



INITIAL INVESTIGATION FIELD REPORT

☐ Check this box if you have attached any documents to this form (using the paperclip icon on the left).

ERTS #(s):
Parcel #(s):
County:
FSID #:
CSID #:
UST #:

722620
28042200201400
Snohomish
49626114
16912

SITE INFORMATION

<u>Site Name (Name over door):</u> Paine Field Fire Training Pit PFAS	<u>Site Address (including City, State and Zip):</u>	<u>Phone</u> <u>Email</u>
<u>Site Contact, Title, Business:</u> Andrew Rardin, Environmental & Wildlife Mgr Paine Field/Snohomish County Airport	<u>Site Contact Address (including City, State and Zip):</u> 3220 100th St SW, Suite A Everett, WA 98204	<u>Phone</u> <u>Email</u> andrew.rardin@co.snohomish.wa.us
<u>Site Owner, Title, Business:</u> Snohomish County Property Mangement	<u>Site Owner Address (including City, State and Zip):</u>	<u>Phone</u> <u>Email</u>
<u>Site Owner Contact, Title, Business:</u>	<u>Site Owner Contact Address (including City, State and Zip):</u>	<u>Phone</u> <u>Email</u>
<u>Previous Site Owner(s):</u>	<u>Additional Info (for any Site Information Item):</u>	
<u>Alternate Site Name(s):</u>		

<u>Latitude (Decimal Degrees):</u> 47.90300
<u>Longitude (Decimal Degrees):</u> -122.28973

INSPECTION INFORMATION

☒ Please check this box if there is relevant inspection information, such as data or photos, in an existing site report for this site.

<u>Inspection Conducted?</u> Yes ☐ No ☒	<u>Date/Time:</u>	<u>Entry Notice:</u> Announced ☐ Unannounced ☐
<u>Photographs taken?</u> Yes ☐ No ☐	Note: Attach photographs or upload to PIMS	
<u>Samples collected?</u> Yes ☐ No ☐	Note: Attach record with media, location, depth, etc.	

RECOMMENDATION

No Further Action (Check appropriate box below):	LIST on Confirmed and Suspected Contaminated Sites List: ☒
Release or threatened release does not pose a threat ☐	
No release or threatened release ☐	
Refer to program/agency (Name: _____) ☐	
Independent Cleanup Action Completed (contamination removed) ☐	

COMPLAINT (Brief Summary of ERTS Complaint):

Andrew Rardin submitted a report with the results of sampling conducted near the former fire training pit at Paine Field.

CURRENT SITE STATUS (Brief Summary of why Site is recommended for Listing or NFA):

PFAS contamination identified in soil and groundwater, but no cleanup has been completed.
Recommendation: add to Confirmed and Suspected Contaminated Sites List.

Investigator: Kim Wooten

Date Submitted: 7/19/2023

OBSERVATIONS**Please check this box if you included information on the Supplemental Page at end of report.**

Description (If site visit made, please be sure to include the following: site observations, site features and cover, chronology of events, sources/past practices likely responsible for contamination, presence of water supply wells and other potential exposure pathways, etc.):

The former fire training pit is located northwest of Taxilane K-6 within the Snohomish County Airport (also known as Paine Field). It is generally located on the west side of Paine Field, centrally north to south within the airport. When in use, the pit was approximately shaped like a 40 ft by 80 ft oval and was 1 to 2 feet deep. The pit was excavated and backfilled in 2006 as part of a remedial excavation to remove petroleum contaminated soil, and is now level with the rest of the surrounding grassy field. The petroleum site remediation is addressed under the Snohomish County Airport Fire Pit cleanup site (CSID 3234), which received a No Further Action determination from the Voluntary Cleanup Program in 2007.

During use, petroleum and other flammable liquids were put in the pit, ignited, and extinguished using aqueous film forming foam (AFFF) that contained per- and poly-fluoroalkyl substances (PFAS). The training pit was used by multiple fire departments for training, including the Snohomish County Airport Fire Department, Boeing Fire Department, and Snohomish County Fire Department (Districts 1 and 11).

A stormwater detention pond is located east and downslope of the fire training pit area. Stormwater from the grassy field and taxilane are piped to this detention pond. Groundwater seeps are also present uphill of the detention pond. The detention pond has an outlet pipe that exits the property, extends under Mukilteo Speedway, and discharges to Big Gulch Creek to the west of the airport.

Soil and groundwater samples near the fire training pit were first collected and analyzed for PFAS in 2018. Additional sampling was done in 2022 and 2023. Overall, sampling results confirmed both soil and groundwater PFAS contamination. Concentrations were highest in the areas near and downgradient of the fire training pit, though PFAS were also detected in upgradient samples. Soil contamination extended to at least 10 feet below ground surface (bgs), the maximum depth of most soil borings. One soil sample was collected at 105 feet bgs and did not have detections of PFAS. Groundwater depth varied with sample location, but was generally between 8 and 35 feet bgs.

