SALSA ON ICE REPORT 05 November 2017

Weather:
-7°C/19°F
Partly cloudy skies, unrestricted visibility, and calm winds

SALSA Team on ice: John Priscu, Dennis Duling, Ed Krula, Anatoly Miranov, Ryan Venturelli

Sediment Lab Update:

Hi Everyone! Ryan here.

I’m a PhD student on the geochemical side of the SALSA project. I work with a radiocarbon preparation technique called ramped pyrolysis (Ramped PyrOx for short) in which we exploit the thermochemical stability of organic material to collect a range of radiocarbon ages. Simply put, we are burning dirt and collecting the carbon it releases to be sent off and dated. Next year we will be taking sediment cores from subglacial lake Mercer, which will be put in our sediment lab and broken down into workable sections before they go back to the U.S. for us to analyze them. I’m sure you’re wondering, now, why I’m down here in Antarctica this year if we aren’t collecting any samples until next year. The answer to your wonderings is that I came here to clean!

No I’m not dusting or mopping in the way that you would traditionally think of your weekly chores. Rather, I’m here to make sure things a ‘radiocarbon clean.’ There is something called ‘tracer’ which is a very handy tool for biologists, but it can be tracked around in labs and really mess things up for us geochemists. Have you ever eaten waffles and gotten maple syrup on your fingers? Everything you touch after that gets that sticky maple syrup film all over it. You’ll try to wipe it up with a towel, but the stick is still there until you get something more serious like soap
and water or cleaning spray to take care of the job, right? Well tracer is kind of like that—but invisible.

Today, I got a ride out to our sediment lab with some of the drill team-Dennis Duling, Ed Krula, and Anatoly Miranov- and SALSA chief scientist, John Priscu.

We came out to get a lay of the lab because last summer, John took swipe samples to determine whether radiocarbon was present above natural levels (i.e. if any surfaces were contaminated). We were able to open up the container and John pointed these locations out so I would know where to focus my efforts this year. Once the heat is turned on in the lab later this week I’ll get to cleaning!

Report by Ryan Venturelli