



**Multi – Division Assessment
of
Doing Science Safely During
COVID-19**

2021-2022

ES&H Self-Assessment Report



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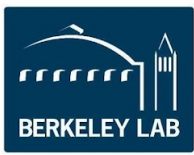
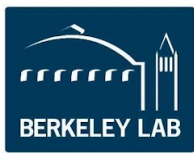


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1.0 Executive Summary

Participation in the assessment provided the following benefits:

This Self-Assessment will assist our Associate Laboratory Directors, Division Directors, and Division Deputies in implementing the LBNL COVID-19 policies that are within the scope of Division Safety Coordinators:

- Ensure Area and Division leaders are engaged in the stewardship of worker health and safety at all Laboratory and off-site locations.
- Prepare for Future of Work and possible future work disruptions

To improve implementation of COVID-19 controls at LBNL, the assessment team recommends improvements to the following systems:

- Communications
- Coordination with Facilities
- Resources for child and elder care
- Teleworking support
- Travel planning and authorization

See Section 3.2 for detailed recommendations.

2.0 Scope

The following Divisions, described hereafter as the Participating Divisions, and their matrixed personnel and affiliates conducted a joint assessment of implementation of COVID-19 controls at LBNL:

- Physical Sciences Area:
 - Accelerator Technology & Applied Physics (AA)
 - Engineering (EG)
 - Physics (PH)
- Earth and Environmental Sciences Area (EESA):
 - Climate and Ecosystem Sciences (CESD)
 - Energy Geosciences (EGD)
- Directorate/Operations:
 - Laboratory Directorate (LD)
 - Operations (OP)
 - Human Resources (HR)
 - Office of the Chief Financial Officer (CF)



The assessment focus is the evaluation of the impacts of COVID-19 control systems, documentation of issues discovered and lessons learned during implementation, identification of best practices, and recommendations for improvement.

This Self-Assessment will assist our Associate Laboratory Directors, Division Directors, and Division Deputies in implementing improvements to controls that are **within the scope of Division Safety Coordinators**.

Methodology

Methods included:

Evaluation of Documents and Tools: Division Safety Coordinators reviewed information communicated to Divisions through LBNL websites, policy manuals, and emails. We assessed the participating Divisions' experiences with tools used to track implementation of COVID-19 policies.

Focus Group Interviews: Division Safety Coordinators collected and documented feedback from key people involved in COVID-19 control efforts to identify issues, Lessons Learned, and Best Practices.

Benchmarking: Division Safety Coordinators and EHS shared information from benchmarking of other selected DOE Labs.

The assessment took place in FY2021. The assessment activities included:

- January 4, 2021 -- Began organizing team, planning scope and lines of inquiry.
- January 25 - February 8 – Team meetings to work on a draft plan.
- February 11 - February 22 – ALD and Division Director review and approval of self-assessment plan.
- February 24 - May 12 - Gathering information, planning focus groups
 - March 24 - Directorate/Operations joins self-assessment team
 - April 28 - Meeting with Office of Institutional Assurance and Integrity
- May 20 - December 1 - Focus Group Interviews conducted.
- November - December 2021 - Team prepared assessment report.



Current Requirements

Listed below are some of the key regulations, standards, and requirements driving LBNL's COVID-19 Control Policies at this time:

Federal Regulations and Guidelines:

Centers for Disease Control Guidance:

<https://www.cdc.gov/coronavirus/2019-ncov/your-health/index.html>

DOE Standards:

[DOE COVID-19 Workplace Safety Plan](#) and [COVID-19 FAQs](#)

California Requirements:

- Title 8, Subchapter 7, (General Industry Safety Orders), Group 16 (Control of Hazardous Substances), Article 109 (Hazardous Substances and Processes), Sections 3205 through 3205.4, [COVID-19 Prevention \(Emergency Temporary Standard\)](#) (8 CCR 3205-3205.4)
- [California Department of Public Health \(CDPH\) COVID-19 Home Page](#)

Alameda County Requirements:

[Alameda County COVID-19 website](#)

City of Berkeley Requirements:

[City of Berkeley COVID-19 website](#)

LBNL Requirements:

EHS Manual, Chapter 46, COVID-19 Prevention Program:

https://docs.google.com/document/d/1EDWdhx-hXjQ7IT_MQbL7znVQotXWLasm1ZKXIShkCiQ/edit



3.0 Results

3.1 Lines of Inquiry:

1. Are LBNL systems for controlling COVID 19 effective and efficient?

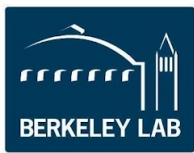
LBNL systems for controlling COVID-19 have been effective in limiting the occurrence of COVID-19 cases on site; however, they have not always been efficient. Due to the rapid onset of the pandemic, it was necessary to develop new systems as needed and adapt them to changing conditions. Continuing improvements will be needed to increase effectiveness and efficiency.

2. Has COVID-19 had significant impacts (negative/positive) on scientific and engineering research efforts and support work in the participating Divisions? How could negative impacts be minimized while maintaining safety?

While most research project deadlines have continued to be met, there have been some disruptions of field work and collaborations requiring travel. There has been increased stress on all categories of personnel.

There were some positive impacts as well. Regular communications from Lab Management were much appreciated and received positive comments. Some systems have strengthened during the pandemic, including cooperation between Division Safety Coordinators, interactions between EHS and Division ergonomics teams, increased abilities to telecommute, and some improvement in the Facilities Area Manager program.

This self-assessment has identified opportunities for additional improvements to systems that will reduce negative impacts, improve safety, and increase our preparedness for the uncertainties of the future.



3.2 Findings, Observations, and Noteworthy Practices:

3.2.1 Findings

A Finding (a term that is interchangeable with “Issue”) refers to a programmatic or performance deficiency and/or a regulatory, policy or procedural noncompliance generally identified in a formal assessment or audit.

While there were some temporary lapses in compliance with COVID protocols, there were no widespread or persistent non-compliance situations that would warrant Findings.

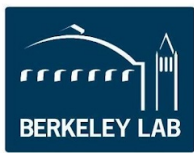
3.2.2 Observations

An Observation is a practice or condition that is compliant with a regulation or requirement, but, if left unaddressed, could lead to a noncompliance.

Most of the interviews took place May - August 2021. A lot of progress has been made by the Lab and the Divisions to address some of the recommended actions in the table below. For example, site access systems improved, travel process approvals have improved, facilities work order and response time is improving. At the beginning of the pandemic, there was limited guidance. The Return to Work newsletter improved communications immensely and addressed questions related to ergonomics, telework, flexible work schedules, and other COVID-19 related concerns.

There were 5 key observations, listed here in alphabetic order, not in order of priority. There has been an evolution of practices and recommended actions were implemented by the Divisions as appropriate since the beginning of the pandemic (March 2020) and throughout the assessment period.

Observation	Recommended Action
<p>Communications of Covid-19 protocols: Interviews indicated that Supervisor-to-worker communications were not always effective.</p>	<p>Interviews reported a set of strategies that worked well as they were implemented:</p> <ul style="list-style-type: none"> ● Strong management engagement in communications; ● Routine meetings with supervisors and on site staff (e.g., spring training, tailgate); ● Centralized Division email address for people to request access to site or



	<p>establishing a management team to coordinate site access readiness and approvals;</p> <ul style="list-style-type: none"> ● Utilize Calendar/scheduler for organizing onsite access when possible.
<p>Coordination with Facilities: The responses to work requests were variable and inconsistent. Scheduling and communication of work with people on site was inconsistent.</p>	<p>Divisions should continue to work proactively with Lab Management and with Facilities to encourage:</p> <ul style="list-style-type: none"> ● Involving Facilities Area Managers in communicating the scheduling of short duration work with occupants. ● Improving tracking of Facilities work. ● Use of Technical Area Designation website. ● Ensuring critical crafts are available for urgent work. ● Discuss scheduled preventative maintenance in older buildings to reduce emergency repairs.
<p>Resources for child and eldercare: Workers lost access to established resources and needed more assistance in locating alternatives.</p>	<p>In times of social disruption when normal resources are not available, management should consider the following measures to retain personnel and sustain productivity:</p> <ul style="list-style-type: none"> ● Increasing flexibility in work schedules, for both teleworkers and on-site workers. ● Showing understanding/ appreciation for workers. ● Adjusting workloads and deadlines as necessary.
<p>Telework support: At the beginning of the pandemic, there was limited guidance and resources for teleworkers. Workers experienced inconsistent access to internet and telephone resources.</p>	<p>To prepare for a future work environment that includes ongoing telework, Divisions should:</p> <ul style="list-style-type: none"> ● Continue to pursue ergonomics support and options.

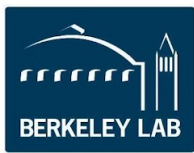


	<ul style="list-style-type: none"> ● Include more information about IT support as part of the on-boarding process. ● Evaluate needs for Lab phones. ● Provide easier access to information about the computing and telecommunications resources available and how to use alternatives.
<p>Travel planning and authorization: Opportunities for professional development and collaboration were missed due to limited travel. Younger researchers' careers were affected. Field work deliverables were delayed. The approval process was inconsistent, confusing, and developed too late. The Work Planning and Control system was not designed for travel authorization and was not an appropriate or efficient tool.</p>	<p>Division management should work with Lab management to encourage:</p> <ul style="list-style-type: none"> ● Development of an expedited travel review and approval process that provides more local control. ● Allowing conference attendance consistent with CDC Covid control protocols. ● Evaluate integration of travel planning and authorization processes.

3.2.3 Noteworthy Practices

A Noteworthy Practice is a practice or condition that is recognized for excellence, and should be considered for Lab-wide application. The following Noteworthy Practices identified:

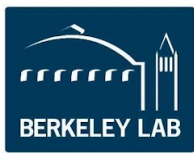
- Labwide, a high degree of respect for fellow workers and prompt shutdown were appreciated.
- EHS and Division ergonomics teams worked well together to provide support.
- Covid-related WPC Activities were tailored to the hazards and controls of each Division.
- EESA senior management developed the controls, regularly communicated with EESA staff and provided oversight throughout the covid shutdown. EESA defined 5 safety roles with expectations for each and a centralized email for access approval.



- EESA developed a formal travel approval process that started with the travel request submitted to the Division Director for review and approval using the [FIELD WORK OR GENERAL TRAVEL REQUEST](#). Upon approval and WPC completion, a justification memo was drafted for the ALD's review and submission to the LBNL Directorate/DOE. Upon final DOE/Directorate approval, the travelers had to submit a [request for travel to authorized field site](#) for the EESA management/DSC review of the local covid conditions prior to travel.
- The Engineering Division provided face mask support frames for on-site workers to reduce fogging of safety glasses.
- The Engineering Division developed an ISM refresher course and shared it with other Divisions.
- The Engineering Division developed new approaches for performing work to reduce the need for 6 ft. distancing.
- ATAP led Physical Sciences Area Safety Week working with Engineering, Physics and ALS-U. The focus was to check on-site conditions and prepare for return to work.
- ATAP programs held routine meetings with on site staff to communicate COVID 19 control measures and ensure all staff were ready for experiments.
- ATAP developed a google sheet-based scheduling system to account for on-site staff, space allocation and management oversight.
- ATAP also created COVID 19 supply stations in offices and common areas that included tri-fold signage with EHS approved guidelines.
- Laboratory Directorate/Operations Area provided extensive on-going ergonomic and wellbeing support to teleworkers.
- Laboratory Directorate/Operations Area identified key contacts for access questions and concerns within each division and clearly communicated those to staff.
- Laboratory Directorate/Operations Area used staff tracking sheets to ensure access limits were not exceeded and to account for staff intending to come on-site that may require additional approvals and/or training.
- The Physics Division initiated weekly on-line meetings for Physical Sciences Division Safety Coordinators to share information and maintain social contacts. Safety coordination has improved.

