

Appendix G – Contaminated Sites

Table 1: Contaminated sites that are within 500 feet of the alternatives

Site Name	City	Status	DEC Database Remarks [sic]	Summary
City of Ambler Clinic (AVEC), Hazard ID 294	Ambler	Open	Historical diesel release caused by faulty fuel pipeline union. Corrective action by RP was inadequate as contaminant plume migrated beneath Clinic building. Workers in the Clinic have been affected by fuel odors during periods of warm weather. USS 5013. Update 12-4-08: Old clinic had vapor intrusion issue, new clinic built in 2002. AVEC did some remediation at site as stated in August 29, 2001 letter in file.	This is a potential source of contamination. Risk of encountering is low due to distance and position. Risk will be managed with locational tracking, BMP, and an inadvertent discovery plan.
Buckland Prototype Home, Hazard ID 7087	Buckland	Informational	The findings of the evaluation indicated no evidence of environmental impacts at the subject site.	No expected impacts to project because there is no evidence of environmental impacts at the subject site, per AK DEC database.
Buckland IRA Fuel Depot, Hazard ID 6570	Buckland	Open	At the time of the 2001 site reconnaissance, this bulk fuel storage facility consisted of eleven aboveground storage tanks (ASTs; three gasoline and eight diesel) located on a gravel pad. The tank farm was fenced and contained within a lined bermed area. The tank farm was active at the time of site reconnaissance, but a new consolidated tank farm built approximately 150' to the northwest of the subject site, prior to 2007. A sheen was noted near the dispenser shed during site reconnaissance. On April 5, 2008, a 7,750-gallon release (spill no. 08389909601) was reported to the Department of Environmental Conservation (DEC) Prevention and Emergency Response Program (PERP). The spill occurred when a 2" supply line from a 42,000 gallon AST to the fuel pump failed at the dispensing unit. Kuskokwim Architects and Engineers (KAE) operated the facility on behalf of Village Safe Water (VSW) at the time of the release. KAE was already in the process of containing/recovering this fuel when PERP responded to the spill. Approximately 3,100 gallons of diesel were recovered. In August 2009, DEC Solid Waste informed the Contaminated Sites Program that 14 supersacks of petroleum contaminated soil were shipped to Kotzebue without authorization when VSW asked for authorization to transport these supersacks from Kotzebue.	No expected impact to the project because of location.

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Kobuk Abandoned Tank Farm, Hazard ID 4117	Kobuk	Open	Historic petroleum contamination discovered at the location of former tank farm. This site was established in 1991 after a 4,000-gallon underground storage tank (UST) used to supply new motor oil to the Jiffy Lube facility (formerly known as Q-Lube) failed a tank tightness test. In September of 2007, the Alaska Department of Environmental Conservation (DEC) Reuse and Redevelopment Program completed a DEC Brownfield Assessment and Cleanup (DBAC) at the Kobuk's former fuel storage location; also known as the Kobuk Abandoned Tank Farm Site. During the limited cleanup of this project, roughly 270 cubic yards (CY) of soil were generated and stockpiled just outside the Kobuk landfill. 03/01/2008 - up to 300 cubic yards of contaminated material were removed from the site in 2007 and relocated to a stockpile near the Kobuk landfill. This material was tested at an average concentration below 2,000 parts per million (ppm) of diesel range organics (DRO). The intent was to use this material as daily cover year 2008. The City of Kobuk owns this site and maintained a tank farm prior to the Alaska Energy Authority (AEA) bulk fuel consolidation. Kobuk sought and obtained a Community Development Block Grant (CDBG) from the Department of Commerce, Community and Economic Development (DCCED), to procure a new emergency generator for their community. The site had not been previously assessed, but it was assumed there are historical petroleum impacts that Kobuk would like to address before reusing the site. In addition to the CDBG, the community has also obtained dedicated funds to conduct some cleanup of the site. The site was prioritized for a DEC Brownfield Assessment in 2007. The site was reassigned to a 38 designation on this date. FKA 480.57.001. On August 15, 2012, Shannon & Wilson Incorporated (S&W) collected five soil samples from the stockpile. The samples were analyzed for diesel range organics (DRO) and benzene, toluene, ethylbenzene, and xylenes (collectively known as BTEX). Four of the samples exhibited concentrations of DRO above DEC migration-to-groundwater cleanup level, which is 250 mg/kg. Concentrations of DRO ranged from 186 mg/kg to 3,640 mg/kg. None of the samples contained BTEX	This is a potential source of contamination. Risk of encountering is low due to distance and position. Risk will be managed with locational tracking, BMP, and an inadvertent discovery plan.

