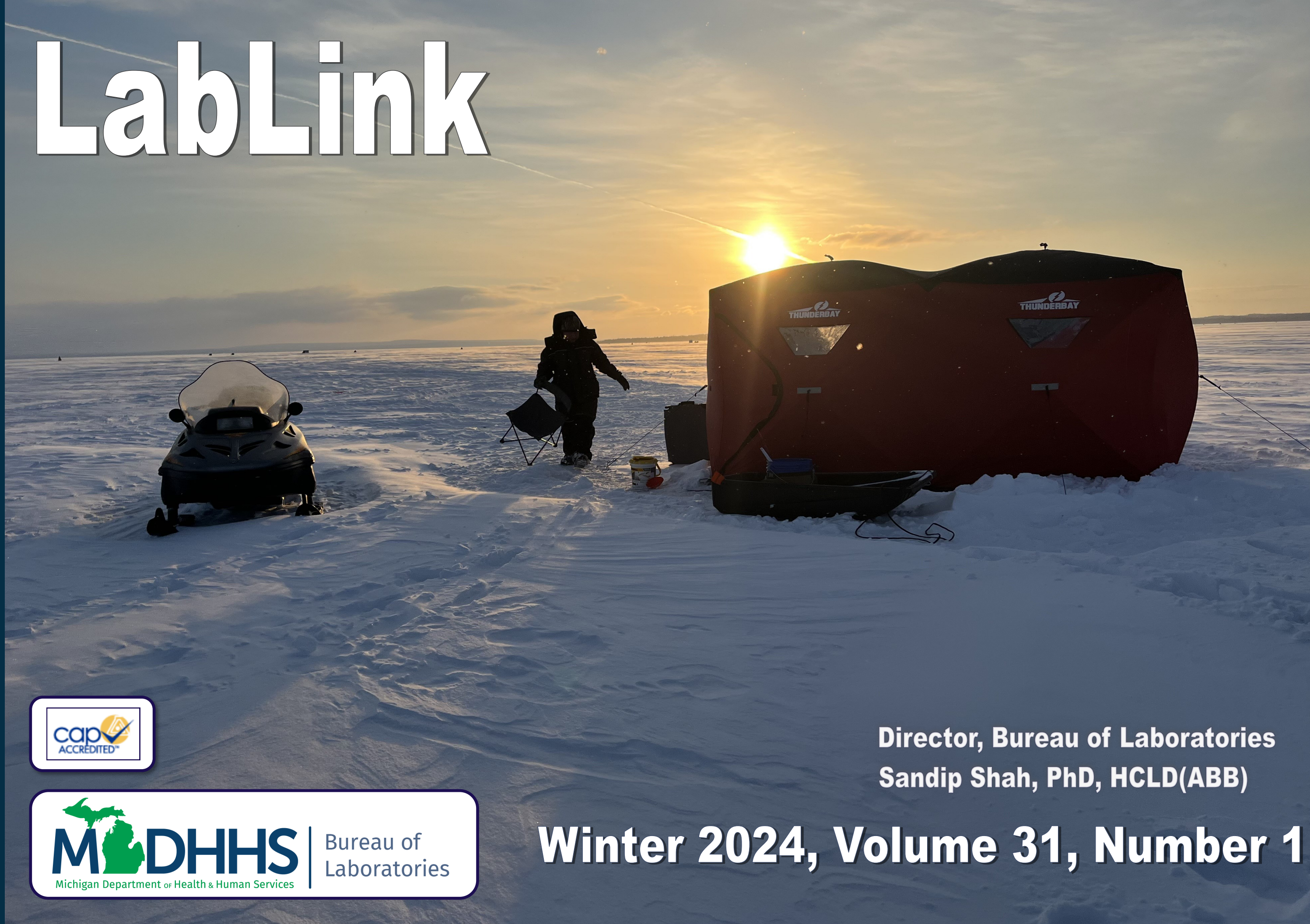


# LabLink



Director, Bureau of Laboratories  
Sandip Shah, PhD, HCLD(ABB)

**Winter 2024, Volume 31, Number 1**

## In this issue...

<b>PFOMS: PFAS in Firefighters of Michigan Surveillance</b>	<b>3</b>
<b>CDC Laboratory Outreach Communication System</b>	<b>4</b>
<b>Updates to LKOTS</b>	<b>4</b>



## Bureau Vision

The Bureau of Laboratories is a stronger, more diverse team within an integrated public health system. We utilize advanced technology and innovative leadership to provide comprehensive public health services in our dynamic global community.