4.0 Conclusion

LBNL people appreciated the Lab's concern for employee health and safety, as demonstrated by the decision to reduce on site operations early in the pandemic. They also appreciated Lab and Division management's regular communications, which kept them informed about the Lab's status and made them feel like a part of the Lab



community. There were improvements to safety and management teamwork which will continue to provide benefits. New systems were developed that will strengthen our ability to work more flexibly in the future. To improve the efficiency of COVID-19 control at LBNL and prepare for any similar work disruptions that appear in the future, the assessment team recommends additional improvements to the following systems:

- Communications
- Coordination with Facilities
- Resources for child and eldercare
- Telework support
- Travel planning and authorization

5.0 Appendices - Summaries of Division COVID-19 Assessments

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Appendix 5.1 Physical Sciences Area

Accelerator Technology and Applied Physics Division:

Issues:

Overall Impressions

Most people understood the necessity of limiting contact during COVID-19. They appreciated LBNL's efforts to keep them safe and allow them to continue working. Compliance with required controls was good. People are getting more comfortable with working remotely, but there is more to learn. The transition was difficult. **There will be a permanent change in the culture, with a mixture of on-site and off-site work.**

Communication of COVID-19 Requirements

The main sources of information were emails, virtual meetings, the EHS COVID-19 website, Elements, and training. There were positive comments about communication efforts by Lab Management; particularly, Mike Witherell's Level-1 emails and presentations made new people feel more connected to the Lab, and Michael Brandt's presentations at the Monday meetings were very useful. Division management found the Area and Division meetings the most useful. The weekly Division meetings at the beginning of the pandemic were useful. **The recommendations are 1) centralize information to make it easy to find (to avoid duplication of messaging we asked employees to go to the Lab's COVID 19 website. EHS web site had some information as did the Lab's COVID 19 website. The feedback was to have all the information on one website). and 2) increase communications from Area/Division management to their employees (the Return to Work newsletters helped the communications from Area/Division/Lab management to employees so there was consistent messaging). Moving forward, a few Division Town Halls would be helpful.**

Social Cohesion

Regular (weekly, daily) virtual work group meetings helped people develop or maintain social cohesion and coordinate work. Social contact helps people understand how their work fits into the "big picture" of what is going on at the Lab. There was little interest in purely social meetings, but meetings that mixed business needs with social interaction worked well. People used a variety of tools to maintain contact, including shared Google sheets, SLACK channels, Zoom, emails, phone calls, texts, Google chat,



Google rooms. **The recommendation is for work groups to have regular (virtual or appropriately distanced) meetings that mix business needs with social interaction.**

Working on Site

Required controls were generally being followed. There were no complaints about people not following controls.

Site Access, Distancing, and Space Occupancy

Some people found site access requirements confusing. Each Division had to develop a tool (spreadsheet/calendar) to track available entry slots and employee locations and communicate if slots are available. The allowable thresholds for site entry and occupancy kept changing, which posed a challenge for administrators. There was no global tool for finding space. Office work with doors closed worked well. The 6 ft. distancing rule and shortage of approved office space made working on site less efficient. There were some concerns about shared tools and spaces. There was a safety trade-off between maintaining distance and not working alone. Distance made it harder to meet new people or share ideas spontaneously. It was easy to maintain distance in the laser labs, but difficult in the control rooms. Some research tasks require more than two people. It was difficult to give lab tours or collaborate. Researchers were eager to speed up the transition back to working at the Lab and increase room occupancy. While the strict occupancy standards have been relaxed with the increase in employee vaccinations, a recent increase in personnel onboarding will continue to present challenges in identifying LBNL work space for everyone who will need to work on site. **The recommendation is: 1) Provide standardized, but simple to use, tools to management and administrative staff to track occupancy (We did accomplish after a few initial iterations), 2) tie requirements for controls to scientific findings, so people understand better why the controls are necessary.**

Masks and Respirators

Communication while wearing respirators was difficult. Masks tend to fog up safety glasses and laser goggles. **The recommendation is to provide better-fitting masks and/or mask support frames to prevent fogging.**



Working Remotely

Zoom

Zoom meetings were seen as an essential tool for getting work done during the pandemic. There were some **recommendations for improving use of Zoom:**

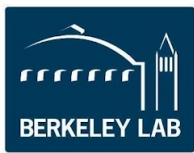
- **Have an agenda and stick to it. If the discussion is finished early, end the meeting.**
- **Make sure the right people are present. Small meetings work better.**
- **Respect attendees' work schedules. Schedule meetings at reasonable times, don't run over the allotted time, and allow some time between meetings.**
- **Limit the number of meetings. Allow people some windows of time to concentrate on other work.**

Working from home

Most people appreciated the opportunity to work from home, but there were some challenges. It was difficult to monitor conditions at the Lab. They missed meeting new people and interacting spontaneously with co-workers. Some people were sharing small homes and work spaces with children or other adults, so interruptions and internet access bandwidth were issues. Scheduling work was more flexible, but it was difficult to resist 24/7 requests for work input. It took some time for the Lab to fully develop and communicate teleworking requirements and ergonomics support systems. Teleworking is expected to continue to be an important part of LBNL work in the future. The recommendation is to **communicate to new workers their supervisor's expectations that they be prepared to perform telework and ensure that all workers have the resources needed to perform telework safely and effectively.**

Onboarding and Training New People

Zoom orientation, badge office scheduling, and website information for new employees were good. The relationship with Site Access was good. The training process was slower because in-person interaction and site access were limited. It was difficult to demonstrate, observe work, and give immediate feedback. It was harder to give new people a "big picture" of how their work fits in with the rest of the Division because they could not go on lab tours or meet very many people in person. Observing work remotely was somewhat helpful. Generally, the recommendation is to **allow more time for training new people before expecting them to be fully competent in their new position.**



Travel and Conferences

While some people enjoyed spending more time at home, researchers missed the opportunities for in-person collaboration and spontaneous sharing of ideas. It was particularly difficult for new / early career researchers to meet other people in their field. Virtual conferences were not very effective. The recommendation is for **Division/ALD management to work with Lab Management to encourage streamlining of travel approvals.**

Coordination and Support from Other Divisions

Some systems worked well:

- Security
- Site access
- Procurement
- Property management
- Accounts payable

Some systems needed improvement:

- **Facilities response to work requests**
- **Deliveries from vendors**
- **Salvage**

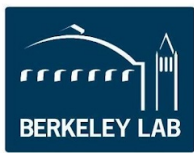
Interview results by Focus Group:

May 20 - New People Pat Thomas/Vivi Fisskidou interviewing, 2 participants

Characteristics - people who have joined ATAP since the beginning of the pandemic

Overall - They liked the way the Division has handled the pandemic, with an abundance of caution. The ability to telework was good. They have been able to continue to work remotely. Communication and coordination was important. They were able to perform difficult tasks. Centralize information and make it available. Generally, efforts have been well-organized.

Social cohesion - They were mostly working from home, but liked to come into the Lab when they can to meet people. They can contact their supervisors. Weekly/daily group meetings help focus work. It is harder to keep track of work status when working



alone. The social aspect of work is important. It helps new people see the bigger picture. It is easier to see what is going on in their work group than in the Lab or Division as a whole. The emails from the Lab Director help them feel more connected to the Lab.

Zoom - It is necessary. It is easier if there are a few people. They need to meet more frequently because they can't have hallway conversations. Meetings can start at 7AM and there can be several consecutive meetings. It may be too convenient to schedule Zoom meetings - it can impact productivity. People need more time to concentrate on work.

Controls - Office work with the door closed is going OK. Distancing in the lab means not meeting as many people as they would like.

Communication - Their main sources of information have been emails and group coordination meetings.

OJT - The lack of in-person discussions has been a critical issue. Electronic communication doesn't work as well. It is harder to share information spontaneously. They tend to try to figure things out by themselves.

May 20 - ATAP Operations teleworkers Pat Thomas/Leigha Rose interviewing, 7 participants

Characteristics - people who are doing administrative or financial support work, mostly from home, with intermittent on-site work as necessary

Occupancy - Each Division had to develop a tool (spreadsheet/calendar) to track available entry slots and employee locations and communicate if slots are available. The thresholds kept changing. There was no global tool for finding space.

Telework - Telework agreements expired and there were quick extensions. There were differences between the telework agreements and WPC requirements. The process was not well-communicated or thought through.

Social cohesion - The administrative group was having weekly virtual meetings. Some people needed to work on site. The financial group was meeting regularly via Zoom. They were missing social interactions.



Zoom - It was necessary (couldn't function without it). It is a great tool, when used right. It can get boring. Tips for successful meetings include getting the right people and staying on the agenda. There were lots of meetings, as well as chat, text, and phone. Use Speedy Meetings or give back time when the agenda discussion is complete. Avoid going over the allotted time.

Controls - Distancing and mask wearing were being practiced. COVID controls are like radiation safety controls - reduce time of exposure, increase distancing, use shielding (masks).

New people - Zoom orientation, badge office scheduling, and website information were good. The relationship with Site Access was good. It was not a big problem for Operations. A new financial analyst was able to learn from home, but it was slower than in person. Training was more difficult because there was no immediate feedback. It was harder to give new people a "big picture" of how their work fits in with the rest of the Division because they could not go to lab tours or in-person lectures.

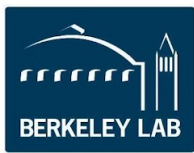
Working from home - It was going OK for this group. They were not able to check on building conditions, availability of supplies, whether printers/copiers were working while at home. There was no Ergonomics Display Center to send people to.

Travel restrictions - They had to explain to scientists that meetings could only be virtual unless "mission critical" under DOE guidelines.

Workload - The work load was mostly manageable. There was less travel planning and expense reports, but more work setting up virtual conferences. People could not take vacations to travel anywhere. It was difficult not knowing the future. People had to learn to defend their Calendars to avoid working 24/7.

Coordination with other Divisions - Facilities response was slow. The Property Inventory went well. Salvage was on hold. Keys had to be picked up in person. Procurement was working great. Accounts Payable was improving. Security was going great. Bottled water deliveries were a problem - we were getting too much for the number of people on site, and they had new delivery people who were not familiar with the site.

May 24 - BELLA researchers Pat Thomas/Vivi Fissekidou interviewing, 6 participants
Characteristics - people who have been doing on-site work in the Bldg. 71 BELLA laser labs, supplemented by work at home



Social cohesion - It was difficult to have social connections. They tried a socially distanced meeting in a park, and group Zoom sessions, but did not get much participation. People working on site are eating lunch outside at a distance.

Zoom - Zoom has not been a replacement for real meetings. They meet the absolute minimum needs for getting work done.

New people - It was really difficult to train new people. New people need to be able to visit the lab with minimal contact. Hands-on demonstrations of knowledge are needed. New people need to watch how experienced people do things. Training efficiency was reduced by about 50%. There were lots of virtual meetings.

PPE - It was difficult to communicate between people wearing respirators. They had to shout and had difficulty understanding. Wearing PPE is better than not going to the Lab. Laser goggles tend to fog up with masks. They needed masks with metal strips for a better fit.

Social distancing - It was easy to distance in the laser labs, but difficult in the control rooms. Some tasks require more than two people. They were eager to speed up the transition back to working at the Lab and increase room occupancy.

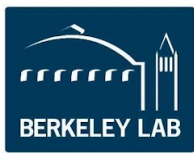
Communication of requirements - In-person discussions, the guidelines on the EHS website, weekly program meetings, emails, and training were all sources of information

Working from home - It was difficult for people working with children at home, trying to do Zoom school in the same space. There were network crashes from systems without enough bandwidth.

Travel restrictions - Exchange of ideas and learning from each other was not happening.

June 3 - ATAP theory teleworkers Pat Thomas/Vivi Fissekidou interviewing, 7 participants.

Characteristics: people who have been doing data analysis and programming work, mostly from home



Social cohesion - They used weekly Zoom drop-in sessions and SLACK channels. Participation dropped off with time. There were monthly and bi-weekly meetings.

Zoom - Meetings were useful, but there were too many. Small meetings were the most useful. Discipline is important for technical meetings - promptness and not running over the scheduled time. There were more meetings and they had to be set up in advance.

Remote work - Some people worked on site, but alone. People answered emails quickly. The telework website was useful in ordering equipment. The IPAC remote conference was a partial success. Time differences were a challenge for reviews. Remote reviewers lacked the ability to interact with people, so they saw less of the whole picture.

Communication - The guidance for Lab entry was confusing. Useful communications included the COVID-19 website, level-1 emails, Elements

New people - Hiring was difficult, especially from abroad. The DOE approval process was a barrier. There was less interaction with students.

Should do differently - People would like to be able to come on site quickly. All badge-ins were counted the same, whether all-day or brief visits.

June 7 - BACI, AM and FS&IBT researchers - Pat Thomas/ Ingrid Peterson interviewing,

6 participants (all from FS&IBT)

Characteristics: people who have been working on site in small laser labs and at test stands, supplemented by work at home

Social cohesion - They used shared Google sheets, SLACK channels, Zoom, emails, phone calls, texts

Zoom - Zoom meetings were both positive (essential) and negative. If there are too many meetings, it can be distracting, hurt productivity, and drain energy.