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			concentrations above DEC's cleanup levels. Kobuk has a relatively dry climate with precipitation averaging 17 inches per year and a snowfall average of approximately 56 inches.	
Nullagvik Hotel - Kotzebue, Hazard ID 3809	Kotzebue	Open	In November 2006, one 500-gallon UHOT was removed from the site. On August 27-30, 2012, one 3,000-gallon UHOT was removed. Site characterization was performed following the removal of each UHOT revealing releases from both UHOT systems. The September 2012 site characterization included the excavation of approximately 500 cubic yards of impacted soil that was disposed of in the landfill. During the excavation, debris (glass, metal, coal, wood scraps, empty drums made into a make-shift septic system) were uncovered. The debris likely originated from the cannery that existed on the site before the hotel was constructed in the 1970s. Excavation confirmation samples revealed diesel range organics (DRO) up to 589 milligrams per kilogram (mg/kg). On September 16-20, 2020, six soil borings were advanced on the site to a depth of 10 feet below ground surface (bgs). Concentrations of DRO, gasoline range organics (GRO), residual range organics (RRO), and volatile organic compounds (VOCs) were all detected, but all below DEC Arctic Zone Cleanup Levels. Groundwater concentrations revealed DRO and RRO above groundwater cleanup levels. Groundwater is thought to be resulting from perched, melting permafrost. Permafrost is prevalent at the site. All concentrations of contaminants were below the residential target level for vapor intrusion.	This is a potential source of contamination. Risk of encountering is low due to distance and position. Risk will be managed with locational tracking, BMP, and an inadvertent discovery plan.
Hanson Trading Company UHOT, Hazard ID 4046	Kotzebue	Open	Petroleum contamination above DEC cleanup levels was found during the removal of a 500-gallon underground heating oil tank in October 2007. Site is adjacent to Kotzebue Sound.	This is a potential source of contamination. Risk of encountering is low due to distance and position. Risk will be managed with locational tracking, BMP, and an inadvertent discovery plan.
Kotzebue IRA Lagoon Street Bldg,	Kotzebue	Open	On November 30, 2015, a fuel line to an aboveground heating oil tank was accidentally sheared off by snow removal equipment operations at the Kotzebue IRA / Native Village of Kotzebue Lagoon Street building, causing the release of 350 gallons of arctic grade (#1 diesel) heating oil	No expected impact due to geographic location.

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Hazard ID 7581			to the snow covered ground beneath the tank directly adjacent to the building foundation, and onto an underground utility corridor. Initial response actions included contaminated snow removal, melt water treatment, break-up mitigation, release investigation, and contaminated soil removal which was limited due to the presence of infrastructure and permafrost. Contaminated soil remains around a buried sewer line, at the permafrost layer on the bottom of the excavation, and in the sidewall nearest the building foundation. Gasoline range organics, diesel range organics, benzene, toluene, ethylbenzene, xylenes, naphthalene, 1-methylnaphthalene, and 2-methylnaphthalene remain in soil at or above DEC cleanup levels. The building was formerly used for reindeer processing and is now used for storage. Excavated contaminated soil is being land-farmed off-site at a property across the road from the Kotzebue Solid Waste Landfill. According to the February 2017 Release Investigation/Site Characterization Report the Kikiktagruk Inupiat Corporation (KIC) is responsible for the operation and management of the land-farmed soil. DEC oversight of the land-farmed soil remediation will be managed by the Prevention, Preparedness, and Response Program under spill number 15289933401.	
Former School Tank Farm Gravel Pad - Selawik, Hazard ID 1271	Selawik	Open	Historical discharges from tank farm to gravel pad. Tank farm consisted of 10 ASTs totaling 92,900 gallons capacity. Later records indicate as many as 20 tanks were located at this location. The tanks were moved to a different location in 1998 during construction of a school addition. Site is 600-800' west of the Selawik River. GW reportedly not used in the village. All DW is taken from the Selawik River upstream of the community. No GW encountered to 315' during site investigations. Maximum active zone thickness ~30". Infiltration of SW is confined to the active layer during summer months.	This is a potential source of contamination. Risk of encountering is low due to distance and position. Risk will be managed with locational tracking, BMP, and an inadvertent discovery plan.
ADOT&PF SREB - Selawik,	Selawik	Open	The Department of Transportation and Public Facilities is planning to construct a concrete floor in the Snow Removal Equipment Building (SREB) at the Selawik Airport. During the phase I evaluation of the shop floors, the presence of contamination was identified on the gravel floor	No expected impact due to geographic location.

