



This is our Black Island communications site. All of our telephone and computer traffic go from McMurdo through this station and up to a satellite and on to wherever. This is twenty or twenty five miles west of McMurdo across McMurdo Sound. Two people live and work here for the five months of summer, but the equipment pretty much runs by itself. The four smaller towers are wind generators; the black roof near the center of the picture is solar panel. The golf ball to the right encloses a seven meter antenna dish that belongs to NASA. The taller tower is part of my project – MWBI or micro wave black island project.



This is the backside of the building complex with the micro wave antenna tower near center. The little shelter at the base of the tower is something we just put in, it will house the new electronics to increase the bandwidth for McMurdo. Before this project we had a 3Mb pipeline out to the world and now we have doubled it. The antenna dishes that are on the tower were removed and replaced with a single, larger more up to date version.

I know next to nothing about the electrical and the electronics. I do know the structural, and my part of this is to coordinate everything into one finished working piece. Thus the sign on my door – Senior Construction Coordinator. This is up and running by the way. These guys did an amazing job.



This is the little shelter (8'x8') before the antenna and cabling was complete. Notice the bolts sticking up through the slab, those are two inch by six foot stainless steel allthreads drilled into the rock as far as we could go and then frozen in. Every thing we build is engineered to resist two hundred mile an hour winds.



While I was there I helped repair this grey water sewer pipe which had been blown apart the month before. That's an inch and a half bond strand pipe inside all that insulation, Wade here is reconnecting the heat trace wires that usually keep the pipe from freezing. This line empties into a shallow lined pit that evaporates or sublimates the liquid. This is the standard utility plumbing system, flanged sections of pipe bolted together with heat trace running their length and at least six inches of rigid insulation, anchored against the wind as well as possible.



This is the twin of the Black Island tower here at McMurdo. There are guy wires coming directly at the camera so you can't see how tight this is for the crane operator. Here they are bringing in the first of two dishes that go on this tower. Again you can see the little 8x8 shelter in place at the base of the tower. Out on the distance you can almost see Black Island. There are two islands out there, Black and White. Because of the way the winds glance off the mountains coming down the ice shelf, they scour the snow off of the one known as Black and leave the snow on the one called White.



This impressive little building houses two Cat generators. This is Marble Point, a refueling stop for helicopters going up into the Dry Valleys. Our job here was to change out that fuel tank that is holding the ladder up. At this point we have two new five hundred gallon tanks out there and ready to switch over. You can almost make them out at the left of the picture – white tanks in the white snow. The problem here is just getting the tanks, the steel foundations and pipe out to the job. It's also pretty much under water as the ice melts and it's difficult to get a good foundation.



Here we are getting started on hydrostatic testing of three fuel tanks. That means we are going to fill the tanks with sea water to see if they leak, tip over or sink into the rock. To do that we need to drill a hole in the ice to pump out the water. Two of our plumbers here are helping me out, we put the dirt on the ice for traction. They went through about twelve feet of ice and this was the middle of summer.



Here is the pump we used to pump the water up to the tanks a half mile away and up 208 feet. This is the same pump they have in fire trucks, and we are using fire hose (two) between the pump and tanks.



These are the tanks we are testing, they are the smallest we have, 250,000 gal. We are draining this tank at this point. I had thought we could just let the water run back down the hoses but it couldn't move fast enough to keep from freezing so we had to bring the pump up by the tank and pump the water down hill. I am also doing the some ground work for two new tanks that will go in next year; they will be two million gallons each.



This just shows our pair of fire hoses snaking down over this ice field to the ice hole. Sometimes you just have to stop and enjoy the scenery – and take a picture. One afternoon I was down by our water intake and noticed two holes in the slush near our suction pipe, a little while later there were three more. I knew they were breathing holes and I waited for the seal for awhile, but I had to go back up the hill. Later that afternoon one of the guys helping us did see the seal. They get curious when you are doing something in their water.



Everyone should have penguins walk through their workplace. I'm still working on getting a picture of them, but they are around the last few days.

These are a few of the "work" things that I do. I only have about six more weeks here before Pam comes down to New Zealand to drag me home. That should work out very well, I will be able to complete the last of the things I wanted to get done here and I think I will be ready to come home. If I get my penguin picture you all will get to see it.