New people - It was a challenge to train students working remotely, and social distancing was a challenge when working in the Lab. Students didn't get as much hands-on training as they normally would. It took longer for new people to feel comfortable doing tasks independently. Training took longer due to shortage of



available time slots. Some training (LOTO) was not available, which limited what new people could do. Meetings with a SULI student were time-consuming, but the results were good.

Remote work/ Work at home - There were monthly remote meetings with collaborators. Sometimes it worked better than in-person meetings. It was difficult to see what was going on in the lab with remote cameras. It was difficult to work remotely with a small child at home. Some people have small houses with several Zoom meetings going on in parallel. It was hard to concentrate.

Space/social distancing - It is hard to give lab tours while socially distancing. It was difficult to commute to the Lab. Weekend work was needed due to limited availability of entry slots. There was a contradiction between not working alone but not working close together. It didn't work very well.

Collaboration - The lack of in-person collaboration slows down the development of ideas. People's Calendars fill up, which limits communication through individual meetings. On-line conferences were not a positive experience for students.

PPE - People got used to wearing masks, but one person experienced eye irritation

Support - It took months to get rid of old equipment or get electrical outlets installed. It was hard to track the status of Work Orders.

June 9 - SMP researchers - 4 participants, Pat Thomas/Ingrid Peterson interviewing
Characteristics: people who have been working on site in magnet test areas and magnet fabrication areas, supplemented by work at home

Social cohesion - Zoom meetings were necessary and worked OK. Also used Google chat and Google room.

PPE - Safety goggles fogging was a problem. We should get nose clips or frames.

Space - The restrictions were well-communicated. Sharing space use in the magnet test facility was a challenge.

Could do differently - We should have a plan and some resources in place - masks were not available for the first few months. Develop tools, such as a spreadsheet for scheduling work and time off at the Division/Program level. The card key access



system failed several times in Bldg. 77. It would be good to have a single point of contact designated in the Division for solving problems. We could use Zoom more to collaborate - need to set up Zoom Rooms. The cleaning protocols for the 58 high bay could be improved.

Remote work - Most people were already used to doing some work remotely. Some meetings were better and more efficient when conducted remotely. Conferences didn't work too well. Remote reviews were good. The ATAP retreat with breakout sessions worked well. Working at home saved commuting time.

Workload - Work hours expanded, but people were already used to working flexible hours. Work/life balance was a challenge for parents who had to coordinate work with children's needs and schooling. The administrative leave was helpful.

New people - It was difficult to train new technicians. It was hard to get feedback from new people. There are some things you can't teach remotely.

Communication - Michael Brandt's presentations at the Monday meetings were very useful. The weekly Division meetings at the beginning of the pandemic were useful.

June 15 - ATAP Management - 7 participants, Pat Thomas/Leigha Rose interviewing
Characteristics: people who have been performing management and oversight work, primarily from home, with site visits as needed to monitor conditions and perform some research

Social cohesion - Some groups used "Slack" software. Zoom was used for regular (daily) meetings, virtual social gatherings, "open door" sessions, one-on-one meetings, project meetings

Zoom - Works better for small meetings. People are looking forward to in-person meetings. The raise hands/chat features allowed more people to participate in meetings who might not have spoken up in person.

Travel - Some people like being at home more. Not going to conferences is not good because much of the real work is done off-line, and it is difficult for junior people to meet people.

Some people are hesitant to do in-person meetings. The virtual environment is a "complete disaster" for large meetings. It is difficult to coordinate time schedules for



international meetings, especially reviews. In the future, there should be a balance between travel and virtual meetings.

Working from home - People were able to be productive, but miss interaction. It is challenging for supervisors to stay in touch with their people.

New people - It has been difficult to integrate new people into Laboratory settings. New people learn more slowly without interaction. The distancing and access controls created a less than optimal environment for training new people.

Controls - The 6 ft. distancing rule and shortage of approved office space made working on site less efficient. Controls should be tied to scientific findings. There were concerns about shared tools and spaces.

Support - There were some difficulties with scheduling riggers and shipping, especially on weekends. Some people have been driving poorly on site.

Communications - The Division/Area communications were the most useful.

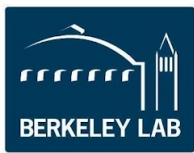
What should we do differently -

--There will be a permanent change in the culture, with a mixture of on-site and off-site work. People are getting more comfortable with working remotely, but there is more to learn. The transition was difficult.

-- Some of the planning/Calendar tools that were developed were useful, but could be improved.

-- The free version of Slack was useful but it would be nice to have some additional features, such as recording decisions.

-- The Operations group likes to use G-Chat.



Engineering Division:

Engineering staff areas to be interviewed:

- Welders, Fabrication area, Coordinated Measuring Machine (CMM) operator, Ultra High Vacuum Coating (UHVC) tech
 - 46, 46A, 46B
 - 77, 77A, and 46
- Engineering Designers,, ALS-U leadership
 - 88 Machine shop
 - 46A/46
- Machinist
 - S71, 71B:
 - Electronics and machine shop
 - 80
 - 6
 - 58
 - 50
- Electronics technicians
 - 47 No shop
 - 58 basement
 - 50A
 - 70A

Mode of working:

Onsite 100% (i.e. Techs)(Safety)

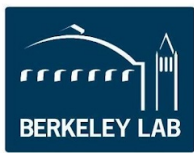
Offsite 100% (Onsite0%) (i.e. Designers)

Hybrid (Both offsite and onsite at least 2 days a week)(i.e. Management)

Overall Impression:

Where our staff was located played a large role in how the lab was viewed in its effectiveness to both communicate and implement the COVID19 controls.

For staff on the hill, each cluster of buildings had a different impression than the next. For staff working from home, their challenges highlighted different weaknesses in the support the lab offered. A clear example came up with the subject of childcare. For those working at home, finding focus with their work and a quiet place from which to



work remained a constant battle. For those who needed to be onsite, the challenge was not the focus but finding childcare options when most professional childcare facilities were shut down. Meanwhile, the EG management was not able to address the larger loss of services within the community. Their change was controlling the impact onsite and at home. The community's shortcomings were beyond their control. This left the staff onsite with a feeling marginalized when faced with having to leave early or remain at home due to constraints with children. All the while, the timelines for project completion continued to add pressure. The timing of extending deadlines to reflect the constraints lagged for several months. This left onsite workers with increased pressure, lack of EHS onsite support and managers facing DOE deadlines.

Successes for those teleworking came from the Ergo department first. Both in the product support and in the training for the EG safety team, Ergo did a great job in protecting

Other challenges include Personal Protection Equipment (PPE) for our machinist. Wearing a face mask and safety glasses proved to be very taxing in the beginning. Not until EG safety found a solution by adding a mask frame, did we begin to see widespread masks with non fogging glasses.

Some onsite workers communicated a sense of psychological isolation, resulting from distance from colleagues, limited additional onsite support (EHS and Facilities) and population density limitations.

Communication of COVID-19 Requirements

Effectiveness of COVID-19 requirements communication varied greatly depending on where staff was located..

For the onsite staff:

Communication at the beginning of the pandemic frequently left many onsite workers confused leading to some being frustrated. Most mentioned that they were unsure of when they would be able to return back to the Lab, and they weren't confident in meeting their project deadlines because they could not perform their work from home. By month 3 of the pandemic, they all agreed that the communication from lab management got better.



allowing them to feel more confident about finishing their work on time. For those who worked 100% from home, they did not have many issues with the lab's communication of COVID-19 requirements. The main sources of information were emails, virtual meetings, the EHS COVID-19 website, Elements, COVID Hotline, and training. There were positive comments about communication efforts by Lab Management; particularly, Mike Witherall's Level-1 emails and presentations made new people feel more connected to the Lab. Division management found the Area and Division meetings the most useful. The weekly Division meetings and COVID training were useful.

Social Cohesion

Onsite workers:

Staying connected with other workers and project staff proved very difficult in the beginning of the COVID19 pandemic. Staff were actively discouraged from gathering any closer than 6 feet and always kept their masks on. Population limitations and colleagues now teleworking made collaborating difficult at best. They were accustomed to working in person and in groups with division partners. This lack of connection weakened communication within the groups

Offsite workers:

Zoom meetings and lab sponsored online social allowed the teleworking staff to keep in contact but the quality of that social cohesion lacked the casualness found while talking around the watercooler. This proved challenging for those who work from home 100%. Regular (weekly, daily) virtual work group meetings help some, but most people found it not enough.

Tools used to keep division connected:

Regular weekly COVID19 update meetings at various management levels

-All EG Supervisors

- Safety Tailgates for mid-level staff

Both of these group instructed to pass along relevant information to their direct reports

For Informal:

Google Chat also aids in keeping connections going.

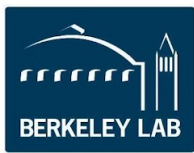
SLACK was also used by our CAD group

Site Access, Distancing, and Space Occupancy

Onsite Workers:

LBNL communication and EG leadership were believed to be effective in keeping onsite workers clear about site access rules and expectations.

access.lbl.gov. was the main tool used to gain or verify access to certain buildings at the lab.



Initially, social distancing presented many problems with how work was performed. Most technicians, used to working directly with their team and receiving in person guidance and instructions from their team leads and supervisors, found social distancing made this harder than expected. Tasks requiring more than two people proved especially challenging to incorporate the social distancing requirement. Also difficult was giving lab tours or collaborating. Social Distancing with face coverings made talking with each other difficult in the shop environment. The ability of speaking and hearing one another in loud spaces was a challenge.

Space occupancy was not much of a concern for onsite staff due to the low numbers allied onsite.

Hybrid Workers:

Since no office cubes were allowed to be used in the beginning of the pandemic, staff had to locate enclosed offices. When hybrid workers would come onsite, they found it difficult to locate an office that was not already being occupied by someone else. In response to this issue, EG leadership created an office availability tracking spreadsheet for hoteling spaces. This spreadsheet continues to help hybrid workers to identify what office spaces are available in their building of choice for use Monday through Friday.

Using Zoom

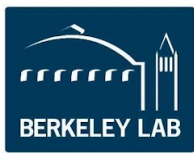
Onsite, Offsite, and Hybrid groups have all agreed that they often experience Zoom fatigue.

Offsite Workers:

Some employees mentioned not being able to take their 5 minute breaks because of an abundance of Zoom meetings in a single work day. From an Ergonomics and work life balance standpoint, there needs to be Zoom meeting scheduling restrictions, that will allow employees to be able to take the necessary break of 5 minutes between meetings.

Onsite Workers:

There has also been an increase of Zoom meetings for the onsite staff as well. They have found Zoom to sometimes become distracting from their projects and tasks that are in progress. Onsite workers leadership is either working hybridly or offsite, so our onsite staff are now having to adjust to meeting via Zoom for instruction and guidance from their leadership. This has changed the work dynamic tremendously for all, most



technicians are used to the hands on training and teaching approach from their leadership.

Hybrid Workers:

Some hybrid workers mentioned having some concerns about back to back meetings on Zoom. For those who did, it raised concerns about their work life balance. Zoom fatigue is a real condition that needs to be addressed by the leadership. All working groups seem to share a similar issue in the EG division.

Working from home

While the Engineering division had significant onsite staff, new challenges surfaced for those teleworking as they blended home work demands. This raised questions on how best to work with their onsite counterparts. From going over plans and inevitable changes to keeping up with each other's work progress, new issues had to be overcome frequently.

Offsite Workers:

Employees were initially satisfied with the response time of the Lab when the pandemic first began. Once enough resources were provided to offsite workers, most indicated they were satisfied with the Lab's response to their at-home needs. In support of this ongoing situation, the Ergonomics team continues to do an outstanding job with supporting our remote staff.

Onsite Workers:

During the beginning of the COVID-19 pandemic, it was extremely hard for onsite workers with children to be able to balance home and work life. Some employees were forced to take time off to help out at home with the children because schools and childcare facilities were closed. Onsite workers expressed disappointment with the support provided to them in regards to their childcare challenges.

Onboarding People and Training

Onsite, and offsite supervisors had to adjust to the new onboarding protocols. Some new hires have expressed difficulties in learning the scope of their jobs because of the hands-off approach. New Staff expressed frustration due to the longer time to develop their job skills due to COVID-19 controls. Employees have not been able to experience much On-The-Job(OJT) training due to COVID-19 social distancing and lab population density. OJT is challenging for supervisors trying to show an employee how to execute a task without the benefit of hands on and up close training.