Perfluorooctanesulfonic acid (PFOS) was the individual PFAS compound present in the highest concentrations in both soil and groundwater, though multiple PFAS were detected in the samples. Maximum concentrations of PFOS were 0.8 mg/kg in soil and 120,000 ug/L in groundwater.

The fire training pit/primary source is located on the parcel listed above. Sampling does indicate contamination on multiple other parcels, including 28042200203200, 28042200201200, and 28042200201100. All of these parcels are within the airport operations area and owned by Snohomish County.

Documents reviewed:

Shannon & Wilson. May 2023. Data Report, Former Fire Training Pit, Snohomish County Airport, Everett, Washington.

CONTAMINANT GROUP	CONTAMINANT	SOIL	GROUNDWATER	SURFACE WATER	AIR	SEDIMENT	DESCRIPTION
Non-Halogenated Organics	Phenolic Compounds						Compounds containing phenols (Examples: phenol; 4-methylphenol; 2-methylphenol)
	Non-Halogenated Solvents						Organic solvents, typically volatile or semi-volatile, not containing any halogens. To determine if a product has halogens, search HSDB (http://toxnet.nlm.nih.gov/cgi-bin/sis/htmlgen?HSDB) and look at the Chemical/Physical Properties, and Molecular Formula. If there is not a Cl, I, Br, F in the formula, it's not halogenated. (Examples: acetone, benzene, toluene, xylenes, methyl ethyl ketone, ethyl acetate, methanol, ethanol, isopropanol, formic acid, acetic acid, stoddard solvent, Naptha). <i>Use this when TEX contaminants are present independently of gasoline.</i>
	Polynuclear Aromatic Hydrocarbons (PAH)						Hydrocarbons composed of two or more benzene rings.
	Tributyltin						The main active ingredients in biocides used to control a broad spectrum of organisms. Found in antifouling marine paint, antifungal action in textiles and industrial water systems. (Examples: Tributyltin; monobutyltin; dibutyltin)
	Methyl tertiary-butyl ether						MTBE is a volatile oxygen-containing organic compound that was formerly used as a gasoline additive to promote complete combustion and help reduce air pollution.
	Benzene						Benzene
	Other Non-Halogenated Organics						TEX
	Petroleum Diesel						Petroleum Diesel
	Petroleum Gasoline						Petroleum Gasoline
	Petroleum Other						Oil-range organics
Halogenated Organics (see notes at bottom)	PBDE						Polybrominated di-phenyl ether
	Other Halogenated Organics	C	C	S			Other organic compounds with halogens (chlorine, fluorine, bromine, iodine). search HSDB (http://toxnet.nlm.nih.gov/cgi-bin/sis/htmlgen?HSDB) and look at the Chemical/Physical Properties, and Molecular Formula. If there is a Cl, I, Br, F in the formula, it is halogenated. (Examples: Hexachlorobutadiene; hexachlorobenzene; pentachlorophenol)
	Halogenated solvents						PCE, chloroform, EDB, EDC, MTBE
	Polychlorinated Biphenyls (PCB)						Any of a family of industrial compounds produced by chlorination of biphenyl, noted primarily as an environmental pollutant that accumulates in animal tissue with resultant pathogenic and teratogenic effects
	Dioxin/dibenzofuran compounds (see notes at bottom)						A family of more than 70 compounds of chlorinated dioxins or furans. (Examples: Dioxin; Furan; Dioxin TEQ; PCDD; PCDF; TCDD; TCDF; OCDD; OCDF). <i>Do not use for 'dibenzofuran', which is a non-chlorinated compound that is detected using the semivolatile organics analysis 8270</i>
Metals	Metals - Other						Cr, Se, Ag, Ba, Cd
	Lead						Lead
	Mercury						Mercury
	Arsenic						Arsenic
Pesticides	Non-halogenated pesticides						Pesticides without halogens (Examples: parathion, malathion, diazinon, phosmet, carbaryl (sevin), fenoxycarb, aldicarb)
	Halogenated pesticides						Pesticides with halogens (Examples: DDT; DDE; Chlordane; Heptachlor; alpha-beta and delta BHC; Aldrin; Endosulfan, dieldrin, endrin)

