



Alaska Department of Environmental Conservation

The Cleanup Process

April 2016

The Cleanup of Contaminated Sites in Alaska

The Alaska Department of Environmental Conservation's Contaminated Sites Program oversees the cleanup or conducts the cleanup of contaminated sites based on their potential risks to human health and the environment. DEC stresses that prevention is the best way to protect people and the environment. When leaks or spills do occur, cleaning up soil and groundwater can be quite difficult, time-consuming and expensive, but foremost in the process is protecting the health and safety of people, and the environment.

The following process describes the investigation and cleanup of what remains after an initial spill response or once an underground release or discharge is discovered. The process can range from a large, formal cleanup with extensive public involvement and lasting several years to a simple one taking a few months. It all depends on the source and extent of contamination and the threat to humans and the environment.

This fact sheet briefly summarizes the cleanup process. For complete information, see Alaska's Statutes Title 46, the "Site Cleanup Rules" in Alaska's Administrative Code of regulations 18 AAC 75 Article 3, and related guidance documents available at: <https://dec.alaska.gov/spar/csp/process.htm>. If the contamination comes from a leaking regulated underground fuel tank, the process is slightly different: see 18 AAC 78. Cleanups conducted under federal authorities (CERCLA, RCRA, or TSCA) follow somewhat similar but more prescriptive processes, use other terminology, and have federal agency regulatory oversight in addition to state oversight.

The person who caused the contamination or who owns the land is typically the one legally responsible for cleaning it up. That person must arrange for a "qualified environmental professional" (typically a contractor or consultant) to conduct or manage the site characterization and cleanup activities.

Site Characterization

The first step is to prepare a Site Characterization Work



Taking samples from a monitoring well is part of the site characterization process for this contaminated site in Kotzebou.

Plan for DEC review and approval. This entails researching information about the site history and use, the types of petroleum or hazardous substances stored, used or disposed of on the property, and any information on known or suspected spills, releases or disposal of such materials.

A Conceptual Site Model is then developed as a first estimate where the contaminants were released, how they may move through the environment, and how people or animals may be exposed to them. This may be prepared as a separate document or included as part of the work plan.

The work plan must describe in detail who will conduct the work, where and how samples will be collected for field screening and laboratory analysis, which DEC approved laboratory will analyze the samples, and which analytical methods will be used. The objective is to determine what contaminants are present, at what concentrations, in which media (soil, water, sediments and/or air) at the site and whether cleanup is necessary.

Field investigation: Guided by the work plan, the contractor (qualified environmental professional) collects samples from the various environmental media and gathers more

information at the site. DEC oversees this work and may conduct site inspections during the fieldwork.

Cleanup levels: An important part of the cleanup process is determining cleanup levels- the concentration of a hazardous substance that may be left in soil or water without posing a threat to human health, safety or welfare, or to the environment. Different levels may be chosen depending on the contaminants present, the soil types, depth to groundwater and whether or not the hazardous substance could be taken in through breathing, skin contact, or eating/drinking contaminated materials. Conservative default cleanup levels set in the Site Cleanup Rules apply unless less stringent alternative cleanup level are proposed and determined to be protective based on site specific soil and groundwater information along with the current and planned future land use.

A Risk Assessment is sometimes conducted to gather detailed information about the site and how people could be exposed to contamination. Risk assessments can be used to justify protective cleanup levels which are more or less strict than default levels. An important part of a risk assessment is to gather information from residents and other people on how they use the land and its resources. DEC has a Risk Assessment Procedures Manual that describes how risk assessments may be used in the site cleanup process.

Site Characterization Report: After the site characterization fieldwork is completed, the qualified environmental professional prepares a report that describes the work, documents the observations and results, draws conclusions about the extent of contamination and proposes cleanup levels for DEC to approve. A formal risk assessment, if conducted, would also be included or submitted separately. Complete removal all the contamination is not often possible, practical or affordable. Potential cleanup techniques are analyzed, and one or more should be recommended based on their potential effectiveness, practicality, and consideration of any public concerns or comments.

DEC may approve the cleanup levels and general cleanup techniques in the site characterization report approval or in

a subsequent site cleanup work plan.

Site Cleanup

Before site cleanup work begins, the responsible person submits a Site Cleanup Work Plan to DEC. The plan describes who will do the work, how the site will be cleaned up, the sampling and analyses that will be conducted to determine the adequacy and effectiveness of the cleanup, how all wastes that will be generated will be treated or disposed of properly, and it must include a schedule for conducting the work. Again, DEC provides oversight and may conduct site inspections during the fieldwork. Interim cleanup reports may be necessary when cleanup activities extend beyond one field season. For sites with groundwater contamination, longer term groundwater monitoring and reporting is typically needed. A Final Cleanup Report is completed for DEC review and approval after all cleanup activities are complete.

Site Closure

Cleanup Complete: When cleanups are successfully completed in a manner that allows for residential land use, DEC issues a “Cleanup Complete” determination.

Cleanup Complete with Institutional Controls: When a cleanup is conducted using alternative cleanup levels that do not support residential land use, or when it is not feasible to cleanup a site to residential use levels, DEC may approve the cleanup as protective as long as conditions or restrictions called “institutional controls” are established that limit future land use activities and exposure that could cause unacceptable risk to people or the environment. In such cases DEC issues a “Cleanup Complete with Institutional Controls” determination, which requires the responsible person or landowner to periodically report to DEC on the land use, compliance with the institutional controls and any change in ownership.

Cost Recovery

DEC is required by state law to seek reimbursement of all oversight and response costs and/or damages from responsible or liable persons.

Follow-up

DEC’s Contaminated Sites Program protects human health, safety and the environment by overseeing and conducting cleanups at contaminated sites in Alaska and by preventing releases from underground storage tanks and aboveground storage tanks. For follow-up questions, please contact the Contaminated Sites staff in the office closest to you:

Anchorage (907) 269-7503 / Fairbanks (907) 451-2143

Juneau (907) 465-5390 / Kenai (907) 262-5210 / Soldotna (907) 262-5210

dec.alaska.gov/spar/csp