## Bureau Mission

We are dedicated to continuing leadership in providing quality laboratory science for healthier people and communities through partnerships, communication, and technical innovation.

LabLink is published quarterly by the Michigan Department of Health and Human Services Bureau of Laboratories, to provide laboratory information to Michigan health professionals and the public health community.

MDHHS is an Equal Opportunity Employer, Services and Programs Provider.

Editor: Teresa Miller



# PFOMS: PFAS in Firefighters of Michigan Surveillance

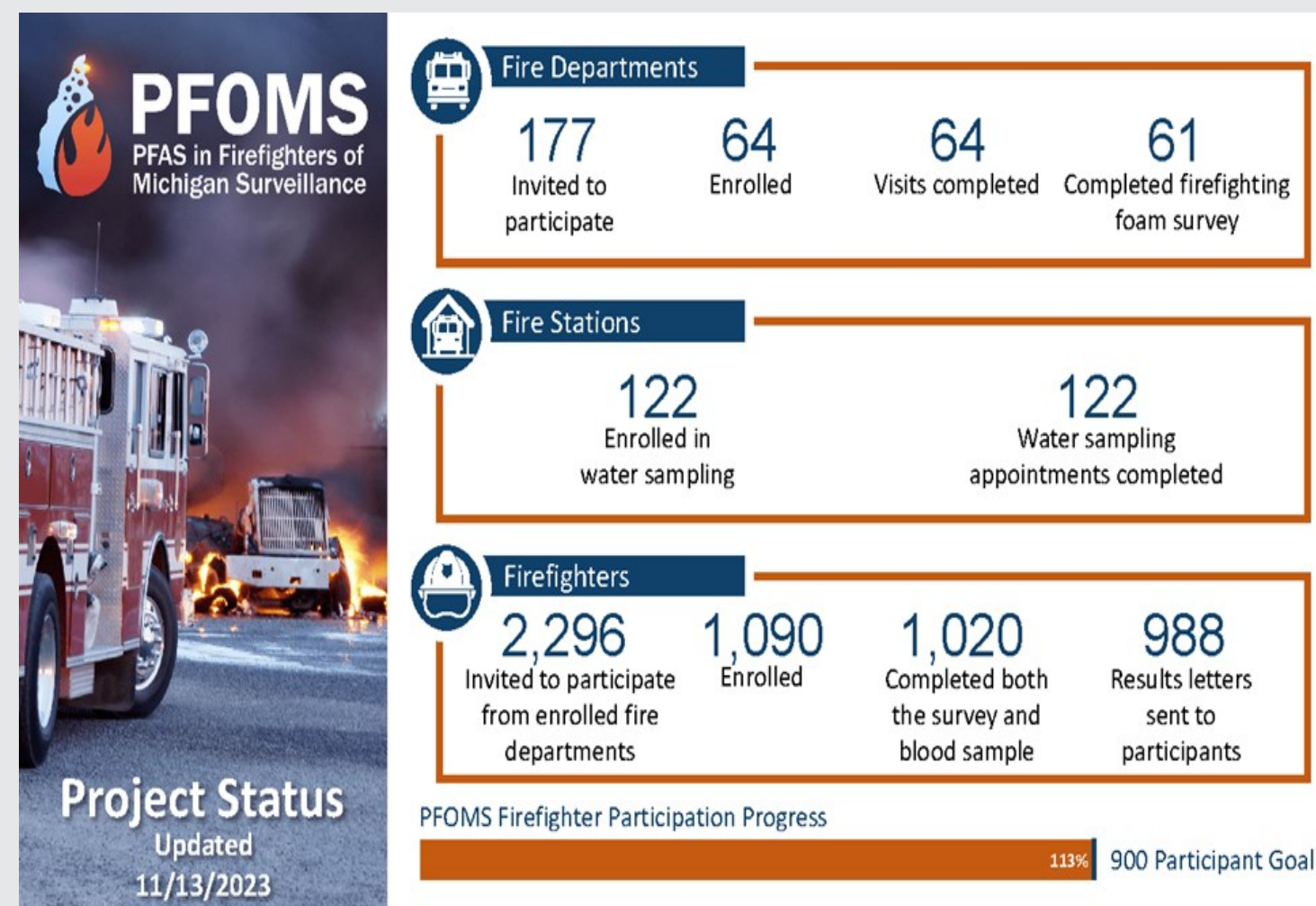
**Author: Jessica Morrison, PhD, Senior Laboratory Scientist, Clinical Organic Unit**

