

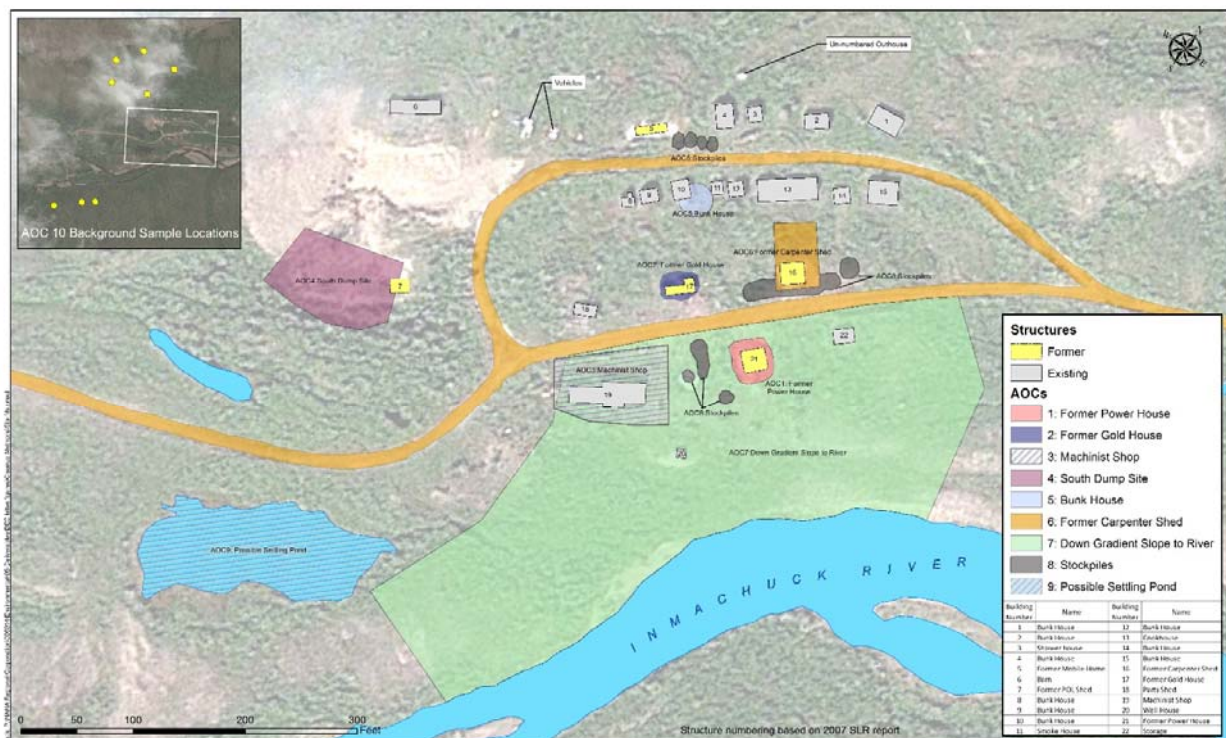
## 2014 Former Utica Mining Camp Field Work

Structural Shoring of Machinist Shop, 08/25-28/2014

### Introduction:

In August 2014 a team from WHPacific, Inc. (WHPacific) traveled to the Former Utica Mining Camp (Utica) near Deering, Alaska to perform site maintenance and to reinforce the structural integrity of the machinist shop (Figure 1 - AOC 3). Prior sampling indicated elevated levels of metals (mercury, lead, cadmium and arsenic) in the soil of the machinist shop floor. Preservation of the building is intended to prevent these metals from mobilizing. Visible deflection in the roofline of the building led to a 2013 structural investigation of the load bearing systems. Recommendations for structural reinforcement of the machinist shop were made based on this investigation.

Figure 1: Utica Areas of Concern (AOCs)



### Day One: 08/25/2014

On August 25, 2014 James Meyers and Troy Phillips of WHPacific travelled to Utica to reinforce the structural framework of the machinist shop near the site of former mining operations adjacent to the Inmachuck River. They started in Anchorage at 5:00AM and arrived in Deering, AK at 6:00pm, following a weather delay in Kotzebue. Upon arrival in Deering lodging was secured at the village washeteria. Two rental ATVs with trailers as well as two local

hires, Clayton and Maranda, were waiting upon arrival. After supplies were loaded the group drove the 18 miles from Deering to Utica.

Upon arrival at the site the current condition of the machinist shop was assessed. The crew also re-covered three existing wood tent platforms with tarps, and replaced the orange safety fence at the perimeter of the former powerhouse excavation (Figure 1 - AOC 1, Photo 1). Seven lead-acid batteries collected during the 2012 field effort were packaged into three vermiculite filled plastic totes and hauled back to Deering for temporary storage until shipment to an approved recycling facility is arranged.

