

Risk and Safety Solutions Assessment: 6-mo Summary Report

Environmental Health and Safety (EH&S)

Status Summary

Risk and Safety Solutions (RSS) is an online suite of applications designed to provide support in the area of lab safety and facilitate regulatory compliance in the areas of hazard assessments, lab inspections, and chemical inventory. EH&S implemented the applications in May of 2019 and is proactively working with campus stakeholders to further implement the applications into routine operations.

Completed Assessments by Department and Year

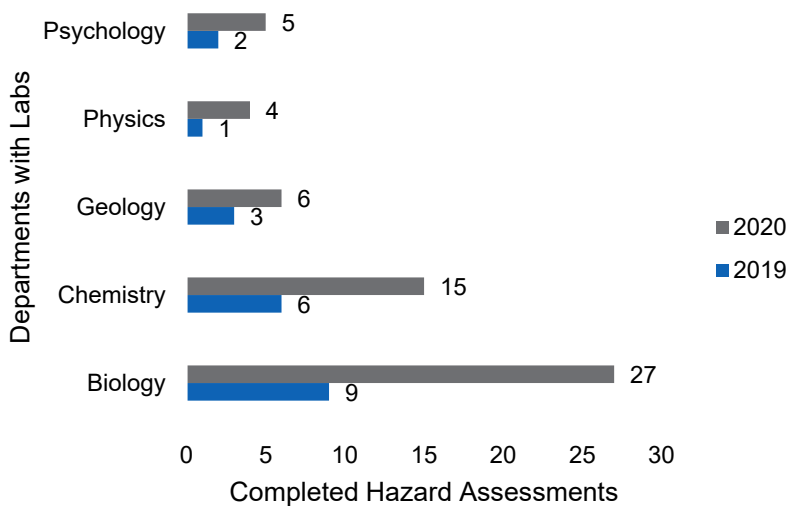


Figure 1: Summary of completed hazard assessments by department for the 2019 and 2020 calendar years.

During this calendar year, EH&S has worked proactively with campus departments to implement a framework that is focused on identifying laboratory hazards through use of the RSS applications and collaborating with Principal Investigators (PI) to resolve any observations identified during the inspections process within an appropriate time frame.

Lab inspections can only be performed once an initial hazard assessment has been completed and a group profile, consisting of the location(s) and participants in that area has been defined by the PI. This is the primary reason we have seen an increase in assessments being completed this year as shown in Figure 1 when compared to the 2019 calendar year. As EH&S

continues to work with our customers to implement these tools, the implementation of new hazard assessments continues to be prioritized to help ensure that the necessary pre-requisite data is in place to support the inspection and chemical inventory processes.

The hazard assessment helps EH&S define the lab space and identify a responsible party as well as other participants such as students or graduate students. Once the assessment has been certified by the PI, it provides valuable information regarding potential lab hazards to any participants defined in the group profile including appropriate personal protective equipment (PPE). EH&S continues to work with campus departments to refine the list of campus lab locations, particularly for academic lab spaces to ensure that the data reflected within RSS aligns with the current use of the physical space.

Lab Inspection Summary

In addition to increasing the overall number of inspections this year, EH&S has updated the existing inspection checklists to include COVID-19 specific criteria which allows EH&S to monitor safety measures and ensure campus procedures are being followed after the initial implementation. The following table reflects an overview of inspections completed in the 2020 calendar year when compared to those completed in 2019.