Perfluoroalkyl substances (PFAS) are a group of persistent man-made chemicals that are both oil- and water-resistant and do not easily breakdown in the environment under normal circumstances. The term “PFAS” is instantly recognizable in Michigan these days as an emergent environmental contaminant. PFAS are suspected carcinogens and endocrine disruptors, with other health effects still being studied and discovered. Because of their ability to repel both hydrophilic and hydrophobic compounds, they are commonly found in both industrial and consumer products. PFAS are also commonly used in Class B firefighting foam as well as firefighter protective gear.

Persistent organic pollutants (POPs) have been tested at the Bureau of Laboratories (BOL) for over 35 years, with PFAS being added to the analyte list in 2011. Due to their environmental persistence, bioaccumulation has been of concern, as PFAS have been shown to build up in blood and organs. On the relative forefront of clinical PFAS analysis, the Clinical Chemistry section (CCS) of the BOL has developed their own high-throughput extraction and liquid chromatography tandem mass spectrometry methods for analysis of 42 PFAS compounds in water, serum, and dried blood spots at low part-per-trillion levels.

In 2019, the CCS in collaboration with the Division of Environmental Health (DEH) was awarded a State-wide Biomonitoring Grant by the Centers for Disease Control (CDC). One of the projects funded by the CDC Biomonitoring Grant is targeted at measuring occupational exposure of firefighters in Michigan to PFAS through the foams they use to put out fires, or the protective clothing they don to keep themselves safe. The project is called PFOMS (pronounced “p-foams”), or PFAS in Firefighters of Michigan Surveillance. The project is a public health surveillance project that will be used to guide public policy and health education.

Fire stations were recruited to participate from locations across the state spanning small town fire stations to big city fire departments to airport fire stations. Each participating fire station had all firefighters (career and volunteer) invited to give a sample of their blood for PFAS serum analysis by the CCS. In addition, all participating fire stations were able to have their drinking water tested for PFAS to eliminate the fire station as a source of PFAS exposure. DEH staff thoroughly interviewed firefighters as well as fire stations to understand PFAS exposure from a firefighter’s life as well as firefighting foam and



## PFOMS: PFAS in Firefighters of Michigan Surveillance *...continued from Page 3*

materials used at the fire station. At each participating fire station, DEH and CCS staff opened up pop-up clinics at the fire stations to be able to take blood samples from each interested firefighter. At the conclusion of the study, each firefighter will receive a report with their personal PFAS blood results, the results of the PFAS drinking water testing from their fire station, and the overall results of the PFOMS project.

PFOMS had an original goal of 600 firefighter samples, but that goal was increased to 900 following strong interest. The project wrapped up recruitment and clinics this year with 1020 total firefighter participants. All blood samples received by the CCS have been analyzed and DEH is completing data review and report writing.

The PFOMS project was recently highlighted by the CDC: <https://www.cdc.gov/nceh/features/firefighters/index.html>

For more information about PFOMS, please visit: <https://www.michigan.gov/mdhhs/safety-injury-prev/environmental-health/topics/dehbio/pfoms>

## CDC Laboratory Outreach Communication System

Centers for Disease Control and Prevention Laboratory Outreach Communication System (LOCS) provides timely information to the laboratory and testing community. Topics include emergency preparedness and response, point-of-care testing, specimen collection, antigen testing, biosafety, laboratory data reporting, and regulatory requirements, as well as training and other resources to support your work. Click [here](#) to opt in now.

