



WRANGELL JUNKYARD MONOFILL PROJECT

Frequently Asked Questions

Updated August 18, 2017

PROJECT BACKGROUND:

During 2016, the Alaska Department of Environmental Conservation (ADEC) performed a cleanup at the former Wrangell (Byford) Junkyard contaminated site on Zimovia Highway. The site was a battery salvage operation that became an uncontrolled hazardous waste site with heavy lead contamination, posing a direct risk to adjacent residents, recreators, and wildlife. The cleanup work involved excavation of wastes and treatment of over 18,000 yards of lead contaminated soil. The cleanup is complete, except for final disposal of the soil, which is slated to be moved to a monofill that will be constructed in a rock pit off Pats Creek Road. For background information on the Wrangell Junkyard cleanup, visit: https://dec.alaska.gov/spar/csp/sites/wrang_junkyard.htm.

WHAT IS A MONOFILL?

A monofill is a landfill or disposal facility that receives primarily one type of solid waste, which in this instance is treated lead-contaminated soil.

WHY CAN'T THE TREATED MATERIAL STAY AT THE ZIMOVIA HIGHWAY SITE?

The material is currently stored in a temporary stockpile only approved for two years of storage. Although covered by an industrial-grade tarp, high winds and storms have already caused damage several times requiring costly repairs.

The Zimovia Highway site does not meet the monofill siting criteria under Alaska's solid waste regulations. The site has a

slope of 17% which exceeds the maximum allowable slope of 10%. The site has wide open exposure to strong winds and storms, which would make long term maintenance of a secure monofill very difficult. Although soil in the stockpile has been treated and stabilized so that the lead is no longer soluble in groundwater or surface water and cannot be absorbed by plants, it still poses an ingestion or inhalation risk to humans and animals if it is not permanently and securely contained. This is why it is important to move this soil into a permanent disposal location that prevents direct contact, erosion, runoff, and windblown migration.

IS THIS MATERIAL STILL CONSIDERED TOXIC?

The lead polluted soil from the former Wrangell Junkyard site has been treated using a phosphate-based product called EcoBond, which has made the lead in the soil insoluble in water. This means the lead can no longer leach into groundwater and migrate to surface water. EcoBond has been used to stabilize lead contaminated soil at many sites around the country including Alaska and is far superior to other treatment methods such as solidification with cement. Phosphates chemically bind to the lead in the soil permanently, rendering it insoluble even in an acid environment. Extensive



testing has been conducted to confirm that the lead in the treated soil from the Junkyard site is not leachable, using an analysis called the Toxicity Characteristic Leaching Potential test. This aggressive test exposes the soil to a strong acidic environment under repeated pressure. Every single result out of 67 tests of the material met the criteria for non-leachability. EcoBond also reduces the bioavailability of the lead when it is ingested. However, the lead concentrations are still high enough to pose a risk to people or wildlife if soil particles are inadvertently ingested or inhaled. This is why DEC is working to ensure the soil is disposed of properly where it can be managed in place in a secure location.

WHY WASN'T THIS MATERIAL SHIPPED OUT?

The cost to ship this material to a landfill out-of-state would be at least double the cost of constructing a permanent disposal facility on the Wrangell road system. DEC cannot spend that much more from the emergency response account fund, when the planned on-island disposal is technically feasible, does not pose unacceptable risk to people or the environment and meets all the regulatory requirements.

HAS DEC BEEN WORKING WITH THE CITY ON THIS?

DEC and the City and Borough of Wrangell have been working together for nearly ten years to get the former Wrangell Junkyard site cleaned up. As the cleanup progressed and the volume of soil was found to be much larger than previously known, discussions on selecting a disposal site within the Wrangell City and Borough began in April of 2016 between DEC, the City Assembly, City Manager and staff, DNR, and EPA.