Travel and Conferences

The Engineering division had little call for international travel during the first few months of the pandemic. Most groups were able to adjust to virtually attendance. Most do wish that they were able to attend conferences, but they understand why the protocols are in place. We did have feedback from a few employees who have projects outside of the state that need to attend to their work at SLAC, but aren't able to because of the travel restrictions. Other than those few technicians, most have adjusted to the new travel guidelines and are prepared to submit a request for travel once the restrictions are lifted.

Coordination and Support from Other Divisions

Onsite Workers:

Depending on the particular building and its Facility Area Manager (FAM), the quality of onsite Facility division's support went from great to terrible. Technicians located in one building stated their onsite support from FA and other divisions was excellent with no complaints while staff located in different buildings expressed their issues and concerns were not addressed in a timely manner and, in some cases, still waiting to be resolved.

Offsite Workers:

Most of our offsite & hybrid workers did not have many issues with coordinating support from other divisions. IT, ERGO, and other support teams received praises for their efforts with the offsite and hybrid staff.

RAW Data from EG interviews

Notes from interviews taken from November 15-22

Participant : Yes, patience is important in terms of dealing with bureaucracy, meeting deadlines, etc. Things haven't been easy. But, they understood that the EG division had to react to the external restraints being put on it. Employees understood that things couldn't have been done differently because of outside requirements. It seems that EG did the best that they could; there weren't many options that the division could take.

Participant : There should be more equality across the board. Not everyone at the Lab got the same treatment especially for those who got to come to the site;



people who were stuck at the Lab didn't get the same accommodations for child care as those who were remote working. The restrictions came quickly for people who were working on site. Childcare is impactful especially for people who have children who have special needs. Maybe there is a special group for people who are on site who have to take time for dealing with a COVID infection. This is important for the techs.

Participant : What would be useful is in the case of a future pandemic/ situation is the granting of clearance privileges at the beginning of a pandemic (eg for laptops - monitors; whatever is needed to be able to work at home) and a more formalized shelter in place plan as a Division - from a functional continuation of business plan perspective- to address ergonomic needs, hardware needs etc

Participant : Operationally we had very little guidance from the facilities operational standpoint. We needed water. Basic things like sanitizing wipes etc. Also, we had to get PPEs and it took a little while to get that going for all the workers on site. There was a supply chain shortage issue. We need to backstock - PPE should be ready to go in case of similar future events. We should adjust training timelines; extending the for staff to get ready.

Participant : For Fire Season certain bldgs have really poor ventilation. And we typically keep the doors open as a result. Covid wise though we were not sure if we could leave the doors open - an HVAC problem - we didn't have cooling options - it was close to heat exhaustion. For 77A we need Auxiliary HVAC Air cleaners for inside the Bldgs to be deployed- (cleaning and cooling).

Participant : They had to evolve the Controls - it was their first shot at it - I feel it was a valid approach; I can't find any fault in that. It did set up stuff back a bit but that happened to the whole world. None of us likes to work this way but it proved that it worked and we did have a safe, transmission-free environment.

Participant : It was frustrating to see rules flouted. You can't necessarily crack down on people but what can be one differently? There should be some consistent and clear way to communicate and enforce good ways to deal with risk tolerance. It was appreciated when Interviewer came to talk to people.



There isn't a way to follow up on people or groups who may have had problems with the protocols. What are the consequences for not following the protocols?

Participant : I was hired during the pandemic; my other job did not immediately close down - people were going back and forth about whether we will actually close down completely or not; everyone felt surprised that eventually we did close down. It was much worse than what we had thought.

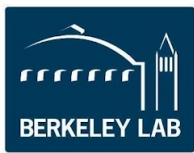
Participant : There was one instance where we had a scheduled visitor to go on site. They had to designate a separate room for him to do work in B46. They had to designate him a separate bathroom (so no one else on site could use it). That wasn't an issue then because there were not many people there. What happens in the future when there are more people? There are a limited number of bathrooms for what could be too many people to safely use the facilities. Would it be possible to have more bathrooms so that everyone can have equal access? There seems to be enough room since there is an upstairs and downstairs.

Participant: Mostly I work at home and I only went to the Lab infrequently. What I feel is that we should be equally able to work in an ergonomically safe way either at home or the site. I had some ergo concerns so I contacted my safety coordinator. I asked for help and got some videos which helped a lot. I'd like to ask that the ergo support continues in the future.

Overall Impressions

Have you had difficulties in maintaining social connections with your work group? What techniques has your team used to maintain social cohesion? Working onsite has raised common difficulties with maintaining social distancing while working on tasks that require more than one person. Not having a supervisor on site has also been non beneficial for some. Others who have been working from home have utilized Zoom check-ins with their team members on a regular basis.

Notes from interviews taken from November 15-22



Participant: Yes, there's a communication gap even with a daily Zoom meeting. This isn't the same as an in person meeting. There are still things that fall through the cracks.

To remedy this, hopefully someone notices it and follows up.

Participant : No specific techniques were used - there was no plan to cover daily communication gaps. Personally it was not difficult to be sequestered. Ad hoc meetings were well received - people were flexible. There was no social plan in place. I am a bit of a hermit. It did not affect me.

Participant : For the most time my team worked on site - nothing changed besides the face mask requirement - social connections were maintained.

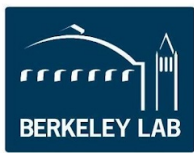
Participant : A lot of groups happened to start before the pandemic. We were all kind of adjusting. Our main supervisor, the person who knows most were not physically on site; so technician morale was affected. I thought that was the most important thing. There was always this kind of tension. There was some friction.

Participant : The biggest challenge was not having the physical contact to talk things over. Now you have to schedule a zoom call, it works but it's just not the same. With in-person meetings everyone builds on everyone else - it's also social; you get a coffee, casual chat and banter; that's what I miss the most.

Participant: One of the strengths here is teamwork. Interaction is hard the way it is now. People will be less efficient in this environment. People are doing the best that they can.

Participant: Now, its not much of a difficulty. This was harder earlier on for people who work on site. There's not much of an issue now.

Participant: I find myself putting in 10-12 hour days when I'm at home. I lose track of time. My partner has to remind me that it's dinnertime. Working at home really means achieving balance while taking care of the family too. For me, I'd prefer to work outside of the home so that I can concentrate on my work. The benefit of working remotely is that I can manage the structure of my day. I can balance with more work at night if I couldn't work as much during the day. I'd



prefer to work onsite. At home, I find that I'm in so many meetings to catch up with colleagues.

- 3. How does PPE (face coverings, respirators) affect your work flow/performance of work and communications?

Participant : Impacted communication to some degree - everyone was a bit more muffled - maintaining distance at the same time added to the difficulty of hearing and understanding the other person ; i.e. it was harder to hear and one had to speak louder.

Participant : A lot of our work is done close by - the face mask got in the way especially as a tech that at times needs to touch chemicals. In my building we had never ever gotten disposable masks. We did not have replacements for dirty masks. Wearing safety goggles added to the difficulty. Sometimes it's a little harder to breathe especially when you are running up and down the hill. We then brought our own masks and that worked better.

EHS said that respirators were required for work; the emails we received from the Lab said they were a personal choice. We were however not allowed to get them without the 'proper' training yet the trainer was not on site. It was confusing. We were not prepared with our PPE to work with the needs of a pandemic - material was out of stock. The lesson to be learned here is: We need backstock that we keep on hand at all times. We got mixed messages from the Division and the Institution regarding what was actually needed for work. Many employees who did receive respirators had to use a covering over the respiration valve which was also confusing.

Participant: Facial expressions are lost. But this is the nature of what the situation is right now. Things will take longer to accomplish but people are trying their best.

Participant: I spent a lot of time in my office so I don't have a mask on all day. When I do have to mask up, it's not difficult. My safety glasses get foggy but that's pretty much the main issue for me.



Participant: Going back and forth between the computer and machine made it a little hard. I did forget my mask once but my supervisor was there to remind me. I have a mask that doesn't fog up. I understand how that can be frustrating for some people. Some COVID stations have masks and hand sanitizer, and some don't.

- 4 of 12. How does social distancing affect your team tasks? Have there been safety concerns related to working separated from your teammates?

Participant : Social distancing makes the job hard especially when you have to move things and it requires more than one person. It was more of a nuisance rather than affecting my work output.

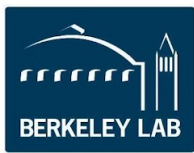
My group was on site a lot and faced with the safety choice. At times it was much safer to break that briefly; we could have done a better job of not doing that but because of the stress onsite it was easier sometimes even for 30 seconds to break those rules. Because there was less onsite presence you have stressed people executing work alone under pressure ; we got lucky that there were no poor decisions made.

Participant : We knew that jobs would take longer and that was acceptable even though we still had to get certain things done. That was a plus.

Interviewer: Our abundance of caution resulted in the LAB having no transmission. The downside was that we were overly cautious. We also saw transgressions of the 6-foot social distancing rule.

Participant : Social distancing with what we do is very concerning as we work alone- there were a lot of our technicians working alone; the primary things they do are (cryogenics, welding, machining) and there is a grey area in the 'working alone' policy. I feel alone many times in Bldg 46.

Participant : In Bldg 40 distancing is not that much of an issue; it's more computer work. The only thing is if you use a hand tool drill; the safety concerns as we are alone is who will pull the power plug in case of an emergency.



Participant: People are getting more accustomed to keeping social distance etc. It just takes longer to get things done. It's a myth that people are separated. People here are definitely interfacing.

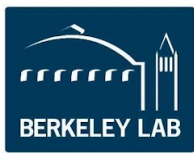
Participant: There is no effect for me due to the nature of my work. Sometimes, we do need to be physically together to complete the work but not too frequently. In the beginning, it was hard especially for people who have a single occupancy office. If I wanted to show something on my computer, well, I really couldn't. For this, I emailed or texted the person the image of what I was looking at. Since most of us are vaccinated, at least we can share space.

- 5 of 12. What information sources have you found the most useful in understanding COVID-19 controls? How effective has the COVID-19 training been?

Participant : Initially it was effective. It's easy to make tweaks to the training as needed. I was one of the first to come back in June and there were very few people around. Due to the nature of our work the training was initially useful. Later on materials like hand sanitizers and gloves ran out, yet we carried on doing what was needed regardless.

Participant : The info coming from the top was pretty good. They communicated pretty effectively and frequently. A lot of the All Hands Meetings were helpful as well. There was a lot of good information that tends to get lost in other sources of media.

Participant: One of the issues with COVID training is that there hasn't been enough interaction with it. Some workers onsite feel as if they haven't had enough input on the training. Training classes and updates occur but without any good communications. On a monthly basis, I try to check my own knowledge and understanding of COVID protocols to stay up to date. There hasn't been a good resource to talk to, such as an office or person to talk to live. Supervisors often have just as much knowledge as you do. Some supervisors don't even work on site.



Participant : There was the web page but the most important thing was the emails notifying us of the changes on the webpage. The webpage was useful, and the COVID Hotline. I like to refer to resources that are .lbl.gov. It was a good way to check up on clarifications, documentation of onsite cases etc.

Participant: The videos were very helpful to show potentially problematic consequences. It was good to see a demo of how to keep social distance. The videos were informative and helpful.

- 6 of 12. What have been the effects on Divisional onboarding processes for new staff (getting to know each other, on-the-job training)?

Participant : When you have management not onsite it's harder to onboard people. Especially as you are not in the room and being able to know them as a person. If you just have a written form of communication (e.g. google chat) the communication can be more difficult; it's not as effective as the relationships that have been built between people [that meet face to face].

Participant. I've onboarded two people, and it's been hard. At the height of the pandemic, it's hard to get any effort from them since they can't see what you are doing. A technician who was on board was also hard because you have to keep your distance to onboard them while also evaluating them. Another issue is that the expectation is that you should give support to the new hire, but there aren't exceptions made in the light of challenges. Supervisors are trying their best.

Participant : I had a student for 6 months when the pandemic started, and the only place to meet when it began was halfway between our homes. It was difficult and disappointing for the student to come out all the way to Berkeley and then have to sit at home. Onsite there was only one person who knew the layout of the lab from their former days of being a student and working at the lab.

Participant : I started in May so the quarantine had already begun; mostly it was web training. But, in June & July I started going in person a couple of days a week and DOE hadn't created some training that was required - for WPC - on the web; so it's taking a lot longer to complete them. I am currently catching up.