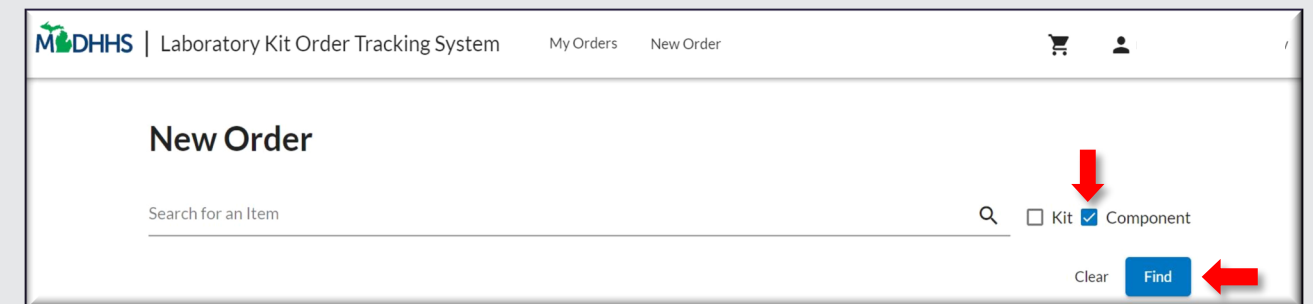


## Updates to LKOTS

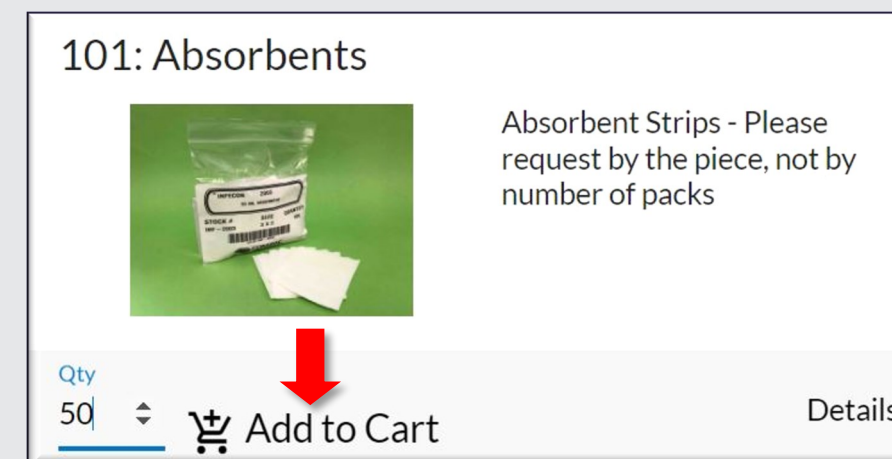
The BOL's Laboratory Kit Order Tracking System (LKOTS) is the online platform for submitters to request packaging and shipping and collection supplies with the single caveat that supplies are only used for testing performed at the BOL.

Based on feedback, enhancements were recently made to the application to improve the user experience.

- Buttons were added to new order screen to easily search between kits and components. Functionality was added to include hitting the enter button to initiate the search rather than having to click on the find button after entering a search parameter.