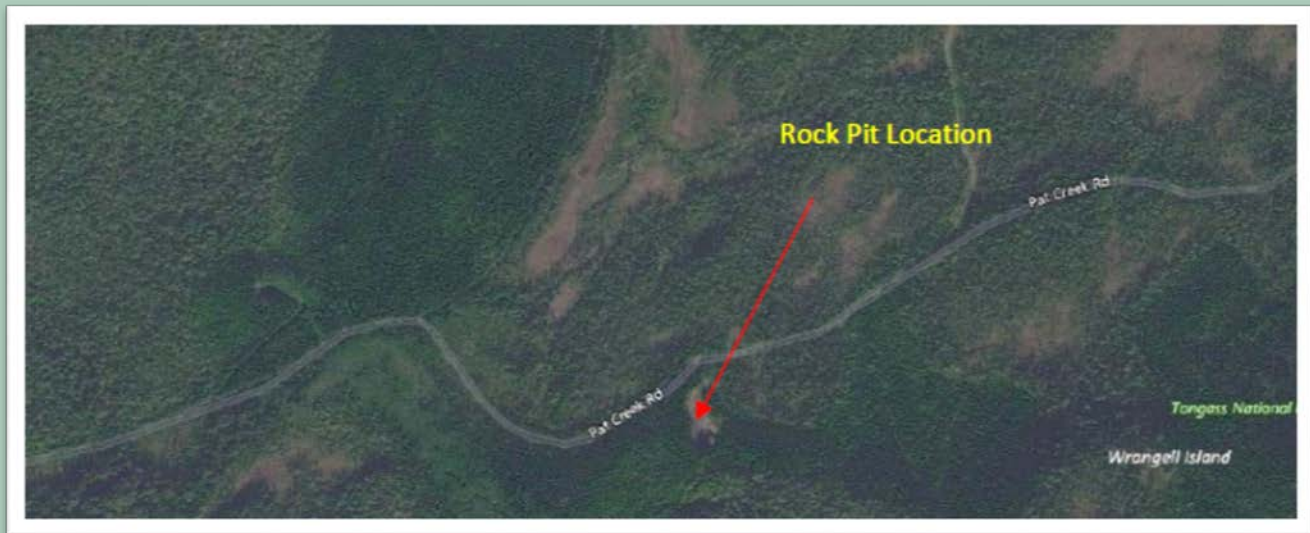
Several candidate sites were investigated, including the municipal landfill, a city-owned rock pit, a running track, and three other rock pits owned or partially owned by the State of Alaska. EPA participated in the site selection for purposes of developing the engineering design for the monofill construction. Based on feedback from the City and discussions with these parties as well as site visits, a state owned rock pit on Pats Creek Road was selected as the preferred monofill location.

WHERE IS THIS PIT LOCATED?

The selected monofill site is located in the Petersburg B-1 Quadrangle in Section 4, Township 64S, Range 84E of the Copper River Meridian.



Aerial imagery showing the location is included above and below.



WHO OWNS THE PIT BY PAT'S LAKE?

The rock pit where the monofill will be constructed is owned by the Alaska Department of Natural Resources.

IS THE PIT NEAR ANY ANADROMOUS SALMON SYSTEMS?

Pat's Creek is an anadromous fish stream and is located 0.2 miles to the north of the pit. Pat's Lake is located approximately one mile to the southwest of this rock pit.

ONCE THE TREATED MATERIAL IS IN THE MONOFILL, COULD IT CONTAMINATE PATS CREEK OR PATS LAKE?

The EcoBond treated material is no longer soluble and cannot leach into groundwater or surface water. Even lead that is not treated is not a very mobile substance and will not migrate far from where it was deposited. However, DEC commissioned a hydrologic and leachability study of the material and the pit location, which showed that the pit is not hydrologically connected to Pat's Creek, located 0.2 miles away and that the material will not migrate to groundwater even when exposed to extreme precipitation.

The monofill is designed to be a permanent disposal cell for the lead-polluted soil. It is designed to withstand significant seismic events and severe weather. The material will be compacted as it is placed into the repository and then capped with multiple layers of rock, an engineered impermeable liner, sand and more rock, and then topped with soil and vegetation. The engineered liner-cover is designed to last 1000 years of exposure to ultraviolet light, but will last even longer because it will be covered by 3.5 feet of rock, gravel, soil and vegetation. Finally, the state will maintain permanent institutional controls on this site to prohibit future activities such as excavation that could damage the monofill. This begins with monthly inspections for five years or longer until the cap is stabilized and then at a reduced rate after that to inspect for damage by wildlife or vandalism. Although not required, the state will also conduct periodic groundwater monitoring to verify that no leaching has occurred.



HOW WILL THE TREATED MATERIAL BE TRANSPORTED TO THE SITE ON PAT'S CREEK ROAD?

The treated material will be loaded into lined and covered dump trucks at the Zimovia Highway site, and the trucks will be inspected and decontaminated as they leave the site. From there, the trucks will travel about eight miles along Zimovia Highway and Pats Creek Road to the rock pit. A total of about 20 truckloads of treated material will be transported to the pit each day. Measures including wetting the material and conducting inspections will be taken to prevent any contamination along the route. All the trucks will also carry a spill kit to respond to any petroleum spills from vehicles.

IS A PERMIT REQUIRED BY THE U.S. FOREST SERVICE TO USE THE ROAD?

DEC and its contractors have submitted a road use proposal to the USFS and are working with the Wrangell Ranger District to obtain a road use permit or authorization to use the approximately two mile section of road for which the USFS has a non-exclusive public easement from DNR and the Mental Health Land Trust. The proposal includes continuous maintenance of the road throughout the project and measures to prevent contamination along the route, and no hauling of material on weekends or holidays during May 1 to October 1 to allow local residents to enjoy the Pats Creek recreation area.

FOR MORE INFORMATION, CONTACT:

Division of Spill Prevention and Response, Contaminated Sites Program

Sally Schlichting, Environmental Program Manager

(907) 465-5076

sally.schlichting@alaska.gov

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