Participant: The Electrical Safety Office has been changed twice, and that has not been helpful.

Participant: As a person who was hired during the pandemic, I had a point of contact who has been great at getting me up to speed and any special considerations. I don't notice anything bizarre and I feel pretty safe.

Participant: My onboarding did take a little bit longer because I had to talk through emails. As a newer hire, not everyone knew who I was or how to best help me. Someone also passed away in my group, so that added to the situation.

Participant: I have a new employee, and things are going well. I've met them in person at the Lab, and we were able to follow the rules for safety. I don't know what will happen in the future but there will probably be some challenges with familiarizing new staff with our working environment.

- 7 of 12. Do you understand the requirements for travel? How have travel restrictions (including testing and quarantines) affected your work? Have you had difficulties with travel approvals/documentation? (LD/OP, AA mgmt & support, EG)[f] (Wade Crosson) Division communications

Participant : There was no work related travel for the first 18 months of the pandemic.

Participant : We went to Denver and the process of approvals was fine. The interesting part was coming back to work without quarantining.

Participant : I didn't travel during the pandemic. My trip was cancelled. There has been nothing since. Everyone is still waiting to see what the process will be.

Participant : Yes there was a problem getting vendors onsite. It got pushed back but eventually when everything was detailed and all the proper protocols were in place they started coming onsite. But, the ever changing rules with travel can complicate coordinating things.



Participant: We're trying to get travel approved. We're kinda stuck because the DOE isn't approving travel. But, we have been advised to get everything lined up and ready to submit anyways. Our request may be approved unexpectedly. I did get approvals and travel authorization for a virtual conference.

Participant: I understand the travel restrictions are in place because of COVID. But these restrictions do affect work because I cannot travel for a project that I've been working on for 2 years. I can't go to Europe as planned. I can't travel to a review either. Our work is not so efficient because of this. For example, Italy is contributing a large magnet but they lost some of the documentation (written 10 years ago). Meetings cannot take the place of being there in person. Project reviews can be conducted virtually. Conferences need to be attended in person to meet different colleagues from outside the Lab. It's just less efficient.

- 8 of 12. How have your workloads been impacted by Covid controls? Have deadlines/expectations been adjusted to the new circumstances?

Participant 1: It would seem that deadlines and the daily schedule have not adjusted. We created a special account to meet Covid related slow down for different projects. Our manufacturing mode has not changed per se. There was a time period where we were expected to increase our pace by 30%.

Participant 2: The deadlines have not changed. We were the first ones back onsite. We tried to speed up and meet these deadlines and that was a little stressful. Our team leader had to push back a lot - as it is very top heavy - he needed us to pick up the 'lost time'. The number projected was 30% more. Recently we relaxed that expectation as that was very stressful. As far as our breaks - and charging an hour a day to Covid cleaning - realistically there is no time to actually do that.

Participant 4: Workload slowed down significantly in the main shop. We were understaffed.

Participant 2: Main problem was getting things produced for us internally - especially with all the due dates. Finally everyone realized they have to push back. They found out real quick that things were not going to be on time.



P1: Deadlines and pressures have increased. There is competition to get even more done during the pandemic.

P2: I agree. It's been hard. Expectations haven't really changed that much even though it's harder to get things done. It's been more work to get things planned and work to meet deadlines. There's a big negative effect on productivity. People aren't able to be as productive as before. There is a negative effect on morale. What can be done, however, in this situation since we are still in the pandemic?

Participant: Yes, productivity has been negatively impacted.

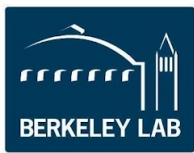
Participant: It took awhile to get used to how work was being accomplished. It became a matter of knowing who was on site, things won't work as smoothly, and what tasks needed to be accomplished.

Participant: I find myself putting in 10-12 hour days when I'm at home. I lose track of time. My wife has to remind me that it's dinnertime.

Participant: Working at home really means achieving balance while taking care of the family too. For me, I'd prefer to work outside of the home so that I can concentrate on my work. The benefit of working remotely is that I can manage the structure of my day. I can balance with more work at night if I couldn't work as much during the day. I'd prefer to work onsite. At home, I find that I'm in so many meetings to catch up with colleagues.

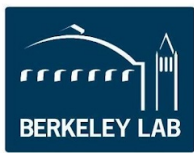
Participant 3: the work load controls from a worldwide perspective have changed, they have been slowed down from their arena so that impacts us. We get parts from so many different vendors so that has slowed down.

Participant 1; The whole funding profile of projects is changing; it all mixes together so that causes a lot of uncertainty and when and where the money comes to buy your stuff. But because of the delays everyone has slowed down so that helps.



Physics Division:

The Physics Division which is participating in the Multi – Division Assessment of COVID-19 Response 2021 Self-Assessment will be submitting a Supplemental Assessment by the end of January 2022.



Appendix 5.2 Earth and Environmental Sciences Area

Communication of COVID-19 Requirements

The Lab Management’s Level-1 emails and presentations made new people feel more connected to the Lab, and Lab weekly management presentations were very useful.

EESA developed a communication process for all staff authorized to participate in the EESA Pilot 1 and 2. EESA Staff were asked to review (i) the Lab [Guiding Principles](#) for the Lab’s return to on site work; these principles covered safety, prioritization of research work, use of science-based guidelines in developing new procedures, communications, and respect for each other and (ii) check the [COVID-19 Information website](#) for the latest updates and developments.

EESA developed the following tools for communicating the Lab requirements:

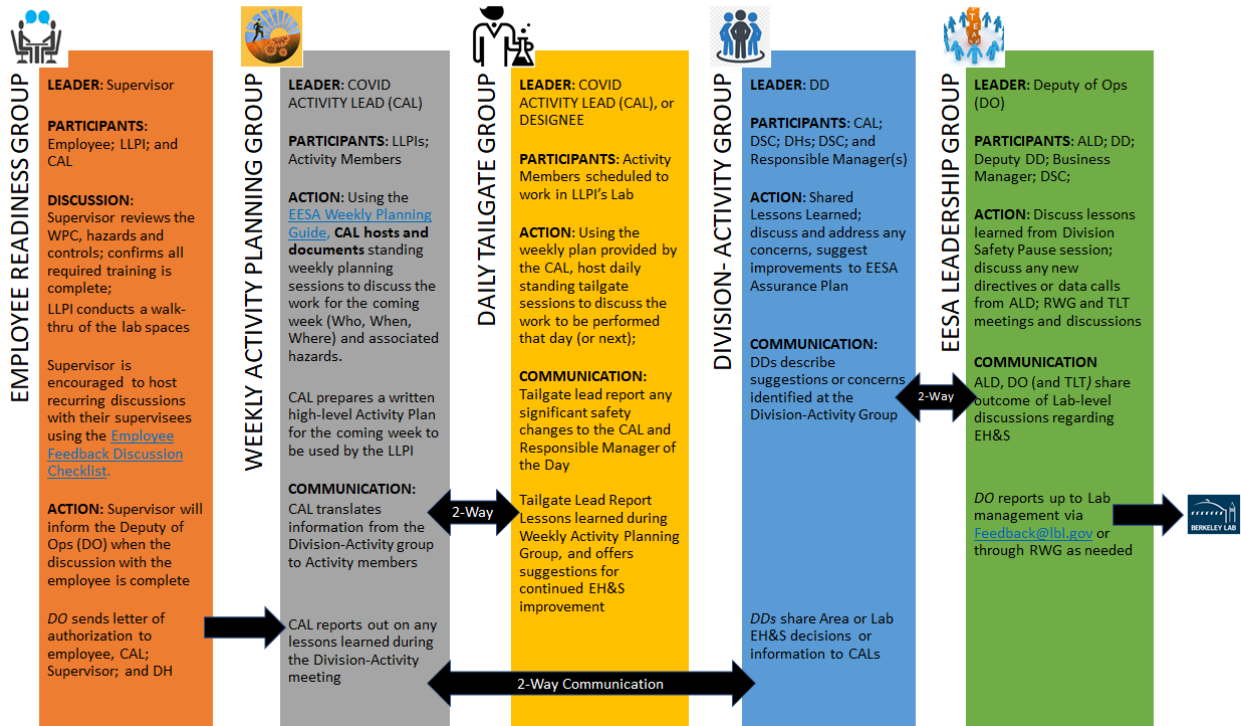
SAFETY ROLES AND GROUPS MATRIX, and COMMUNICATION FLOW CHART:

EESA developed a strategy to enhance two-way communication between Leadership and Pilot 2 participants as illustrated in the below charts:

		WHO										
		ALD	DD	DO or Deputy DD	DH or SR. LEADER	DSC	COVID-19 ACTIVITY LEAD	LAB LEAD PI	SUPERVISOR	PILOT 2 LAB MEMBERS		
ROLES	Serve as the on-call LEADER of the Day (may also serve as the RM)	x	x	x								
	Serve as the on-site RESPONSIBLE MANAGER (RM)	x	x	x	x							
	Serve as the on-site DIVISION SAFETY COORDINATOR (DSC) of the Day					x						
GROUPS	EMPLOYEE READINESS briefings led by Supervisor with staff prior to start of work					x Optional	x	x	x (Lead)	x		
	WEEKLY PLANNING led by the COVID Activity Lead (CAL)					x Optional	x (Lead)	x		x		
	DAILY TAILGATE led by the COVID Activity Lead (CAL) or Designee						x (Lead)	x		x		
	Bi-Weekly DIVISION ACTIVITY led by DDs and includes: CAL; LLPI, DH, RM; and DSC		x (Lead)		x	x (co-Lead)	x					
	Bi-weekly EESA LEADERSHIP SAFETY PAUSE led by the Deputy of Ops (DO) and includes: ALD; DDs, Deputy DD, DSC, and Business Manager	x	x	x (DO Lead)		x						

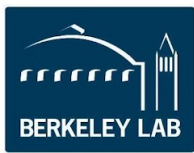


EESA Assurance Framework Consists of FIVE SAFETY GROUPS, each with a different Objective, and with well-defined lines of communication:



1. EESA developed the [EESA Covid Onsite Scheduler](#) tool to track and meet the Lab's occupancy requirements.
2. The EESA Covid Website was updated to address any questions, concerns, or suggestions, and provided a feedback tool [EESA COVID 19 Suggestion Box](#) (also available through the [EESA COVID 19 website](#))
3. A centralized email EESAemergency@lbl.gov, monitored by the Operations Deputy, Business Manager and Safety Coordinators for onsite access requests and any issues arising during the work day.
4. EESA Senior Management daily presence and Safety Coordinator support was posted on the [EESA COVID 19 website](#)
5. **Email Message to staff providing EESA guidelines and listing resources.** An example of the email message is presented below::

"This message is to confirm your authorization to return to the Berkeley Lab site to perform lab work as an EESA Pilot 2 team member effective January 4, 2021 through the balance of the Pilot 2 program. Note that Pilot 2 is likely to run through the 1st quarter of 2021; continuity of the program is dependent on everyone's adherence to required actions and safety precautions. It is important to know that only EESA Pilot 2 team members are authorized to return to the



work site for regular work. All incidental visits (non Pilot 2 participants) must send their requests to EESAemergency@lbl.gov.

Your weekly schedule is controlled by Eoin Brodie. Please work with Eoin to coordinate the days you will be coming to the work site during the weekly planning sessions. As our badge-ins are very tight, please communicate any changes to your schedule during the daily tailgates.

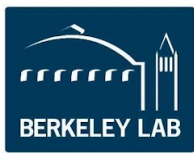
All Pilot 2 participants: The schedule for January is available by going [here](#). However, please note you must first complete the requirements noted below before coming to the work site.

You must adhere to the schedule and planned locations. While a normal work week is Monday-Friday, the lab has now opened up the opportunity to work on the weekends. Please work with your supervisor and Lisa to secure approval to work the weekends. It is important to note that many services are not available on the weekends (e.g. cafeteria, shuttle services). Should you need access to a location that is not included on your schedule (e.g. ALS, Foundry, other buildings), please reach out to your activity lead and EESAemergency@lbl.gov. Until approved, you are not authorized to enter those buildings.