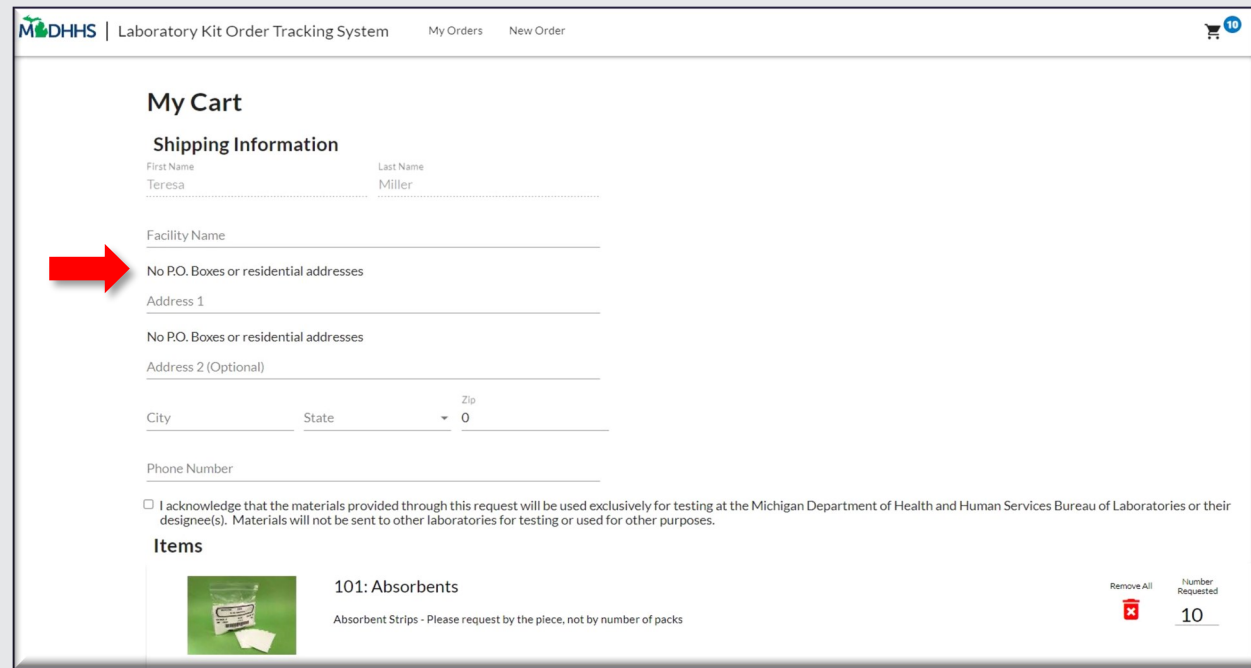


- Text was added to the cart icon; to clarify, it is used to add items to the cart.