Inspection Questions by Calendar Year

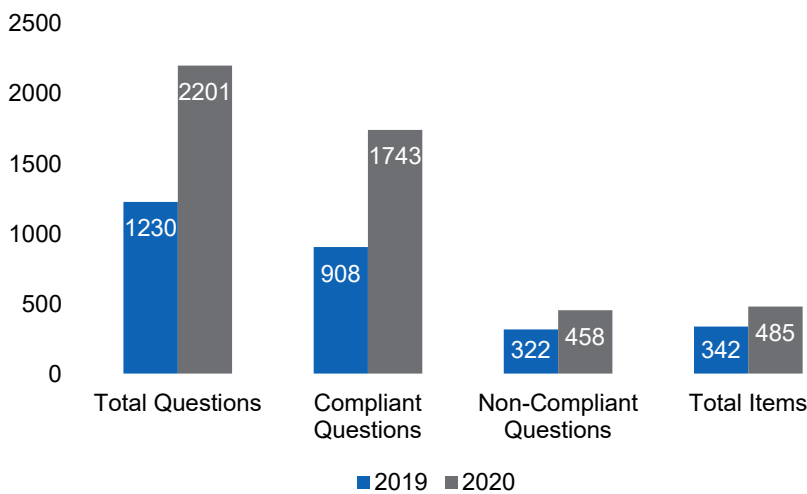


Figure 2: Percent Compliance for Lab Inspections in 2019 and 2020 calculated by dividing compliant questions by total questions. The sum of compliant and non-compliant questions is the total questions for inspections.

As observed in *Figure 2*, a total of 485 items were observed to date during inspections which accounted for an overall increase of 42% when compared to the similar period in 2019. The increase is attributed to an overall increase in the number of inspections performed during the 2020 calendar year which is also supported by the overall increase observed in the total number of questions.

Overall, EH&S conducted a total of 21 inspections in 2019 and has completed a total of 47 inspections date in the 2020 calendar year; an increase of 124% from 2019.

By comparing the number of compliant questions with total questions assessed during an inspection, a compliance ratio can be established to better understand the overall compliance. By dividing total questions by compliant questions, we can establish an overall lab compliance ratio of 74% and 80% for the 2019 and 2020 calendar years, respectively.

Chemical Inventory Summary

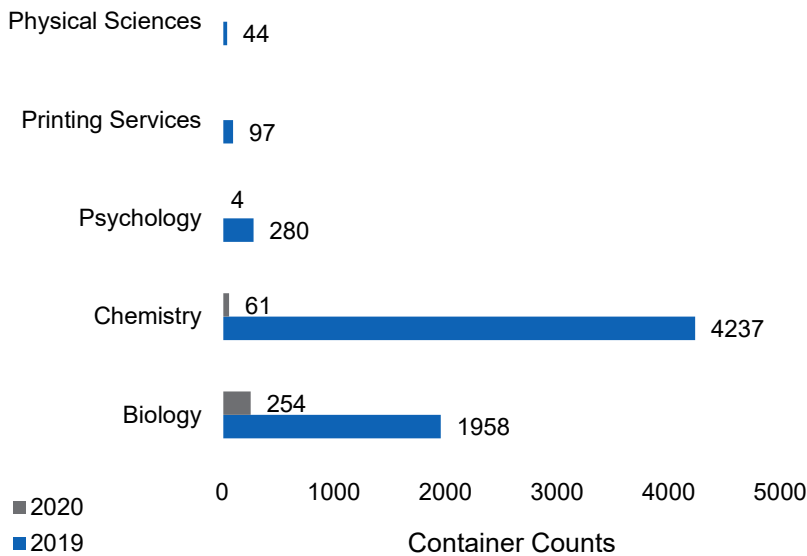
EH&S utilized support of several student assistants to help with the initial completion of the chemical inventory in 2019. This approach allowed EH&S to provide additional support to departments by assisting with the initial inventory process. EH&S is currently coordinating with campus departments to facilitate an annual reconciliation of active chemical inventories and has acquired hand-held scanners to assist departments in completing this process. In certain situations, EH&S is assisting departments with the reconciliation process which allows the opportunity for departments to adjust their assigned sub-locations and other storage options for their inventory configuration to best meet their operational needs.

	2019	2020
Number of Inventories Completed	42	13
Number of Unique Chemicals Inventoried	2,418	210
Total Containers	6,807	365

Table 1: Summary of chemical inventory status for 2019 and 2020.

As seen in *Table 4* above, there have been significantly fewer chemical inventories completed in the 2020 calendar year when compared to 2019 which has been attributed to the effects of the COVID-19 pandemic which significantly reduced the number of on-campus work during the months of March through August in 2020. EH&S began scheduling chemical inventories in late September 2020 once able to return to the campus in a limited capacity.

Chemical Inventory by Calendar Year



To better articulate the decline in this activity, *Figure 3* shows a comparison of chemical inventory data collected to date in 2020 when compared to the previous calendar year. As additional requests for campus research are approved, EH&S will continue to work with departments to ensure that inventories are updated in RSS; as such, these figures are expected to increase.

Figure 3: A count of chemical containers inventoried by department for the 2019 and 2020 calendar years.