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Petroleum Brownfields in Alaska

DEC Brownfields Program
Alaska Department of Environmental Conservation
Division of Spill Prevention and Response
Contaminated Sites

Background

Brownfields are abandoned, unused, or underused properties that are hindered from desired reuse or redevelopment due to contamination or potential contamination from hazardous substances, petroleum, or both. Petroleum is the most common contaminant in Alaska. Alaskans use a wide variety of petroleum products, including gasoline, diesel fuel, heating oil, jet fuel, lubricating oil, bunker oil, and tar – all of which are refined from crude oil. Most petroleum contamination in Alaska comes from leaking storage tanks, containers, pipes, and equipment; transportation accidents; and improper handling and disposal practices that lead to spills. In fact, petroleum contaminants are of concern at approximately 75% of all sites (brownfields and non-brownfields) managed by the Department of Environmental Conservation (DEC) Contaminated Sites Program.

For More Information

Lisa Griswold
DEC Contaminated Sites Program
Brownfields
(907) 269-2021
lisa.griswold@alaska.gov

Marc Thomas
DEC Contaminated Sites Program
Brownfields
(907) 465-5206
marc.thomas@alaska.gov

What are petroleum brownfields?

As their name suggests, petroleum brownfields are any properties that are contaminated or potentially contaminated by petroleum or petroleum products and are usually found at sites that use or store these products where spills or leaks are more likely to occur.

Depending on the type of petroleum product, how it is released into the environment, and the volume of the release, the product may evaporate, attach to soil or sediment particles, be carried into surface waters, or be carried into groundwater. Lighter products such as gasoline are more toxic and mobile in the environment but also degrade faster than heavier ones, such as tar. Petroleum products naturally degrade when exposed to oxygen, sunlight, and soil bacteria. However, in Alaska, cold Alaskan air and soil temperatures and winter snow cover slow natural breakdown causing petroleum-contaminated soil to degrade slowly, taking many years or even decades to complete.. Petroleum-contaminated groundwater can remain contaminated for a long time because of cold temperatures and lack of oxygen in the groundwater.

Common Types of Petroleum Brownfields

- Former gas stations with underground storage tanks (USTs)
- Old tank farms
- Leaking home heating oil tanks
- Commercial property with aboveground storage tanks (ASTs)
- Abandoned drums

Are there special eligibility considerations for receiving brownfields funding for petroleum sites?

Yes. The Environmental Protection Agency (EPA) or DEC may be able to support or provide technical assistance to assess or clean up petroleum brownfields. To be eligible for EPA funding or DEC services, petroleum sites need a written determination of eligibility by EPA or DEC. In Alaska, DEC is usually the

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regulatory authority that issues eligibility determinations for petroleum-contaminated sites.[1] For a petroleum-contaminated site that otherwise meets the definition of a brownfield to be eligible for funding, DEC must determine:

1. There is no viable Responsible Party.
2. The site will not be assessed, investigated, or cleaned up by a person that is potentially liable for cleanup.
3. The site must not be subject to a corrective action order.

If a party is identified as causing or contributing to the contamination at the site and that party is financially viable, then the site is not eligible for brownfields funding directly or indirectly from EPA.

In order to receive an eligibility determination, DEC will need additional information about the site. DEC can assist in researching the site's history to fill in any data gaps if some information is not readily known or available.

- Names of the current and immediate past owners;
- When and how the current owner acquired the site;
- Information establishing that the current and immediate past owner of the property did not cause or contribute to any contamination;
- Information that the party applying for assessment or cleanup funding or services is not potentially financially/legally responsible for addressing any contamination at the site;
- Information that a Responsible Party has not been identified through an unresolved judgment, order, or third-party suit with respect to the site;
- Information that the site is not subject to an order under the Resource Conservation and Recovery Act (RCRA); and
- Information that the current or immediate past owner, if responsible, is not financially viable to meet their cleanup obligations.

Two aboveground storage tanks at Former Fish Processor, Golovin

Underground Storage Tanks (USTs)

State and Federal laws regulate the installation, operation and maintenance, closure, and cleanup of USTs and their associated piping, called UST systems. In Alaska, USTs include petroleum tank systems that have 10 percent or more volume underground, hold at least 110 gallons and are not used only for heating oil where the fuel is only consumed at the premises.

Underground heating oil tank systems that are also used for another purpose (such as emergency power generation or fueling vehicles) are regulated under DEC regulations, 18 AAC 78 (Underground Storage Tanks), and under Federal law. Contamination from UST systems that have only been used for the storage of heating oil consumed at the premises must be reported to DEC and cleaned up under other DEC regulations, 18 AAC 75 (Oil and Other Hazardous Substances Pollution Control; these are the regulations for contaminated sites).

[1] EPA will issue petroleum eligibility determinations for Metlakatla Indian Community or at the State's request.

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Can EPA or DEC funding be used to remove tanks?

An EPA assessment grant or DEC services may be used to remove a tank only if it is determined that the tank must be pulled in order to conduct an effective assessment. The appropriate EPA project officer must concur with this determination prior to conducting field work. If the EPA project officer concurs, any tank (AST/UST, regulated/ unregulated) could be removed using brownfields funding if deemed necessary to complete activities (e.g., sampling) to more fully assess and characterize a site.

ASTs at fuel storage area, Jumping Salmon Lodge, Chenega Bay

Can brownfields funding be used to respond to a spill?

No. Brownfields funding is not available to immediately respond to a spill; however, it may be available to assess and/or clean up a petroleum release if the initial response does not address all potential contamination and depending upon site-specific circumstances. If there is a leak, overfill, or other petroleum release, the owner or operator must notify DEC within 24 hours and take immediate action to prevent any further release, including removing the petroleum from the tank, if necessary.

Reporting an Oil-Petroleum Products Spill to DEC	
During Normal Business Hours, Call the Nearest Response Office	
Central Alaska: Anchorage	(907) 269-3063
Northern Alaska: Fairbanks	(907) 451-2121
Southeast Alaska: Juneau	(907) 465-5340
Alaska Pipeline: Fairbanks	(907) 451-2121
Outside Normal Business Hours	
Toll Free	1-800-478-9300
International	1-907-269-0667

Where can I find more information?

DEC has several resources related to the cleanup of oil and petroleum products. See:

- DEC Underground Storage Tank homepage
- DEC Leaking Underground Storage Tanks homepage
- DEC Response Resources