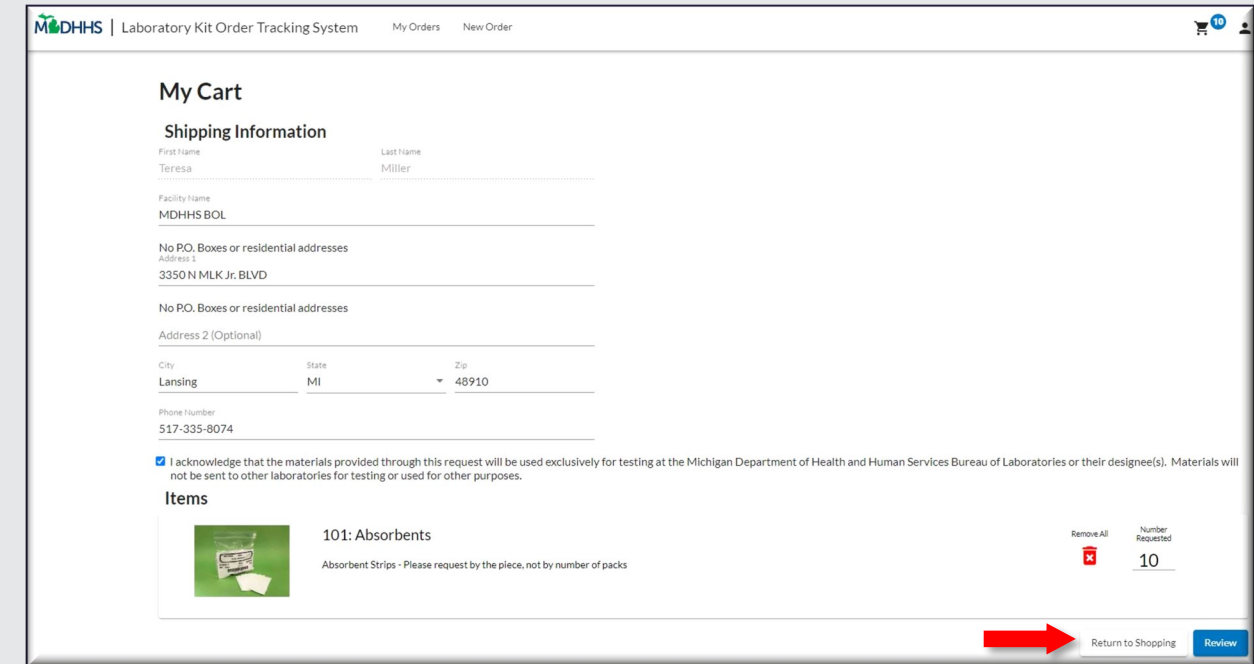


# Updates to LKOTS ...continued from Page 4

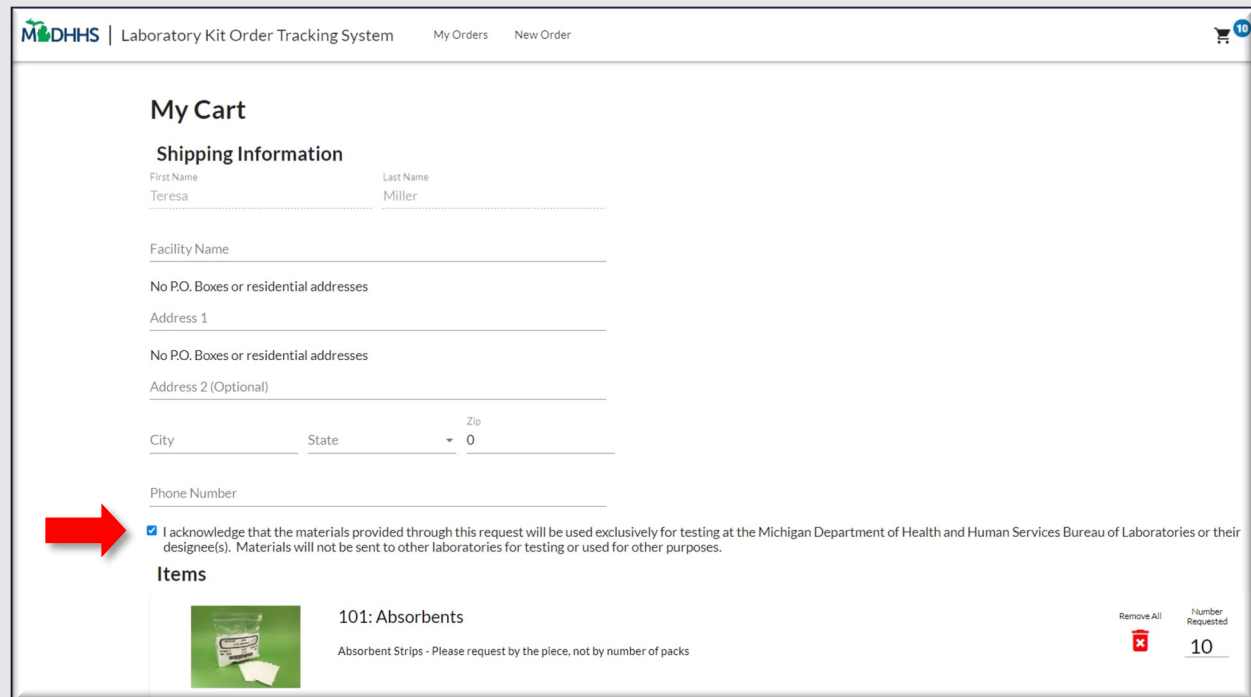
3. A reminder was added to the My Cart screen that supplies cannot ship to PO Boxes or residential addresses.



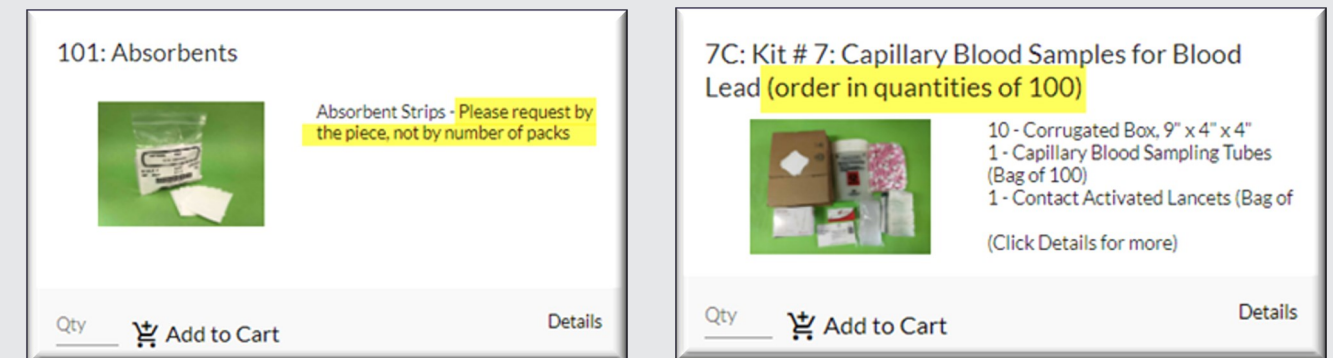
5. The entered shipping information is now retained if the return to shopping button is selected, additional items are added, and users reenter the cart.



4. An acknowledgement checkbox was added for requestors to confirm supplies will be utilized only for testing at the BOL. This box must be checked in order to proceed.



6. More clarity was added to indicate in which quantities items should be requested.



If you have questions about these enhancements, feedback for future enhancements, or issues utilizing LKOTS, please contact [MDHHSLab@michigan.gov](mailto:MDHHSLab@michigan.gov).

The LKOTS URL is <https://milkots.michigan.gov/login>. Guides to create an account and to place an order are available here: <https://www.michigan.gov/mdhhs/doing-business/providers/labservices>