### **Day Two: 08/26/2014**

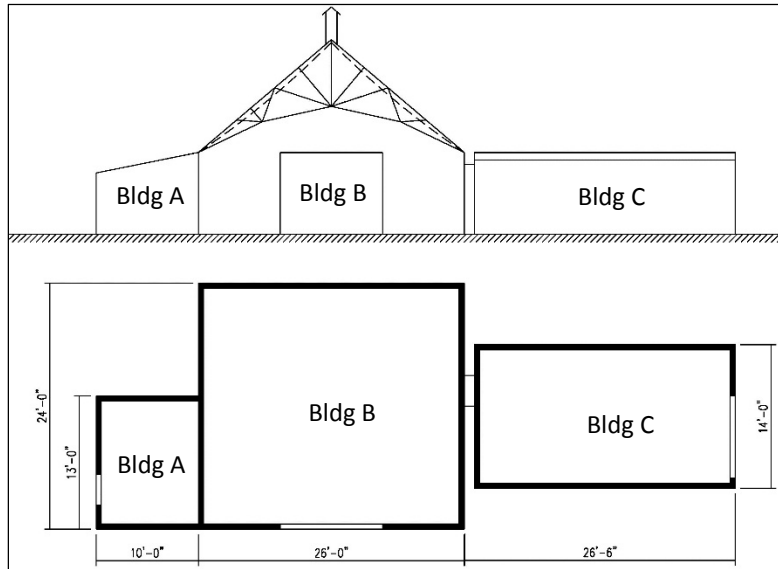
The morning of August 26 the team returned to the Utica machinist shop, while enroute the deteriorating condition of the road between Utica and Deering was documented in several locations. Noteworthy road damage included large puddles (Photo 2), washed out sections (Photo 3) and a displaced culvert (Photo 4).

Upon arrival at Utica Troy and Maranda began shoring the existing structure of the machinist shop. A site walk through and inspection of covered soil stockpiles was performed by James and Clayton. Some of the stockpiles were uncovered and several tarps were in need of repair or replacement (Photo 5).

The machinist shop is composed of three buildings: A, B, and C. Shoring of Building B (Figure 2) began with a base of two transversely oriented layers of three 2x4s on the floor of the building, followed by installation of a 4x4" column. Additional blocking was added at the top of the column to increase the area of connection and everything was toe nailed in place with screws (Photo 6). Where roof deflection was most apparent four web stiffeners were added to the beams that had been reinforced with the column (Photos 6 & 7). Because a ladder was not available during the previous site visit, some members that were thought to be strong enough for structural shoring were found to be degraded past reliability. Additional beams would have been required to tie into any other trusses.

In Building A a ledger board was screwed into the studs of the wall (Photo 8) as recommended in the structural investigation report. Building C was left unaltered, as upon further inspection it appeared structurally sound. It previously appeared that cross bracing was missing in Building C, but that was due to additional members being nailed onto non-structural columns.

Figure 2: Machinist Shop Layout



While the work in the machinist shop was being completed, James and Clayton inspected and, as needed, re-covered stockpiles of previously excavated soils around the site (Figure 1 - AOC 8, Photo 9). Once they were satisfactorily covered, the drum staging areas were inspected. The drums near a large tailings pile just outside the eastern site boundary and north of the road remained well covered and the integrity of the cover looked good (Photo 10). One Caterpillar heavy equipment battery was found and removed from this area and one additional battery was discovered and extracted near building 22. Plastic sheeting covering drums on the western side of the machinist shop had begun to degrade and tear from exposure to the environment (Photo 11), replacement should be considered. The condition of cached supplies (poles for wall tent, propane tanks, toilet paper) for future mobilizations was checked, everything appears to be present but some minor disturbance was evident. After shoring of the building was completed, a ladder purchased for this work was secured in the machinist shop (Photo 12). The remaining 5 batteries (12 total) were transported back to Deering and staged for future shipment and disposal.

**Day Three: 08/27/2014**

Before departing Deering local hires were paid, the lodging and rentals were paid for, and all 12 of batteries collected were staged in the designated conex container by the old tank farm. The batteries have since been transported and to Kotzebue and staged in the Nana Regional Corporation maintenance shop there. James and Troy departed Deering around 4:00PM and arrived back in Anchorage at 9:30PM.

**Conclusions and Recommendations:**

The structural reinforcements completed during the 2014 season should significantly extend the lifespan of the machinist shop. It is recommended that a followup visual inspection of the machinist shop occur during the summer of 2015 to evaluate the effectiveness of the structural reinforcements. Safety fencing, stockpile covers and drum coverings should also be inspected at that time. The plastic sheeting covering the drum staging areas should be replaced as needed and any additional necessary maintenance should be noted and reported.

## Photographs:

Photo 1:  
Replacement  
orange safety  
fencing around  
perimeter of prior  
powerhouse  
excavation.

Date: 8/26/2014



Photo 2:  
Road Conditions at  
approximately  
mile 7.

Date: 8/26/2014



Photo 3:  
Road Conditions at  
approximately  
mile 12.

Date: 8/26/2014



Photo 4:  
Displaced culvert  
at approximately  
mile 12.

Date: 8/26/2014



Photo 5:  
Uncovered soil  
stockpile

Date: 8/26/2014



Photo 6:  
Building B new  
web stiffeners  
(red) and column  
(orange).

Date: 8/26/2014



Photo 7:  
Web stiffeners  
installed in  
Building B

Date: 8/26/2014



Photo 8:  
Ledger board  
added in building  
section A

Date: 8/26/2014





Photo 9:  
Re-covered soil  
stockpiles.

Date: 8/25/2014



Photo 10:  
Weathered, but  
intact, DuraSkrim  
plastic sheeting  
covering drums.

Date: 8/26/2014



Photo 11:  
Weathered and  
torn DuraSkrim  
sheeting over  
drums.

Date: 8/26/2014



Photo 12:  
Ladder secured in  
machinist shop.

Date: 8/26/2014

