Reference sheet
Detailed site characterisation

Time of assignment

2017-2021

Client

Trafikverket

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Detailed Investigation of the Fire Training Area at Örnsköldsvik Airport

NIRAS, commissioned by the Swedish Transport Administration (Trafikverket), conducted detailed environmental technical soil investigations of areas in and around Örnsköldsvik Airport regarding poly- and perfluorinated substances (PFAS) during the years 2017-2019 and reported the findings during the 2020-2021. The assignment constituted the first part of a three-part project: a detailed investigation, an in-depth risk assessment, and a remediation study. The detailed investigations were carried out to complement previously conducted investigations with the goal of clarifying the contamination situation regarding PFAS before the future steps of risk assessment and remediation study. The extent of PFAS in soil and groundwater has been mapped at the fire training area and other suspected source zones, and the knowledge of the groundwater plume's extent and flow direction from the fire training area has been updated. As part of the assignment, data has been compiled into a conceptual hydrogeological model in the form of plan maps in GIS and cross-sections in GeoDin. The conceptual model has been used as a basis for assessing, among other things, existing groundwater reservoirs, groundwater flow directions, and possible contamination pathways.

The assignment included sampling of soil, groundwater, surface water, sediment, stormwater, drinking water, peat, and biota (fish) within and around Örnsköldsvik Airport. Mapping and sampling of soil and installation of groundwater pipes were carried out through both traditional auger drilling and with Geoprobe. The investigation also included leaching tests (on soil) as well as rock probing and geophysical surveys (Resistivity/IP and ground-penetrating radar).