



# United States Department of the Interior

UNITED STATES FISH AND WILDLIFE SERVICE  
Fairbanks Fish and Wildlife Field Office  
101 12th Avenue, Room 110  
Fairbanks, Alaska 99701  
May 29, 2014



Mr. Christopher Floyd  
U.S. Army Corps of Engineers  
ATTN: CEPOA-EN-CE-ER (FLOYD)  
Joint Base Elmendorf-Richardson, Alaska 99506-0898

Re: Re-initiation of Section 7 consultation for Kogotpak Landfill FUD remediation project

Mr. Floyd:

Thank you for contacting us regarding re-initiation of section 7 consultation for the cleanup of the Kogotpak Landfill Formerly-used Defense site (FUD) on the Arctic National Wildlife Refuge (Refuge). We understand that additional time is needed to complete waste removal from Kogotpak and that plans have changed for transporting contaminated soil offsite. The contractor, Marsh Creek, would landfarm petroleum contaminants for the next three summers (instead of shipping contaminated soil offsite) or until target contaminant concentrations are met. Additionally, the US Army Corps of Engineers (USACE) has added work at Nuvagapak and Collinson Points. Field crews plan to start work at Collinson and Nuvagapak about July 10, 2014.

Marsh Creek's Special Use Permit (SUP) was extended through September 30, 2014 by the Refuge, and field crews will likely receive additional permits from the Refuge for the next three years. The additional work at each site is described below.

### Nuvagapak Point

Field crews will excavate and containerize up to 400 tons (267 cubic yards) of PCB-contaminated soil and concrete for offsite transport/disposal via barge.

Approximately 3,000 cubic yards (4,500 tons) of petroleum-contaminated soil will be excavated from multiple areas (primarily former Drum Site D) with varying concentrations of diesel-range organics from 12,500 to 26,000mg/kg. Once excavated, the soil will be mixed and aerated (diluting the 26,000 mg/kg to a lower concentration) using a skid steer loader with a tiller attachment. The landfarm will be constructed approximately 6 inches thick and will cover approximately 1.5 to 1.8 acres on an existing pad. This process will minimize localized high concentrations. The landfarm will be divided into decision units and sampled to monitor the remediation progress.

The landfarm will be tilled (mixed/aerated) approximately monthly from June through August. Tilling events will promote bioremediation to reduce the contaminant concentrations through

microbial action. The landfarm will be sampled monthly (typically in late July/early August) to monitor remediation progress. Marsh Creek currently plans to decommission the landfarm and backfill areas of the pad with the treated soil in August 2016.

#### Collinson Point

Field crews will excavate and containerize up to 300 tons (200 cubic yards) of PCB-contaminated soil and concrete for offsite transport/disposal via barge.

Approximately 300 cubic yards (450 tons) of petroleum-contaminated soil will be excavated from multiple areas from 12,500 to 24,000mg/kg. Landfarming protocols will be similar to and performed at the same time as those at Nuvagapak Point, but over a smaller area (0.15 to 0.18 acres). Marsh Creek currently plans to decommission the landfarm and backfill areas of the pad with the treated soil in August 2016.

#### Other Activities

Marsh Creek would perform other activities to support remediation efforts. To support the long-term monitoring and maintenance of the landfarms, one 20-foot connex shipping container will remain onsite at each location to securely store equipment and materials. Additionally, field crews would set up a 12-person tent camp each summer equipped with an electric fence perimeter to deter polar bears. Marsh Creek would receive an intentional take LOA for polar bear deterrence activities.

The tilled soil and exposed petroleum products can attract wildlife such as polar bears. However, initial petroleum levels may be low enough that the landfarming may decrease petroleum contamination to cleanup levels within one summer, perhaps even by the first post-creation tilling event. Therefore, field crews will erect a 6-foot fence around each landfarm to deter polar bears from contacting contaminated soil if concentrations do not reach cleanup levels by the first sampling event in 2014 (likely in July). Field crews would look for evidence of polar bear incursion (e.g., a downed fence, footprints or other markings) into the landfarms before or while tilling and record observations on the polar bear interaction form used to report interactions for their LOA. Additionally, Marsh Creek will place cameras near the landfarms to monitor polar bear use of the area. These incursions would be summarized in a report and submitted to the Fairbanks Fish and Wildlife Field Office by November 30<sup>th</sup> annually.

Activities such as barging contaminants would be performed in a similar manner as described in previous consultations.

