

Landfill Environmental Investigation and Closure

This fact sheet provides general information regarding the history of environmental investigations and closure of the landfill at the former Lowry Air Force Base. This site is not related to the "Lowry Landfill" in Arapahoe County.

History and Location: This 70 acre parcel is located on Alameda Avenue, east of Fairmount Drive. From 1949 to 1989 the landfill was used for disposal of municipal waste and construction debris, similar to other municipal dumps of that time.

Lowry Assumption, LLC (LAC) closed the Lowry Air Force Base landfill in accordance with State and Federal regulations in 2004 and is currently responsible for the long-term monitoring and maintenance.

Environmental Investigations:

Environmental investigations of the former landfill began in 1983 under the Air Force's Installation Restoration Program (IRP) with oversight by the Colorado Department of Public Health and Environment (CDPHE), and input from the cities of Denver and Aurora. The studies include the Remedial Investigation (1990); Supplemental Remedial Investigation (1995); and Focused Feasibility Study (1998). All studies (listed below) were performed using State of Colorado and EPA published guidelines.

Lowry AFB Landfill Environmental Investigations/Chronology	
IRP Phase 1 records search	1983
IRP Phase II Confirmation/ Quantification	1987
Remedial Investigation (RI)	1990
Supplemental RI for the Landfill Zone	1995
Focused Feasibility Study	1998
Proposed Plan	1998
Preliminary Closure Plan for OU2	2003
Phase 2 Corrective Action Plan	2003
Long-Term Monitoring for Radiologi- cal Parameters	2004- 2005
Landfill Closure	2004- 2005
Post-Closure Monitoring – 30 Year Obligation	Begin 2006
Additional Radiological monitoring	2007
Closeout of Radiological study with No Further Action determination	2008

Investigation Results: The investigations were designed to characterize the landfill zone and areas that could be impacted by it, including the discharge areas, Westerly Creek and the wetlands to the north. Samples were collected from soil, groundwater, surface water and sediment and analyzed for a wide range of chemicals/contaminants. The concentrations detected in the samples were similar to those found in other urban settings, and no immediate health risks were identified.

Landfill Closure: Operations at the landfill ceased in 1989 and it had to be closed to meet current regulations. Landfills throughout the country are closed using a variety of techniques in order to prevent physical contact with the waste materials and to prevent run-on water and precipitation from moving through the waste materials.

In May 1998, a Proposed Plan was issued by the U.S. Air Force for closure of the landfill in accordance with the Colorado Solid Waste Regulations. The plan considered the results of the investigations and was presented to the public for comment with concurrence from CDPHE and EPA.

Following the mandated evaluation of alternatives, the selected closure method was installation of a low permeability soil cap, which was implemented in 2004 and final construction approved by CDPHE in 2006. To protect the integrity of the cap, legal covenants are in place to prevent active uses on the property.

Ongoing Monitoring and Maintenance:

The approved closure plan also includes a 30-year program of monitoring and maintenance to ensure that the cap is performing effectively. Groundwater and surface water are regularly sampled to identify releases from the landfill should they occur in the future. Gas probes were also installed within the landfill and are monitored for methane, a compound often generated in landfills due to the decay of organic materials such as food and yard wastes.

Other Concerns: There have also been questions from community members regarding uranium detections immediately downgradient of the site. Due to its geology, many places in Colorado have higher than average levels of background uranium from rocks and soils. At the request of CDPHE, LAC performed additional study of uranium and other radionuclides in the landfill zone. LAC presented the findings of the study and expert evaluation to CDPHE in 2008, and CDPHE issued a No Further Action determination stating that "the source of elevated uranium is naturally occurring with a source related to the geology of the site." In addition, the study ruled out any impacts from man-made radionuclides. LAC will continue to monitor gross alpha and gross beta in accordance with the approved post-closure monitoring plan.

FOR MORE INFORMATION:

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