-5P) reservation time in a 2 week horizon.  
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4. Reservations will be monitored by staff for spatial and temporal distancing. |
| Facilities schedule and accessibility | 9A-5P Mon-Fri  
1. Trained users. Staff will be on campus and on call via Zoom. All user interactions will be virtual except in exceptional circumstances. | 1. Trained users. Staff will be on campus and on call via Zoom. In-person user interactions will be limited based on social distancing guidelines. | 1. Trained users. Staff will be on campus and on call via Zoom. In-person user interactions will be limited based on social distancing guidelines. |
| Afterhours, weekends, holidays      | 1. Trained users with after hours access privileges. On call contact available for emergency safety situations. | 1. Trained users with after hours access privileges. On call contact available for emergency safety situations. | 1. Trained users with after hours access privileges. On call contact available for emergency safety situations. |
| Access restrictions                 | 1. No in-person assisted users.  
2. No external users. | 1. External user sample submission for data collection at assisted use rates  
2. No new external users | 1. External user sample submission for data collection at assisted use rates  
2. No new external users |
## Instrument reservation policies in Phase RR2

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<tr>
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<th>XRDSEF</th>
<th>EMSEF</th>
<th>ASEF - Surface</th>
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<td><strong>Lab specific reservation policy</strong></td>
<td>Users can only have one standing reservation at a time per tool. New reservations can be made after existing reservation is used. The maximum length of reservation is detailed below.</td>
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<td>Users can only have one standing reservation at a time per tool. New reservations can be made after existing reservation is used. A daytime reservation cannot exceed 4 hours without permission from the lab supervisor.</td>
<td>No modification of Coral restrictions.</td>
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<td><strong>Tool specific reservation total time limits in 2 week horizon</strong></td>
<td>Smartlab thin film XRD: 4 hrs Panalytical PXRD: 4 hrs</td>
<td>Zeiss Merlin HRSEM: 3 hrs FEI Helios FIB/SEM: 5 hrs JEOL 2010 HRTEM: 4 hrs FEI Tecnai TEM: 4 hrs JEOL 2010F TEM: 4 hrs JEOL 2011 TEM: 8 hrs ION MILL: 8 hrs</td>
<td>No tools with specific total time limit restrictions.</td>
<td>SQUID MPMS VSM: 48 hrs</td>
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<td><strong>Note:</strong> New reservation can be booked after completing existing reservation</td>
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<td><strong>SEF-wide policies</strong></td>
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<td>2. Users must indicate on the room's occupancy door board that they are in the room and remove that indication when they leave the room.</td>
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<td>4. Reservations will be monitored by staff for spatial and temporal distancing.</td>
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