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Hazard ID 3660			of the SRE building at the Selawik Airport. Nortech estimates approximately 6.5 cubic yard of contaminated soil remain at the facility. Phase I was limited to visual observations (no screening or analytical). Visual observations were limited due to the presence of wet gravel making it difficult to discern between just wet gravel and gravel stained by contamination. Visual observations suggested contamination limited in depth.	
Selawik Old AVEC Tank Farm, Hazard ID 6702	Selawik	Open	The Native Village of Selawik submitted a DEC Brownfield Assessment Request Form for an area-wide assessment of Selawik which includes the former AVEC tank farm. The site is located on the east side of the village school and close to residential houses. Some drinking water may be derived directly from the Selawik River; however, the Village derives its drinking water from Selawik Lake and a water treatment plant. Historically, the site was used by AVEC for fuel tank storage and electrical generation. The pipeline used to fill the tanks ran from the river - east to west - to the southern part of the property at the generator building. In 2003, the northern ASTs were decommissioned. In 2012, the generator building was decommissioned and the eight empty fuel tanks were cut up and disposed of in the Selawik landfill. As of 2013, Cribbing, sub-grade piping, structures, tank farm liner, and trash from dumping activities remain on site. The AVEC Property is currently enclosed within a chain-link fence (10/16/2019). Site cross-referenced with Selawik area-wide Brownfield Assessment/Selawik Barge Landing Area, 500.57.001.	This is a potential source of contamination. Risk of encountering is low due to distance and position. Risk will be managed with locational tracking, BMP, and an inadvertent discovery plan.
Selawik Water Treatment Plant, Hazard ID 8443	Selawik	Open	A tank overfill occurred in November 2020 when an employee began a tank transfer at a 5,000 gallon day tank and walked away. It is estimated that approximately 7 hours passed before it was discovered and the rate is estimated to be 1000 gal/hour. There was an unknown amount of fuel in the tank before the transfer. A site assessment was performed in July 2021 and indicated soil contamination and visible sheen on the groundwater.	This is a potential source of contamination. Risk of encountering is low due to distance and position. Risk will be managed with locational tracking, BMP, and an inadvertent discovery plan.

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Selawik Areawide Brownfield Assessment & Barge Landing Area	Selawik	Informational	The Barge Landing Area is currently used for staging and transferring materials transported by barge. The space available at the facility has been found inadequate and plans are being made to upgrade the facility. The active barge landing area is located approximately 1,400 feet north-northwest of the Davis-Ramoth School along the south bank of the Selawik River. The barge landing area features a gravel pad of about 100 feet by 200 feet for staging materials. A 300-foot-long gravel-surfaced access ramp leads from a pad north of the Selawik River. A steel fuel pipeline roughly parallels the north side of the pad and west side of the ramp, terminating at a marine header near the river edge. The Barge Landing Area was likely developed in the early to mid 1990s, and was used during the construction of the new school. The marine header was installed between 2000 and 2003. A visual reconnaissance and sampling was conducted on Oct. 1, 2010. About twenty-four 20-foot shipping containers, a variety of construction materials, storage tanks, two diesel generators, and various scrap were present on or near the gravel storage pad. Burned trailers and scrap were present off the western edge of the storage pad. Decommissioned ASTs, stored vertically in two groups are stored on the pad: fourteen tanks are stored at the northern end of the gravel pad and an additional fourteen vertical tanks and three tanks are located northeast of the storage pad and ramp on the tundra. Four locations at the Barge Landing area were selected for sampling. Sample depths ranged from 0.3 to 1 foot bgs. Limited screening and sampling did not suggest that large releases of contaminants have occurred, but several potential sources of contaminants are present at the Barge Landing. Site part of an area-wide Brownfield file, associated files 500.38.001, 500.38.003, and 500.38.007.	This is a potential source of contamination. Risk of encountering is low due to distance and position. Risk will be managed with locational tracking, BMP, and an inadvertent discovery plan.
Shungnak Native Store, Hazard ID 3484	Shungnak	Open	Numerous historic spills and leaks have occurred at the Shungnak Native store. In 1993, 450 gallons of heating fuel released at the Store's unlined bermed day tank area. Approximately 250 gallons of product was recovered by sorbent pads, which were put in plastic bags; and some was scooped from depressions and put in to 55 gallon drums.	This is a potential source of contamination. Risk of encountering is low due to distance and position. Risk will be managed with locational tracking, BMP, and an inadvertent discovery plan.