To prepare for your arrival, it is critical that you completely digest the following information and take the required actions before coming onsite:

ACTIONS:

- Complete [LBL 0012](#) and [LBL0014](#), a new online mandatory training course
- Enter Work Planning & Controls (WPC), accept WPC for COVID controls, and review your entire WPC for the approved activity to refresh yourself about all practices
- Complete the [EESA Employee Pilot 2 return to work checklist](#)
- Self-monitor for COVID-19 symptoms daily (and stay home if you are ill)
- Attest that you are [COVID-19 symptom-free](#) (repeat weekly on Sunday prior to entry)
- **SUPERVISOR:** Please step through the [Employee Readiness requirements](#) to ensure your staff member is prepared to return to the work site. Go [here](#) to review the step
- Use the Blackberry Gate (you may exit through Grizzly Gate M-F from 7 a.m. to 6 p.m.)
- Present your Berkeley Lab badge on entry and wear it on site
- Bring a face covering with you and have it available at all times while on-site



Lab senior leadership, working with the Transitional Leadership Team, developed [Guiding Principles](#) for the Lab's return to on site work. Please read and familiarize yourself with these principles which cover safety, prioritization of research work, use of science-based guidelines in developing new procedures, communications, and respect for each other. Please check the [COVID-19 Information website](#) for the latest updates and developments.

WHILE ON SITE, you are asked to:

- **Be hypervigilant about EH&S, including existing controls and new Covid-related practices.** As many of you have been out of the lab for ~3 months, it is of utmost importance to take the time to restart activities slowly, thoughtfully and carefully,
- To conform with the order by the [Alameda County Health Department](#), all staff are required to wear a face cover when outdoors or when working in or walking through common areas of the Lab such as hallways, stairways, and elevators, and while in any room or enclosed area when other people are present. Please wear a face cover, and in compliance with social distancing standards, please keep at least six feet of distance between yourself and anyone else while onsite.
- Empty your office trash into provided receptacles in common areas;
- On a daily basis, disinfect your phone, keyboard, mouse, doorknobs, light switches, research equipment and other commonly touched surfaces in your immediate work areas. Disinfectant sprays and wipes are available. If you are unable to acquire the needed products, please reach out to EESAEmergency@lbl.gov; and
- Disinfect any equipment in shared spaces upon use, e.g., copy machine, kitchen counter.

ADDITIONAL INFORMATION:

ACCESS: You may come/go to the lab site on any given day that you are scheduled for access as much as needed. Multiple entries to Lab sites by the same badge holder on the same day counts as one badge-in for that day.

SHUTTLES: During Pilot 2, Lab shuttles will be running on a limited schedule and will be on-demand only. Special restrictions will promote social distancing, such as a limit of three riders per shuttle. Riders are required to wear face coverings and should not chat with drivers. Shuttles will pick up and drop off, by request, between 7am and 8pm, at a subset of our regular shuttles stops. Visit commute.lbl.gov for details.

CONCERNS: If you have any questions, concerns, or suggestions, we urge you to submit your feedback to the [EESA COVID 19 Suggestion Box](#) (also



available through our [EESA COVID 19 website](#)). Your input can be anonymous or you may self-identify.

If you find it challenging to adhere to the new procedures, please do not hesitate to contact Lisa Kelly, Deputy of Operations, or contact your supervisor, Division Director and/or EESA Sr. HR Partner. You may also submit your concern to the [Return to Work feedback form](#). Thank you for helping to ensure we are promoting a safe environment during our gradual return to onsite work.

We need your highest level of attention to safety during this important pilot period for the lab, and ask that you completely digest and implement the requirements above. Watching out for one another has always been an important part of the Lab's safety culture, however being part of the Lab community now includes another dimension of social responsibility. We owe it to ourselves, our colleagues, and our families to help keep the Lab's community healthy and safe. Failure to comply may minimally result in your inability to access the laboratory and could threaten the continuity of the entire Lab's Pilot program. "

6. **EESA checklist for the EESA PILOT 2 Returning Employees:** EESA developed a checklist to ensure staff are ready to work onsite, as follows:

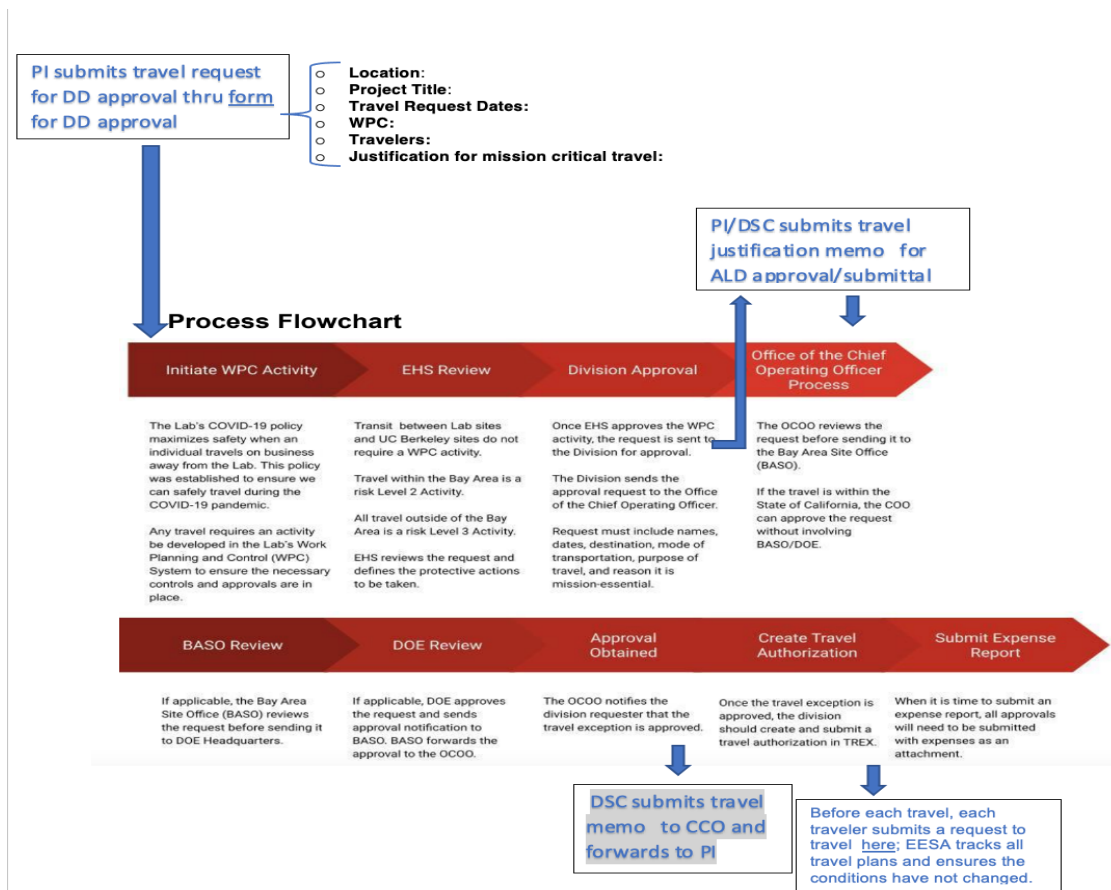
How do I prepare to return to work at the Lab (any LBNL site)?

- Ensure you have been received an email authorization from Lisa Kelly authorizing your return to work at the Lab site
- Confirm your work schedule/shift with your supervisor (and matrixed supervisor, if you have one); your schedule may be different from normal
- Confirm work location with your supervisor (it may be different than your normally assigned location).
- Ensure you received a Work Planning and Control (WPC) assignment and acknowledge accordingly.
- Complete the COVID-19 Safety Training and embedded Health Pledge per the instructions you received in an email to return to work at a Lab site.
- Complete the weekly [Symptom Check \(go.lbl.gov/s\)](https://go.lbl.gov/s) before entering any LBNL site and continue to self-monitor for symptoms on a daily basis.
- If you were remotely/virtually hired and onboarded on or after March 17, 2020, [click here](#) to schedule an appointment to get your badge and to complete the I-9 verification process, which is a required condition of continued employment. Be sure to bring your welcome letter or single day pass, and photo ID with you to the Lab for access to the Lab.
- Check Commute.lbl.gov for parking and shuttle service information.
- Bring your laptop or plan for computer access if you took your primary workstation home. If you need assistance, contact [Bryan Taylor](#) at 510-708-6011



- Bring food and beverage; vending machines are limited, and cafeteria services are not yet available. Hoping to have limited services available by mid-July.
- Have a face covering with you at all times and wear it in accordance with the directions provided in the training.
- Bring a small bottle of hand sanitizer. While the Lab intends to provide hand sanitizer, you won't want to get caught without it.
- Wear your Lab badge; Lab badge is required for site access
- Be Prepared to perform your work following the Lab's [Exposure Prevention Rules and Etiquette](#).

7. Earth and Environmental Sciences developed a formal travel approval process that included a request, with justification, for the Division Director's review and approval using the [FIELD WORK OR GENERAL TRAVEL REQUEST](#). Upon approval and wpc completion, a justification memo was drafted for the ALD's review and submission to the LBNL directorate. Upon final DOE/Directorate approval, the travelers had to submit a [request for travel to authorized field site](#) for the EESA management/DSC to evaluate covid conditions prior to travel. The EESA travel review and authorization process is depicted below.





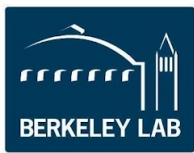
EESA Self-Assessment process

Target audience:

- Onsite staff, lab researchers/ post-docs/technicians
- Teleworkers (theory/modeling/admin/support staff)
- New staff (hired last 12 months)

Questionnaire:

1. How have restrictions on accessing Lab areas affected your work? (telework, visiting other work areas, safety walkthroughs, etc.)
2. What barriers have you experienced while working at home? What could the Lab do to help you? Have you been able to control your work hours?
3. Have you had difficulties in maintaining social connections with your work group?
 - a. What techniques has your team used to maintain social cohesion?
4. In what ways have ZOOM meetings been helpful for you?
 - a. In what ways have ZOOM meetings made it more difficult for you to get work done?
5. How have your workloads been impacted by Covid controls?
 - a. Have deadlines/expectations been adjusted to the new circumstances?
6. How have space use/density restrictions affected your work?
 - a. Do you have safety concerns about working alone on tasks you would have previously done with team members?
 - b. How does social distancing affect your team tasks?
7. What have been the impacts to informal collaboration/sharing of ideas/impromptu problem-solving (hallway/ water cooler/white board conversations)?
8. Have there been safety concerns related to working separated from your teammates?
 - a. Has the shortage of on-site support staff affected your work?
9. How does PPE (face coverings, respirators) affect your work flow/performance of work and communications?
10. How effective has the training been?
11. Have you been able to maintain 6' distancing?
12. What have been the effects on onboarding new staff (getting to know each other, on-the-job training)?
13. For new people, what has been your experience with meeting people and learning your job?
14. How have travel restrictions (including testing and quarantines) affected your work? Have you had difficulties with travel approvals/documentation?
15. What issues have you had with coordinating services from other groups (Facilities, EHS, etc.)?
16. Have you observed other people who do not appear to be following the rules? What was your reaction? Have you had concerns about other people entering your work areas?



- a. Have you had any difficulties with site access, for yourself or bringing other people on site?

Issues:

Overall Impressions

Most people understood the necessity of limiting contact during COVID-19. They appreciated LBNL's efforts to keep them safe and allow them to continue working. Compliance with required controls was good. People are getting more comfortable with working remotely, but there is more to learn. The transition was difficult. There will be a permanent change in the culture, with a mixture of on-site and off-site work.

Social Cohesion

Regular (weekly, daily) virtual work group meetings helped people develop or maintain social cohesion and coordinate work. Social contact helps people understand how their work fits into the "big picture" of what is going on at the Lab. There was little interest in purely social meetings, but meetings that mixed business needs with social interaction worked well. People used a variety of tools to maintain contact, including shared Google sheets, SLACK channels, Zoom, emails, phone calls, texts, Google chat, Google rooms.

Working on Site

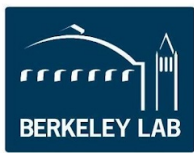
Required controls were generally being followed. There were no complaints about people not following controls. The Subcontractor quarantine equivalency documentation was confusing and was affecting equipment servicing.

Site Access, Distancing, and Space Occupancy

Some people found site access requirements confusing. EESA had to develop a tool (spreadsheet/calendar) to track available entry slots and employee locations and communicate if slots are available. The allowable thresholds for site entry and occupancy kept changing, which posed a challenge for administrators. Office work with doors closed worked well. There were some concerns about shared tools and spaces. Distance made it harder to meet new people or share ideas spontaneously. Some research tasks require more than two people. It was difficult to give lab tours or collaborate. Researchers were eager to speed up the transition back to working at the Lab and increase room occupancy.

