**SOP for shipping analytical samples to Mississippi State Chemical Lab (MSCL) from Michigan for GLRI Michigan field pesticide trials on Red Swamp Crayfish**

**Sampling:**

1. Open cooler label for Study Day [e.g., Day 14].
2. Remove pre-labeled bubble-wrapped bottles and ziplock bags from box.
3. Place bubble-wrapped bottles and ziplock bags in sampling cooler filled with blue ice.
4. After samples have been collected, clean all debris off containers and dry containersprior to bubble-wrapping and placing the bottles into the shipment cooler.
5. If packing for immediate shipment, be sure to have enough blue ice in shipping cooler to chill samples to <4 ℃ prior to shipment.

**Sample Prep:**

1. Chill samples prior to shipment.
2. Place water and sediment samples in clean bubble-wrap sleeves [provided].
3. Make sure tops of bottles are screwed on securely but not overtly tigh (allow for expansion if samples freeze).
4. Make sure ziplock bags are sealed.
5. Ensure sample box has a layer of bubble wrap on the bottom of the box [provided].
6. Place clean bubble-wrapped bottles in box on top of bubble-wrap layer.
7. Put box into plastic bag [provided].
8. Seal bag with a zip-tie or twist-tie. Box is to keep sample water contained if a sample bottle were to break.
9. Place foil wrapped ziplock bag into plastic bag, secure with tie, place in cooler.

**Cooler Prep:**

1. Freeze blue ice until it is completely frozen [>24 hr in <4℃ freezer].
2. Remove label shipment cooler which identified Study Day.
3. Layer the bottom of the cooler with 4-small (16 oz) blue ice packs or 2-large (32 oz) blue ice packs.
4. Put one thicker (larger bubbles) layer of bubble wrap [provided with cooler] above blue ice.
5. Place bagged box containing sample bottles.
6. Place 4-small blue ice containers around the outside of the box. If this does not stabilize the box in the cooler [i.e., if the box can wiggle around and or move], roll or fold up bubble wrap and place on the sides of the box to keep box from moving and secure in place. After the box is stable in cooler, fill any leftover dead space with bubble wrap.
7. Place paperwork [Chain of Custody or Sample Inventory and MSCL Sample Submission Form] into cooler. Forms should have dates filled out, type of analysis (rush or standard), and confirm number of samples to be shipped.
8. Place forms in a 1-gallon ziplock bag [provided], seal, and place on top of sample box.
9. Place return shipping label and Fedex sleeve into coolers for their return to Columbia Environmental Research Center (CERC).
10. Place a thick layer of thick bubble-wrap on top of the box.
11. Place 2-large blue ice packs in another layer of bubble-wrap and fold over both sides of wrap to encapsulate the blue ice.
12. Make sure the lid is completely closed. Tape [provided] lid tightly as possible. Tape cooler with 4 complete revelations of tape on perpendicular sides of the cooler [e.g., top to bottom; left to right].
13. Tape Fedex shipping label in sleeve [provided] to the top of the cooler.
14. Shipment must be taken to local Fedex office no later than 5pm (latest to shipment time from office in Michigan).