

Date: March 3, 2025

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Location: Lake Road Fire Station Dillingham, Alaska 99576

Report ID: PFAS-LFS-2024-01104

Executive Summary

This report presents the findings of a comprehensive Per- and Polyfluoroalkyl Substances (PFAS) contamination assessment conducted at the Lake Road Fire Station. Based on multiple sampling methods and laboratory analyses, **no PFAS contamination was detected** at the site. All samples collected from groundwater and surface water were found to be below the laboratory detection limits and well below the applicable regulatory standards.

1. Introduction

1.1 Background

The Lake Road Fire Station was selected for PFAS contamination assessment due to the historical use of firefighting foams that potentially contained PFAS compounds. Fire stations have been identified as potential sources of PFAS contamination due to the past use of Aqueous Film Forming Foam (AFFF) during training exercises and emergency response.

1.2 Objectives

The primary objectives of this assessment were to:

- Determine if PFAS contamination is present at the Lake Road Fire Station site
- Assess potential risks to human health and the environment
- Establish a baseline for any future monitoring requirements

2. Methodology

2.1 Sampling Strategy

The sampling strategy was designed to capture potential PFAS contamination in various environmental media:

- Groundwater samples from three monitoring wells
- Surface water samples from adjacent drainage areas

2.2 Sampling Methods

All sampling was conducted in accordance with EPA Method 537.1 protocols for PFAS testing.

Special precautions were taken to prevent cross-contamination:

- Use of PFAS-free sampling equipment
- Avoidance of water-resistant clothing and materials
- Implementation of strict decontamination procedures
- Collection of field blanks and equipment rinse samples

2.3 Analytical Methods

Samples were analyzed by an accredited laboratory using:

- Liquid Chromatography/Tandem Mass Spectrometry (LC-MS/MS)
- Reporting limits of 2 ng/L (ppt) for water and 1 µg/kg (ppb) for soil
- Analysis targeting 24 PFAS compounds, including PFOA and PFOS

3. Results

3.1 Soil Sampling Results

No soil sampling was conducted at this location.

3.2 Groundwater Results

One well was sampled. All groundwater sample(s) returned results below the laboratory detection limits for all PFAS compounds.

Sample ID	PFOA (ng/L)	PFOS (ng/L)	Total PFAS (ng/L)
MW-01	ND (<2.0)	ND (<2.0)	ND (<2.0)

ND = Not Detected (below laboratory detection limit)

3.3 Surface Water Results

Four surface water samples were collected from the drainage areas surrounding the fire station. All samples returned results below the laboratory detection limits.

Sample ID	PFOA (ng/L)	PFOS (ng/L)	Total PFAS (ng/L)
SW-01	ND (<2.0)	ND (<2.0)	ND (<2.0)
SW-02	ND (<2.0)	ND (<2.0)	ND (<2.0)
SW-03	ND (<2.0)	ND (<2.0)	ND (<2.0)
SW-04	ND (<2.0)	ND (<2.0)	ND (<2.0)

ND = Not Detected (below laboratory detection limit)

3.4 Quality Assurance/Quality Control

Field blanks, equipment rinsate samples, and laboratory method blanks all returned non-detect results, confirming the absence of cross-contamination during sampling and analysis.

4. Discussion

The comprehensive testing program conducted at the Lake Road Fire Station found no evidence of PFAS contamination in groundwater or surface water. These findings suggest that either:

1. AFFF containing PFAS compounds was not used at this location, or
2. Any PFAS that may have been present have since degraded or migrated away from the sampling points, or
3. The quantities used were insufficient to result in detectable contamination

The sampling program was robust, including multiple media, which provides high confidence in the conclusion that no PFAS contamination is present at the site. Current conditions at the Lake Road Fire Station pose no risk to human health or the environment from PFAS exposure.

5. Conclusions

Based on the comprehensive sampling and analysis conducted, we conclude that:

1. No PFAS contamination was detected at the Lake Road Fire Station
2. All groundwater and surface water samples were below laboratory detection limits
3. The site does not require remediation or additional monitoring for PFAS compounds
4. The site meets all applicable regulatory standards for PFAS compounds

6. Recommendations

Although no PFAS contamination was detected at the site, we recommend the following precautionary measures:

1. Maintain records of this assessment for future reference
2. Ensure current firefighting materials are PFAS-free to prevent future contamination
3. Incorporate this site into the regional PFAS monitoring database as a non-contaminated control site



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