Masks and Respirators

Communication while wearing face covers was difficult. Masks tend to fog up safety glasses.



Working Remotely

Zoom

Zoom meetings were seen as an essential tool for getting work done during the pandemic. There were some recommendations for improving use of Zoom:

- Have an agenda and stick to it. If the discussion is finished early, end the meeting.
- Make sure the right people are present. Small meetings work better.
- Respect attendees' work schedules. Schedule meetings at reasonable times, don't run over the allotted time, and allow some time between meetings.
- Limit the number of meetings. Allow people some windows of time to concentrate on other work.

Working from home

Most people appreciated the opportunity to work from home, but there were some challenges. It was difficult to monitor conditions at the Lab. They missed meeting new people and interacting spontaneously with co-workers. Some people were sharing small homes and work spaces with children or other adults, so interruptions and internet access bandwidth were issues. Scheduling work was more flexible, but it was difficult to resist 24/7 requests for work input. It took some time for the Lab to fully develop and communicate teleworking requirements and ergonomics support systems.

Onboarding and Training New People

Zoom orientation, badge office scheduling, and EESA website information for new employees were good. The training process was slower because in-person interaction and site access were limited. It was difficult to demonstrate, observe work, and give immediate feedback. It was harder to give new people a "big picture" of how their work fits in with the rest of the Area/Division because they could not go on lab tours or meet very many people in person. Observing work remotely was somewhat helpful. Generally, the recommendation is to allow more time for training new people before expecting them to be fully competent in their new position.

Travel and Conferences

Researchers missed the opportunities for in-person collaboration and spontaneous sharing of ideas. It was particularly difficult for new / early career researchers to meet other people in their field. Virtual conferences were not very effective. Traveling for field work was limited and required advanced DOE approval. Project deliverables were affected.

Coordination and Support from Other Divisions

Some systems needed improvement:

- Facilities response to work requests
- Deliveries from vendors
- Salvage



Interview results by EESA Group:

June 3, 2021 – Geosciences Measurements Facility (GMF) Vivi Fissekidou/ Pat Thomas interviewing, 5 participants; people who are working onsite and in the field .

Overall – It was challenging working onsite and traveling to the field. In line with the directorate guidelines, EESA placed limits on the staff working onsite which created a number of issues completing tasks that are to be performed by multiple staff working together and preparing equipment for field work. Limited travel also affected field work and deliverable. Teleworking was not an option when hands on activities in the lab are required. Communication and coordination were important. Centralize information, communication with eesaemergency@lbl.gov and keeping track of the staff working onsite, was an important part of scheduling the work. Generally, the EESA efforts have been well-organized. There was limited interaction with students. All badge-ins were counted the same, whether all-day or brief visits.

Social cohesion – Physical presence in the lab was important. Weekly/daily group meetings help focus work. It is harder to keep track of work status when working alone. The social aspect of work is important. The emails from the EESA management help them feel more connected to the Lab.

Zoom - It is necessary. They need to meet more frequently because they can't have hallway conversations. Meetings can start at 7AM and there can be several consecutive meetings. It may be too convenient to schedule Zoom meetings - it can impact productivity. People need more time to concentrate on work.

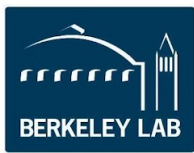
Controls - Distancing in the lab means not meeting as many people as they would like. Subcontractor access and distancing was a major concern for maintaining equipment and services.

Communication - Their main sources of information have been emails and group coordination meetings.

OJT - The lack of in-person discussions has been a critical issue. Electronic communication doesn't work as well. It is harder to share information spontaneously. They tend to try to figure things out by themselves.

May 28, 2021 – EESA IB74/84 lab researchers: Vivi Fissekidou/Pat Thomas interviewing, 4 participants; people who are working onsite in the IB74 and B84 labs.

Occupancy - Each Division had to develop a tool (spreadsheet/calendar) to track the number of employees working onsite. The numbers of staff onsite were in line with the daily allocation to EESA and it was limiting interaction and collaborative work.



Communication and daily check in among the staff was coordinated by the PIs responsible for the work.

Telework – WPC activities were created per department, to address telework. It was difficult to work remotely with a small child at home. Some people have small houses with several Zoom meetings going on in parallel. It was hard to concentrate.

Social cohesion - They were missing social interactions.

Zoom - It was necessary (couldn't function without it). It is a great tool, when used right. It can get boring. Tips for successful meetings include getting the right people and staying on the agenda. There were lots of meetings, as well as chat, text, and phone. Use Speedy Meetings or give back time when the agenda discussion is complete. Avoid going over the allotted time.

Controls - Distancing and mask wearing were being practiced but not conducive to lab work.

New people - Zoom orientation, badge office scheduling, and website information were good. Training was more difficult because there was no immediate feedback. It was harder to give new people a “big picture” of how their work fits in with the rest of the Area. There was limited interaction with students.

PPE - It was difficult to communicate between people wearing face covers. They had to shout and had difficulty understanding. Safety glasses tend to fog up with masks.

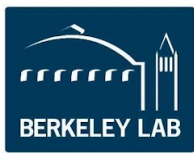
Working from home – was limited to data analysis and computational tasks. Ergonomic issues were not easily addressed. Zoom meetings were taking a big part of the day.

Travel restrictions - Only “mission critical” travel was authorized. The approval process was long and affected field work deliverables.

Workload - The work load was mostly manageable. There was less travel planning and expense reports, but more work setting up virtual conferences. People could not take vacations to travel anywhere. It was difficult not knowing the future.

Coordination with other Divisions - Facilities response was slow. It took months to get rid of old equipment or get electrical outlets installed. It was hard to track the status of Work Orders. Salvage was on hold. Procurement was working well. Security was managing every day access to the lab.

May 28, 2021 – EESA B70/70A lab researchers: Vivi Fissekidou/Pat Thomas interviewing 8 participants, staff mainly working on-site in the B70/70A labs, supplemented by work at home



Social cohesion - It was difficult to have social connections. They tried a socially distanced meeting in a park, and group Zoom sessions, but did not get much participation. People working on site are eating lunch outside at a distance.

Zoom - Zoom has not been a replacement for real meetings. They meet the absolute minimum needs for getting work done.

New people - It was really difficult to train new people. New people need to be able to visit the lab with minimal contact. Hands-on demonstrations of knowledge are needed. Training efficiency was reduced. There were lots of virtual meetings.

PPE - It was difficult to communicate between people wearing face covers. They had to shout and had difficulty understanding. Safety glasses tend to fog up with masks. They needed masks with metal strips for a better fit.

Social distancing - It was a challenge to train students working remotely, Some tasks require more than two people. Limited room occupancy helped maintain social distancing.

Communication of requirements - They used shared Google sheets, SLACK channels, zoom, emails, phone calls, texts. In-person discussions, the guidelines on the EESA website, weekly program meetings, emails, and training were all sources of information

Working from home - It was difficult for people working with children at home, trying to do Zoom school in the same space. There were network crashes from systems without enough bandwidth.

Travel restrictions - Exchange of ideas and learning from each other was not happening. Field work deliverables were delayed.

May 28, 2021 – EESA Operations team: Vivi Fissekidou/ Pat Thomas interviewing, 7 participants. Operations staff, who have been supporting EESA management and researchers, mostly from home. Work/life balance was a challenge for parents who had to coordinate work with children's needs and schooling.

Social cohesion - They used weekly Zoom drop-in sessions and SLACK channels. Participation dropped off with time.

Zoom - Meetings were useful, but there were too many. Small meetings were the most useful. Promptness and not running over the scheduled time was important. There were more meetings and they had to be set up in advance.

Remote work - People answered emails quickly. The telework website was useful in ordering equipment.



Communication - The guidance for Lab entry was confusing. Useful communications included the EESA emails and COVID-19 website, level-1 emails, Elements

New people - Hiring was difficult, especially from abroad. The DOE approval process was a barrier.



Appendix 5.3 Directorate/Operations

Overall Impressions

With the vast majority of workers within the LD/Ops Area working remotely, acceptance of the change in the way we work was high, though there were many areas that needed immediate improvement. Overtime, these were adequately addressed, leading to high worker satisfaction with the Lab's and each Division's responses, communications and resources made available.

Communication of COVID-19 Requirements

The three most commonly used sources of information have been the Berkeley Lab's COVID-19 website, communications from Lab leadership and specific group meetings (Divisional or by employee group). These three followed across all interviewees. In addition to these three, Teleworkers were more likely to consult outside sources while on-site workers relied on lab training courses. New hires appeared to stick with the three main sources of information. Feedback for improvements in this area centered around ease of access to the information and ensuring it was updated and insync across laboratory sources. Additionally, some interviewees wanted more transparency and reasoning behind the decisions and/or guidance.

Social Cohesion

Overall, there were not major barriers to social connections among any of the groups of staff. Within each group a subset of individuals appeared to favor one type of social interaction over the other between virtual, in-person or as a group. Factors for those individuals may also be correlated with level of social interactions outside of work.

By far, the most commonly used method to maintain social interaction was via Zoom for work groups, individuals or other social groups at the Lab. Other platforms included Google Chat/Hangouts and Wonder.me. Many of these groupings had already begun using Zoom prior to the shelter in place and this eased the transition. Variation was minimal between groups as even with on-site staff, many of their meetings required the use of teleconferencing due to colleagues who were teleworking.

Working on Site

On-site staff responded that they adhered to controls. There were minimal concerns or observations of others not following controls around the site. No impacts due to PPE or other on-site controls were reported.

Site Access, Distancing, and Space Occupancy

With minimal on-site staff within the LD/Ops area, those who were not familiar with or confused by the site-access requirements were able to be addressed quickly to resolve concerns. Each Division developed a tracking sheet for staff coming on-site in order to ensure that there were available badge ins as well as to note employee locations. As changes to these limits and protocols occurred it was communicated through the Division Safety Coordinator or high level Division Management. Social distancing and



use of enclosed spaces was easy to manage due to the limited number of staff on-site. There were some concerns about shared tools and spaces.

Masks and Respirators

This is not applicable to staff in the LD/Ops Area.

Working Remotely

Zoom

Zoom in and of itself was a welcomed technology and key due to the vast majority of staff teleworking. Many groups had already been using the service (or similar services) for their meetings, allowing for an easier transition. Some specific significant benefits included the ability to see faces with voices (compared to teleconferencing), share presentations/data and for those who are hard of hearing due to the reduction in people talking over each other. New staff found that putting names with faces was a significant boost to learning who their colleagues were as well as feeling as part of the team quicker.

The ease of scheduling was a benefit, though also was a downside as a significant number of interviewees found that their schedule filled up quickly with back to back to back Zoom meetings. This also left little time for other work products and led to multitasking during meetings, therefore not being able to pay attention to the same level or they found their days to become longer to complete their tasks. This led to "Zoom fatigue" for many and the provided tips from the Lab were beneficial to reducing the levels of this fatigue. Over time, staff were able to reassess and take back management of their schedule by blocking off times for specific work, breaks or simply to not be on Zoom.

Working from home

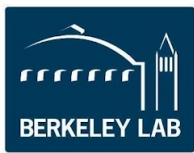
With the majority of staff working from home, there was a significantly positive response to this change in work location along with some drawbacks. Those who did not have a strong social group within work or outside of work reported feeling of isolation or disconnection from work. The lab's resources in this area improved significantly overtime and these individuals felt that their connection to the laboratory was re-established.

Onboarding and Training New People

Zoom orientation, badge office scheduling, and website information for new employees were acceptable. The onboarding process was variable across Divisions with some having quarterly new employee introductions (positively received) while others only announced new staff via email. New staff responded that Zoom was adequate to get to know their colleagues, but finding support from IT or other groups at the lab was difficult at times.

Travel and Conferences

Within this group there was minimal impact with the loss of travel at first since events were canceled, but in time as travel was allowed, travel requests began to start. Most



travelers were not familiar with the new requirements and needed a full explanation of what was needed and the expectations that they should have for approvals. These requirements were not clear and required more one on one time to be understood.

Coordination and Support from Other Divisions

The strongest concerns in this area were in regards to IT support services for hardware availability as well as support through the IT help desk. Mail was also pointed out as a concern due to limited deliveries and local sorting at mailstops.

Interview results by Focus Group:

Assessment Methodology

Groups across each division were identified to target three key groups: Teleworkers, On-Site Workers and New Hires (staff hired during the pandemic). Each group was interviewed separately and given a set of questions that was consistent to all groups as well as some specific questions based on the group being interviewed.

