SGS MUSCOWPETUNG

ABORIGINAL CONSTRUCTION MONITORING

WEEKLY REPORT

SPREAD 6

JANUARY 28TH TO FEBRUARY 3RD, 2019

Social and Cultural Features

Field Observation	# of occurrences	Description and Mitigation Measures	Mitigation Status	Further Action Required (Yes/No)
Traditional Use Area (hunting, fishing, gathering, trapping)	1	SSKP 805.63 – 805.93 Heritage Resource TLU 132,133,134,135	Excavating of the Pipestone Creek within the HER site.	Yes - Continue to Monitor
Rock Formations (rocks of significance, tipi rings, etc.)				
Artifacts				
Bones	Many	Bison bones/Bison skull found during excavations at the Pipestone Creek	Archeologist on site to preserve the items.	Yes - continue to monitor
Potential Gravesites				

Environmental Features

Field Observation	# of occurrences	Description and Mitigation Measures	Mitigation Status	Further Action Required (Yes/No)
Medicinal or Cultural Plants				
Aquatic Life				
Animal Observations or Burrows	1	At SSKP 795 + 260 plains garter snake located next to right of way	The snakes were taken to Regina for re habilitation	No
Bird Nests				
Trees (Red Willow)				
Wetlands				
Watercourse Crossing	1	MB 1010 Pipestone Creek Class V (FB)	Excavating ditch through the Creek	Monitoring

Additional Observations and Summary of Activities or Concerns

This week everyone on the project focussed on the extreme cold weather. The extreme cold temperatures were the daily safety topics. Minus forty temperatures occurred a couple of days this week, which made the chances of frostbite and hypothermia possible for minimal exposure times. Our team prepared with dressing in layers, walking shorter times on site, hydrating and taking more warm up breaks through the day.

This week our team continued to monitor at the Pipestone Creek. Crews prepping for the isolated crossing at the creek MB1010 805 + 770 SSKP 805.63 – 805.93 Heritage Resource TLU 132,133,134,135 Track hoe cleared snow on both sides of the creek banks and placed the snow in separate piles., Archaeologist ICM'a and ACM's walked the area excavated an gathered several bison bones. Geotech was placed on the ground around the perimeter of the area excavated. Track hoe sat on top of ice bridge and cleared snow off the creek down below.

The access road/ramp was extended on the east side of the ice bridge. Crews prepped materials and equipment for the isolated crossing at the creek, Crews laid out the hoses from the south side of the creek extended under the constructed ramp. Hoses were also laid out on the opposite side and strung up to the dirty water containment.

Dozer cleared the ditch line path on the east side of the Creek. Track hoe excavated an area on the west side of the creek bank. Excavation of the pit for the wet ditch material was completed. Archaeologist ICM's and ACM's were all on site – walked the excavated areas and located more bison bones and a bison skull. The skull was first noticed by an equipment operator, who stopped and motioned that he had uncovered something. The operator dug up the skull at approximately 2.1m depth below frost line in coarse sandy material. A prayer was said by one of the ICM elders. The skull was wrapped in a blanket and placed in a rubber tote with the sand material placed on the bottom and on top of the skull to preserve the item. The Manitoba Heritage board was contacted, and the Canadian Conservative Institute will give the Archaeologist further direction.

Crews completed the construction for the water pump out containment. Geotechnical membrane (Geotech) was placed on the ground, straw bales were hauled in and placed on Geotech. Additional Geotech was placed over the bails to complete the containment for water discharge (pig pen.). Excavator continued clearing out both east and west banks of the creek. The spoil pile from the pit excavated was relocated to the south side of the right of way. The clay excavated on the west bank was loaded onto rock trucks and hauled to the east side across the tracks. Archaeologist ICM's and ACM's – walked the excavated areas and located more bison bones. Two parallel lines were cut into the creek the crew worked with two ice saws to complete the cuts for the isolation. The sand bags were hauled closer to the creeks edge and placed for instalment. Track hoes continued with excavating the ice out of the creek.