#### Previous Consultations

We previously consulted with the Refuge on this action on September 30, 2010 and concurred that the proposed action was not likely to adversely affect the spectacled (*Somateria fisheri*) and the Alaska-breeding population of the Steller's eider (*Polysticta stelleri*) because of low abundances of these species in that area. However, we were unable to make a determination on the effect of issuing the SUP on polar bears (*Ursus maritimus*) or polar bear critical habitat because the Refuge did not provide us with a detailed project description at that time. Therefore, the USACE re-initiated to consider effects on polar bears and polar bear critical habitat. We concluded that the proposed Action was not likely to jeopardize the continued existence of polar bears and was not likely to adversely modify polar bear critical habitat on March 7, 2011. We

then re-initiated consultation for project delays and concluded on April 3, 2012 that our previous concurrence regarding eiders and conclusion regarding polar bears and polar bear critical habitat were still valid and project date changes are not likely to adversely affect listed eiders, are not likely to jeopardize the continued existence of polar bears, and are not likely to adversely modify polar bear critical habitat. We again reinitiated on February 22, 2013 due to a needed time extension and changes to the project. We concluded that our previous determinations that the proposed action was not likely to adversely affect listed species were still valid. We also retracted a previous evaluation of polar bear critical habitat because the rule designating polar bear critical habitat was vacated and remanded back to the Service.

#### New Effects of the Action on Listed Species

Most effects to listed species would be identical to those described in previous consultations for this project. The modified project would have no additional effects on listed eiders. Thus, our previous determination that the proposed action was not likely to adversely affect listed eiders is still valid. Landfarming, however, could attract polar bears to the site and cause additional effects.

The tilled soil, exposed petrochemicals, and the field camp (when workers are present) may attract polar bears to the work site. Polar bears could be exposed to petroleum chemicals should they contact contaminated soils. Ingestion of even sub-lethal amounts of oil can have various physiological effects on a polar bear depending on whether the animal is able to excrete or detoxify the hydrocarbons (see USFWS 2011). Petroleum hydrocarbons irritate or destroy epithelial cells lining the stomach and intestine, thereby affecting motility, digestion, and absorption. Because initial contaminant concentrations would be low, bears exposed to petroleum products at these sites may experience minor, low-level irritations from inflammation of nasal passages and stress related to such irritations. Generally, oiling of the pelt reduces its insulation value, and skin irritation may further contribute to impaired thermoregulation. Bears may ingest oil as they groom to restore the insulation value of the oiled fur. Oil ingestion by grooming or by nursing could have pathological effects, depending on the amount of oil ingested and the individual's physiological state. We expect bears exposed to soil in these landfarms would have only minor, low level physiological responses because soil petroleum concentrations at these landfarms would be very low. Over time, potential physiological responses from exposure would decrease with declining petroleum concentrations in the landfarm.

Polar bear-human interactions may increase if polar bears are attracted to the site. While the electric fence around the campsite may cause very short term discomfort and behavioral changes in polar bears (i.e., they may run away from the site after being shocked), it will likely reduce the need to use lethal means to protect human safety. Additionally, Marsh Creek will follow its polar bear interaction plan to minimize effects of these interactions. Effects of these human-polar bear interactions were evaluated in USFWS (2013), which analyzed effects of authorizing intentional take of polar bears pursuant to the Marine Mammal Protection Act.

Proposed mitigation measures would minimize potential impacts to polar bears to the extent practicable. Monitoring for possible polar bear intrusion into the landfarms will allow us to evaluate the effectiveness of the mitigation measures and adapt these measures as needed. Thus, we do not expect that project modifications, including landfarming efforts, would have

population-level effects on polar bears. Thus, project modifications *are not likely to jeopardize the continued existence of polar bears or reduce appreciably the likelihood of both its survival and recovery in the wild by reducing its reproduction, numbers, or distribution.* Should you have questions, please contact Shannon Torrence at 907-455-1871.

Sincerely,



Ted Swem  
Branch Chief

Cc: Brian Glaspell and Alfredo Soto, Arctic National Wildlife Refuge  
Jason Ditsworth, Marsh Creek, LLC  
Andy Sorum, U.S. Army Corps of Engineers

Literature Cited

USFWS. 2011. Programmatic Biological Opinion for Polar Bears (*Ursus maritimus*), Polar Bear Critical Habitat, and Conference Opinion for the Pacific Walrus (*Odobenus rosmarus divergens*) on Beaufort Sea Incidental Take Regulations. Fairbanks Fish and Wildlife Field Office, Fairbanks, Alaska.

USFWS. 2013. Biological Opinion for the USFWS Region 7 Polar Bear and Pacific Walrus Deterrence Program, Marine Mammals Management Office, Anchorage, Alaska. Fairbanks Fish and Wildlife Field Office, Fairbanks, Alaska.