Participation was as follows:

- Teleworkers: 94 (conducted over two sessions)
- On-Site Workers: 4
- New Hires: 5

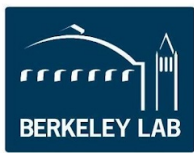
Note that some new hires chose to participate in the teleworker sessions and due to the profile of the divisions involved, there are very limited numbers of on-site workers.

Summary of Responses:

Q1. What information sources have you found the most useful in understanding COVID-19 controls? How effective has the COVID-19 training been?

Teleworkers:

- Lab leadership communications: emails - elements/leaderline communication and email updates from LD), team meetings, Dr. Witherell's videos and charts, updates on specific cases at the Lab.
- Berkeley Lab's COVID-19 webpage as well as Divisional COVID pages.
- Training on safety protocols and their updates as changes were made to protocols. Also provided understanding of other's needs and roles to better understand the whole of the picture.
- CDC website, local news
- Weekly safety groups meetings
- Divisional Meetings including All hands meetings
- Division Safety Coordinator communications
- Covid symptom tracking app
- Specific infections updates - compared to other labs



On-Site Workers:

- Berkeley Lab's COVID-19 webpage
- Lab leadership communications: Emails, COVID calls
- Supervisors communications
- Training on safety protocols - Good and conscience. Not too wordy and clear. Not complicated and didn't take too much time. Reminder emails for Health Check form.

New Hires:

- Training on safety protocols including scenarios
- Berkeley Lab's COVID-19 webpage
- Lab leadership communications

Q2. Have you had difficulties in maintaining social connections with your work group? What techniques has your team used to maintain social cohesion?

Teleworkers:

- Zoom (some groups already using prior to SIP), Wonder.me
- Regular team meetings + ice breakers, randomized buddy calls, Social check ins for groups
- Beginning with a strong team was important and new hires had a little harder time
- Off-site meetings/trainings when allowed
- For some, missing in person interaction was more impactful
- Lab Provided activities - Groove lounge, open mic. IDEA office - working to continue stretch breaks, mindfulness breaks, wellness in the new normal, parents network. ERGs and other clubs at the Lab.
- HR information systems across platforms - has to create new norms and respecting lines for Zoom, etc.

On-Site Workers:

- Most of the group was on-site routinely
- Zoom meetings to stay in touch with other groups, though harder to schedule at times
- Felt impact of loss of casual interactions

New Hires:

- Emails, Chats/chat rooms (Google Chat), phone calls.

Q3. In what ways have ZOOM meetings been helpful for you? In what ways have ZOOM meetings made it more difficult for you to get work done?

Teleworkers:

- Pros: Already familiar with the technology, allows face to face during teleworking, keeping in touch. Lead to increase in communications on other platforms (google



chats, hangouts). Good for hard of hearing people and helps identify who is speaking (vs. conf. calls). Great for on screen collaborations, more structure to meetings. Good for quick informal meetings. Easier to make it to meetings (scheduling + no travel to). Less talking over one another. Interns can get undivided attention from mentors

- Cons: Easier to setup = many more meetings. Takes the place of a short call, multiple Zoom meetings vs. one in-person, being on camera all day (fatigue), Disabilities need more addressing in Zoom. Need to manage schedule and create No Zoom times in the day/week.

On-Site Workers:

- Pros: Fewer dropins, now scheduled. No commute (saved time in day). Get to see faces (vs. conference calls). Everyone has an equal share of the screen. Anyone can join from anywhere.
- Cons: Longer work day, scheduling over lunch hour, loss of commute to decompress on the way home. Harder to have quick check-ins/meetings. Zoom fatigue (resources helped a lot!). Hard to get a webcam early on.

New Hires:

- Pros: Seeing names on screen with faces, sharing screens/presentations. Not having to move around from meeting to meeting. Flexibility.
- Cons: Multitasking and overscheduling. Larger meetings led to more distractions with email and other things at home. Home internet connections are not always strong.

Q4. What have been the impacts to informal collaboration/sharing of ideas/impromptu problem-solving (hallway/ water cooler/white board conversations)?

Teleworkers:

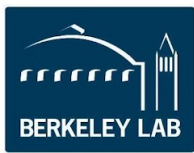
- Positives: Increase in Google Chat/Hangouts, Slack and other collaboration tools, increased mindfulness of others time, increased productivity due to limited interruptions, able to communicate with others from other buildings easily, screen/meeting recording so can review/catch up after or if meeting is missed, training can be completed at own pace vs. in-person,
- Negatives: Siloing and isolation, casual conversations lost, less time between meetings to reset mindstate, interaction can be less engaged, others not completing pre-meeting work and use time in meeting for it.

On-Site Workers:

- (NOT ASKED THIS QUESTION)

New Hires:

- Positives: Better documentation due to chat/email vs. phone call/drop ins
- Negatives: Not being able to have quick, informal conversations limits creativity. Lack of movement, getting out of routine space.



Q5. How have restrictions on accessing Lab areas affected your work? (telework, visiting other work areas, safety walkthroughs, etc.)

Teleworkers:

- Little to none for many
- So many requirements to get approvals/authorizations
- Limited visits allowed, so saved up needs for each visit
- Badge issues on arrival, make it difficult
- Originally more trips required, then fewer overtime
- No issues accessing the site, though it felt weird being there
- Group created a routine to reduce need to come on-site
- Not having a printer and easily available resources from office has been a negative
- Delays in shipping, mail due to limited access

On-Site Workers:

- Buildings being locked, requiring your access card all the time to get in and out. This could have been announced in advance.
- Some groups needed access rights to more areas due to work. Hard to gain those access rights with newer system.
- Paper archives not accessible for remote work. Need a future system to upload and convert to a cloud based system.

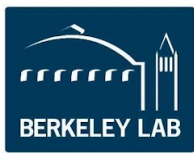
New Hires:

- Needed to access physical docs at the lab, which was not easy to get access approvals. Electronic filing in the future will be important.

Q6. What barriers have you experienced while working at home? What could the Lab do to help you? Have you been able to control your work hours?

Teleworkers:

- Technology and IT support less accessible
- Having own space for work and the proper accessories (printer, consumables)
- Ergonomic accessories (got better with telework catalog over time)
- Flexibility in schedule a positive
- Home internet connection limitations and cost to increase bandwidth
- The lab could cover increased costs for home internet, electrical, heating & A/C, etc.
- Work/Life balance for some easier than others - home has others also (partner, children, elders)
- Able to eat healthier
- Preferred not having the commute
- Feeling of isolation
- Concerns about greenhouse gasses created from home increasing



- Offer voice over IP phone software for laptop to avoid using personal phone

On-Site Workers:

- (NOT ASKED THIS QUESTION)

New Hires:

- Hard to find a proper place in home for work
- Better work/life balance and no commute
- Nice to be with family at lunch/breaks

Q7. How have your workloads been impacted by Covid controls? Have deadlines and expectations been adjusted to the new circumstances?

Teleworkers:

- Higher workloads for some (HR notably so), other stayed the same
- Commute time saved so overall shorter day
- No deadline extensions provided
- Higher productivity
- Retirements increased leading to higher workloads for some groups
- Month end & Year end were more challenging due to documentation and communications needed for tasks.
- Remote access VPN made systems slower, issues for some to get setup
- PMP goals were accommodated due to the changed circumstances
- Overall supervisor support was strong, but for some not as easy to get

On-Site Workers:

- No significant impacts for most
- Projects postponed as required due to staff being off-site
- Moving equipment was difficult due to social distancing requirements and potential need for respirators.
- Delays had to be accounted for due to waiting on staff to be able complete projects.
- Workload went up due to increase in processing extensions for work due to delays. Vendor response was variable and regulations could allow for more flexibility in future.

New Hires:

- (NOT ASKED THIS QUESTION)

Q8. Do you understand the requirements for travel? How have travel restrictions (including testing and quarantines) affected your work? Have you had difficulties with travel approvals/documentation?

Teleworkers:

- Office of Science restrictions were had to understand for specific travel situations



- Travel approval process was more work
- Relocations on were put on hold, leaving new hires remote
- Significant impact for Workforce Development and Education due to travel to events
- Sponsors coming on-site was restricted
- Outreach / Funding opportunities may have been impacted or lost

On-Site Workers:

- Networking has suffered due to lack of interactions
- Lost opportunities for outreach and funding for DOE as science was not able to be presented in panels, etc. to get the information and collaboration opportunities out there. Some populations require direct interface (vets, minorities, disabled persons).
- Opportunities to host virtual conferences were more expensive and went over budget

New Hires:

- (NOT ASKED THIS QUESTION)

Q9. Has the shortage of on-site support staff affected your work? What issues have you had with coordinating services from other groups (Facilities, EHS, etc.)?

Teleworkers:

- IT was not as responsive nor as nimble (help desk specifically noted)
- Supply chain issues with IT components/hardware
- Mail piling up

On-Site Workers:

- Longer wait times for pickup or transportation
- Had to learned to use support groups directly without admin support
- Mail service was not reliable on a daily basis. Some locations are piled up due to changes. No information provided on changes for the buildings.

New Hires:

- (NOT ASKED THIS QUESTION)

Q10. Have you had any difficulties with site access, for yourself or bringing other people on site?

Teleworkers:

- (NOT ASKED THIS QUESTION)

On-Site Workers:

- Mostly none, but some construction areas impacting parking and walking routes concerns were not clearly marked nor information provided prior to changes.



New Hires:

- (NOT ASKED THIS QUESTION)

Q11. How does PPE (face coverings, respirators) affect your work flow/performance of work and communications?

Teleworkers:

- (NOT ASKED THIS QUESTION)

On-Site Workers:

- No impacts

New Hires:

- (NOT ASKED THIS QUESTION)

Q12. How does social distancing affect your team tasks? Have there been safety concerns related to working separated from your teammates?

Teleworkers:

- (NOT ASKED THIS QUESTION)

On-Site Workers:

- When two people were required to move an item, more coordination had to be done. Jobs are often sent to facilities instead due to requirements for respirator use. This caused delays in moving items.

New Hires:

- (NOT ASKED THIS QUESTION)

Q13. Have you observed other people who do not appear to be following the rules? What was your reaction? Have you had concerns about other people entering your work areas?

Teleworkers:

- (NOT ASKED THIS QUESTION)

On-Site Workers:

- Overall, no concerns or specific incidents. All felt comfortable.
- One observed a specific individual would be working inside without a mask when alone and then quickly put it on when others were around leading to concerns about using honor system for those who may not be vaccinated.

New Hires:

- (NOT ASKED THIS QUESTION)



Q14. How have space use/density restrictions affected your work? Do you have safety concerns about working alone on tasks you would have previously done with team members?

Teleworkers:

- (NOT ASKED THIS QUESTION)

On-Site Workers:

- None

New Hires:

- (NOT ASKED THIS QUESTION)

Q15. What has been your experience with meeting people and learning your job?

Teleworkers:

- (NOT ASKED THIS QUESTION)

On-Site Workers:

- (NOT ASKED THIS QUESTION)

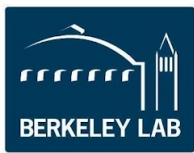
New Hires:

- Onboarding done entirely via zoom, which was not ideal, but good under the circumstances.
- Zoom was good for getting to know faces right away, then keeping up communication
- Some found it challenge to come on 100% remote as it was harder to develop working relationships with colleague and that it was harder to answer quick questions
- Harder to get to know policies and systems in depth without someone to point out how..
- Support for using new systems was limited leading to training period taking longer, therefore slower to get up to speed.
- For some it was hard to adjust to remote working while others were concerned about it being difficult to transition back to in person/on-site work in the future

Q16. If the Lab experiences a similar situation in the future, what should we do differently?

Teleworkers:

- Most all respondents considered that the Lab's response was good
- Having a stock of IT and ergo items ready to be deployed
- Remote access to phone system and voicemail
- Electronic filing advancements
- Home office IT support should be improved
- Offsets for costs at home
- More respect for each other as individuals with varying needs



- Supervisors should pre-plan for those whose roles will be more impacted
- Consider outside factors for staff (family-kids and elderly, local area impacts) that impact their ability to work remotely

On-Site Workers:

- Overall positive remarks about the Lab's response
- Provide clearer information on whose guidelines the Lab is following (county vs. Fed vs. CalOSHA)

New Hires:

- Mostly positive to Lab introduction
- Communications about returning to work has been confusing as to impact on role
- Knowing more about the division's approach would be better
- More early resources to address work/life balance and prevent isolation

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