Biologist and their team were on site conducting turbidity test on the creek. Twelve holes in total two upstream and five sets downstream. For testing - holes are re-opened with an auger, the holes are left to set for a while and tests runs are completed 3 times per day. Wood framed boxes with poly plastic were constructed for containment of the pumps and generators. Filter baskets were installed at the creek, biologist conducted testing for aquatic life in the creek.

The pumps were hooked up and the dirty water was pumped to the pig pen. Due to the location the water flowed out towards the road. The area was cleaned up immediately. The pumps were re-located on the east side of the road approximately 40m in the field, silt material was placed for the pumped water. The sand bags were places across the creek on both sides and steel plates were installed for the isolation. Track hoes sat on timber skids and excavated the ditch through the creek loading rock trucks with the ditch material from both sides of the creek. The wet material was unloaded into the pit and the deeper spoil solid material was hauled to an area on the east side and placed on Geotech. Ditch line through the creek was excavated to depth between 4.3m and 5.4m. Proper egress and access on both sides. The pipe section is prepped and ready to be lowered into the ditch. Biologist and their team were on site conducting turbidity test on the creek water, signs of sediment

changed was continuously monitored by the biologist throughout the excavation. The environmental team was also on site all week monitoring the area. Our team continues to monitor the open cut - isolated crossing across the Pipestone Creek.

This week our team observed welders completing tie ins at 788 + 460, - 794 + 200 HER Resource 143 and 796 + 200 Heritage Resource 188. 706 + 900 Observed crew setting up test head, test heads are welded on to product pipe. 764 + 600 Observed dozers pushing spoil piles and back filling ditch line. Track hoes back filling and building up roach on ditch line. 767 + 000 to 768 + 300 Observed track hoes back filling tie ins with spoils material at Wetland SK - 902. track hoe was key cutting and breaking up clay piles for back filling. Track hoes breaking up material for back filling tie ins at SK - 902 - 2. At 779 + 400 observed crew building hoarding over product pipe and test head. 779 + 500. Observed welders welding product pipe for tie ins. 785 + 250 Observed track hoe excavating valve pit 4.6 meters deep. dozer pushing spoil piles material in to pile. Excavating ditch, lowering pipe and tie ins continue through various areas of spread six.

At SSKP 795 + 260 a plains garter snake hibernaculum is located just off the right of way. An excavation for tie in was in process when an equipment operator noticed the snakes on the edge of the right of way. The biologist was contacted, and the snakes were taken to Regina for rehabilitation.

Wetland restorations and mechanical clean-up are in process and moving east. The night shift continued to pump water from ditches and bell holes and general clean up of the right of ways. Our team continues to Monitor the pipeline construction at various locations on spread six.

Photos of Sites Visited & Topics Discussed This Week

Crew setting up the straw bails and Geotechical membrane for the ditch water containment

Pit constructed for Creek excavated material

Cutting back the ice bridge to boundry on south side

Pipe Stone Creek excavating west side

Bones and Bison skull located during excavation at the Pipestone Creek

Archaeologist's ICN's and ACM's walking the area looking for artefacts

Excavating pit for Creek ditch material at the Pipestone Creek Archaeologist observing for items of interest in the soil

Excavating ditch line through the Pipestone Creek


Pipestone Creek - Crew cutting line into the ice for the isolation


Hoses set across the Pipestone creek & Containment for the generators

Biologist conducting tests on the Pipestone Creek water

788 + 460 & 796 + 200 Excavating ditch for tie ins.

Approvals

Prepared by

D. Masney _____

Darlene Masney

Senior Construction Monitor February 4th, 2019

Reviewed by

_____ _____

Joseph Roach

Project Manager February 5th, 2019

Approved by

_____ _____

Emmanuel Olotu, P.Eng.

Technical Manager, Geotechnical February 5th, 2019