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			Fate of these drums and bags is unknown. In 1994, 275 gallons of gas spilled from the store's broken flex hose. The quantity of recovered free product is unknown. In 1998, five gallons of gasoline leaked from the store's pipe during fill operations. The contaminated soil was removed and placed in the tank farm (TF) area. In 2001, at the Shungnak Store and AVEC pipeline, contamination was discovered 6 ft. bgs while a hole was being dug to install a utility pole between the store TF and the power plant TF. The product was allegedly gasoline from the 1994 Shungnak Native Store 275 gallon gas spill. The tank and pipeline responsible for the release was repaired. In 2002, 20 gallons of diesel spilled during fueling. Five gallons of free product was recovered and impacted snow and gravel was removed and disposed in the landfill. In 2002, Harry Commack reported an old pipeline had leaked fuel onto his property. According to him, the old pipeline was built around 1976 and might have been associated with the Public Health Service or possibly AVEC. He also mentioned a newer pipeline associated with the Native Store that had a large crack in it. The pipelines were decommissioned in 2005, and the contamination associated with the pipelines was addressed. A PERP 2002 site inspection and discussions with the contractors excavating a pipeline in Shungnak indicated that gross contamination near the corner of Jim Street and Back Street at the Shungnak Store remains, but no free product was observed. This site (Hazard ID 3832) also includes spill no. 18389918101; spill date = 6/30/18; substance = diesel; quantity = ~250 gallons; source: lateral above ground tank at tank farm; cause: improper tank shut-down procedures resulted in release; PPRP file no. 490.02.001.	
Shungnak AVEC Tank Farm, Hazard ID 8482	Shungnak	Open	During geotechnical exploration activities conducted on November 5, 2018, significant hydrocarbon odors were noted in the top 1-2 feet of gravel fill at the test pit located in the northwest corner of the site. The presence of hydrocarbon odors in the soil are likely attributed to spills/leaks from refueling activities and/or faulty equipment from the aboveground storage tanks and associated piping located on the site.	This is a potential source of contamination. Risk of encountering is low due to distance and position. Risk will be managed with locational tracking, BMP, and an inadvertent discovery plan.

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			The storage tanks are used to store diesel fuel that the City of Shungnak uses for power generation.	
Shungnak School HOT, Hazard ID 8504	Shungnak	Open	Two tanks on Northwest Arctic Borough School District property were connected to a three-way valve used by the school, local utilities, and the Shungnak Native Store. During a fill, the three-way valve was improperly opened, allowing fuel to flow into the two opened top school tanks. This caused one tank to overfill. Spilled diesel traveled south across the hill before turning east and flowing downhill towards the Kobuk River. Silty sand substrate allowed the majority of diesel spilled to percolate into substrate at top of the hill. However, a significant, yet unknown amount flowed downhill. The 2021 field report confirms downhill contamination has moved closer to the river, but ground water was not encountered during delineation. Field investigations also do not indicate the Kobuk River, a source of drinking water, or groundwater has been affected as of 2021. Contamination at the top of the hillside appears to be 10ft below ground surface and may also overlap a previously unreported historical spill that was discovered during 2020 delineation. Some contaminated soils were removed and sent to the landfill, while the rest of the contaminated soils remain at the site in a stockpile.	This is a potential source of contamination. Risk of encountering is low due to distance and position. Risk will be managed with an inadvertent discovery plan.