



Alaska Department of Environmental Conservation (ADEC) Solid Waste Program and Contaminated Sites Program (Doug Huntman and Grant Lidren) conducted a Coastal Impact Assistance Program (CIAP), Waste Erosion Assessment and Review (WEAR) site visit for Kipnuk on September 18th, 2012. Harvey Dock participated on the site visit. The following narrative is a brief description of our findings during the September inspection.

WEAR Sites

- **Landfill, 59.932264/-164.064701 (Active)** – The permitted, self-haul landfill covers 3.2 acres and is located half a mile from the nearest structure. The landfill is owned and operated by the Native Village of Kipnuk and located on semi-discontinuous permafrost. The site's boundary is less than 60 feet from a medium sized lake and contains a half acre tundra pond within the landfill boundaries. The landfill accepts municipal waste, but it does not prohibit any special wastes or hazardous wastes. The landfill's operations are very basic: there is no cover material, there is no heavy equipment for consolidation/compaction, and they open burn. There was a large amount of contractor waste in the landfill at the time of the inspection. The landfill is situated approximately 2,000 feet from the banks of the Kugakhtlik River. This site has flooded in the past.



- **School Sewage Monofill, 59.935915/-164.038538 (Closed)** – This site is the former sewage lagoon for Chief Paul Memorial School, which is owned and operated by the Lower Kuskokwim School District. Closure of the sewage lagoon was approved by the Solid Waste Program. The lagoon was de-watered, treated and capped with fill material in 2012. As of this visit, the site was fully covered with soil and construction was on-going for the school expansion approved on the site's footprint. It is located 1,140 feet from the Kugkaktlik River, which is eroding at 6 feet a year in this section per the BEA study.



- **Tank Farm, 59.935736/-164.036632 (Active)** – This tank farm is located in the village, approximately 120 feet from the church and adjacent to the old clinic. It contained 10 vertical fuel tanks within a fenced area and around 10 smaller tanks in an unfenced area with secondary containment. It was reported that several hundred gallons of diesel spilled out of an above ground storage tank in the past. It is located 1,450 feet from the Kugkaktlik River.



- **Tanks and Sheen, 59.938401/-164.042494 (Abandoned)** – This site is located right on the banks of the Kugukaktlik River near the old KTC Lodge and Garage. It is on discontinuous permafrost with a silty soil that was observed to be very mucky with ponds of standing water. The site contained several dozen abandoned personal use fuel tanks and a few commercial fuel tanks. The tanks were not hooked together and were loose, indicating they all originated somewhere else and are being stored at the site until permanent disposal or removal occurs. There was no indication that the tanks had been emptied or cleaned prior to storage. There were the remnants of header piping that hung 4-5 feet out into the river, indicating a possible former fuel station. We observed a rainbow sheen coming out of the site by the Lodge building and going directly into the river, where there is very aggressive erosion; however a later site visit by a contractor was unable to locate the sheening. The site is a popular boat landing area. Geotextile fabric was installed at the site to help slow the erosion. Huge slumps in the banks were observed along the banks. Erosion was reported by locals to be greater than 5 feet a year, which is confirmed as the BEA study lists erosion at 7 feet a year in this section of riverbank. We observed this site lose at least two feet of ground between the September and October visits.



- **West End Tanks, 59.936503/-164.048359 (Abandoned)** –There are approximately 3 dozen abandoned personal heating tanks located on the western end of the village along with six 5,000 gallon tanks. We were not able to make it across the slough to inspect the six larger tanks. The entire site is used as a boat launch area and encompasses 2.15 acres. This site is located west of the Tanks Near Armory site and is right on the banks of the Kugkaktlik River. The site is suffering from an accelerated erosion rate of 7 feet a year per the BEA study. Mitigation at this site consists of geotextile fabric draped across the back to slow down the erosion rate; however, it does not appear to be working.



- **Native Fuel Station, 59.941433/-164.040926 (Active)** – This site contains three large fuel tanks and is approximately 25 feet from the Kugkaktlik River. There are two very large, white fuel tanks on the site complete with secondary containment. Another large, older red fuel tank was reported to be “out of service” during the time of the inspection with disconnected piping. The river in this area is eroding at 9 feet a year per the BEA study. Several erosion control measures are in place at the site, but they seem to be failing.



- **Northern Tank Farm, 59.942538/-164.040784 (Abandoned)** – This former tank farm site is located .25 miles north of the village. There were around 6-9 vertical fuel tanks; however, they were too difficult to access as they were across a slough from the current gas station. Our contact did not know the status of the tanks. The site is approximately 240 feet from the Kugkaktlik River, which is eroding at 9 feet a year per the BEA study.