CONTAMINANT GROUP	CONTAMINANT	SOIL	GROUNDWATER	SURFACE WATER	AIR	SEDIMENT	DESCRIPTION
Other Contaminants	Radioactive Wastes						Wastes that emit more than background levels of radiation.
	Conventional Contaminants, Organic						Unspecified organic matter that imposes an oxygen demand during its decomposition (Example: Total Organic Carbon)
	Conventional Contaminants, Inorganic						Non-metallic inorganic substances or indicator parameters that may indicate the existence of contamination if present at unusual levels (Examples: Sulfides, ammonia)
	Asbestos						All forms of Asbestos. Asbestos fibers have been used in products such as building materials, friction products and heat-resistant materials.
	Other Deleterious Substances						Other contaminants or substances that cause subtle or unexpected harm to sediments (Examples: Wood debris; garbage (e.g., dumped in sediments))
	Benthic Failures						Failures of the benthic analysis standards from the Sediment Management Standards.
	Bioassay Failures						For sediments, a failure to meet bioassay criteria from the Sediment Management Standards. For soils, a failure to meet TEE bioassay criteria for plant, animal or soil biota toxicity.
Reactive Wastes	Unexploded Ordnance						Weapons that failed to detonate or discarded shells containing volatile material.
	Other Reactive Wastes						Other Reactive Wastes (Examples: phosphorous, lithium metal, sodium metal)
	Corrosive Wastes						Corrosive wastes are acidic or alkaline (basic) wastes that can readily corrode or dissolve materials they come into contact with. Wastes that are highly corrosive as defined by the Dangerous Waste Regulation (WAC 173-303-090(6)). (Examples: Hydrochloric acid; sulfuric acid; caustic soda)

(fill in contaminant matrix above with appropriate status choice from the key below the table)

Status choices for contaminants	
Contaminant Status	Definition
B— Below Cleanup Levels (Confirmed)	The contaminant was tested and found to be below cleanup levels. (Generally, we would not enter each and every contaminant that was tested; for example if an SVOC analysis was done we would not enter each SVOC with a status of "below". We would use this for contaminants that were believed likely to be present but were found to be below standards when tested)
S— Suspected	The contaminant is suspected to be present; based on some knowledge about the history of the site, knowledge of regional contaminants, or based on other contaminants known to be present
C— Confirmed Above Cleanup Levels	The contaminant is confirmed to be present above any cleanup level. For example—above MTCA method A, B, or C; above Sediment Quality Standards; or above a presumed site-specific cleanup level (such as human health criteria for a sediment contaminant).
RA— Remediated - Above	The contaminant was remediated, but remains on site above the cleanup standards (for example—capped area).
RB— Remediated - Below	The contaminant was remediated, and no area of the site contains this contaminant above cleanup standards (for example— complete removal of contaminated soils).

Halogenated chemicals and solvents: Any chemical compound with chloro, bromo, iodo or fluoro is halogenated; those with eight or fewer carbons are generally solvents (e.g. halogenated methane, ethane, propane, butane, pentane, hexane, heptane or octane) and may also be used for or registered as pesticides or fumigants. Most are dangerous wastes, either listed or categorical. Organic compounds with more carbons are almost always halogenated pesticides or a contaminant or derivative. Referral to the HSDB is recommended if you are unfamiliar with a chemical name or compound, as it contains useful information about synonyms, uses, trade names, waste codes, and other regulatory information about most toxic or potentially toxic chemicals.

Dibenzodioxins and dibenzofurans are normalized to a combined equivalent toxicity based on 2,3,7,8-tetrachloro-p-dibenzodioxin as set out in WAC 173-340-708(8)(d) and in the Evaluating the Toxicity and Assessing the Carcinogenic Risk of Environmental Mixtures using Toxicity Equivalency Factors Focus Sheet (<https://fortress.wa.gov/ecy/clarc/FocusSheets/tef.pdf>). Results may be reported as individual compounds and isomers (usually lab results), or as a toxic equivalency value (reports).

FOR ECOLOGY II REVIEWER USE ONLY (For Listing Sites):

How did the Site come to be known: ☒ Site Discovery (received a report): _____ (Date Report Received)
☐ ERTS Complaint
☐ Other (please explain): _____

Does an Early Notice Letter need to be sent: ☒ Yes ☐ No
If No, please explain why: _____

NAICS Code (if known): _____
Otherwise, briefly explain how property is/was used (i.e., gas station, dry cleaner, paint shop, vacant land, etc.):

Site Unit(s) to be created (Unit Type): ☒ Upland (includes VCP & LUST) ☐ Sediment
If multiple Units needed, please explain why: _____

Cleanup Process Type (for the Unit): ☐ No Process ☒ Independent Action
☐ Voluntary Cleanup Program ☐ Ecology-supervised or conducted
☐ Federal-supervised or conducted

Site Status: ☒ Awaiting Cleanup ☐ Construction Complete – Performance Monitoring **Model Remedy Used?** ☐
☐ Cleanup Started ☐ Cleanup Complete – Active O&M/Monitoring **If yes, was this a** ☐
☐ No Further Action Required **transformer spill?**

Site Manager (Default: _____): _____

Specific confirmed contaminants include:

PFAS in Soil

PFAS in Groundwater

_____ in Other (specify matrix: _____)

Facility/Site ID No. (if known):

49626114

Cleanup Site ID No. (if known):

16912

COUNTY ASSESSOR INFO: Please attach to this report a copy of the tax parcel/ownership information for each parcel associated with the site, as well as a parcel map illustrating the parcel boundary and location.

☆ Parcel: 28042200201400

Parcel Owner: SNOHOMISH CO PROP MGMT
Site Address: UNKNOWN, UNKNOWN, WA

[Run Property Report](#)

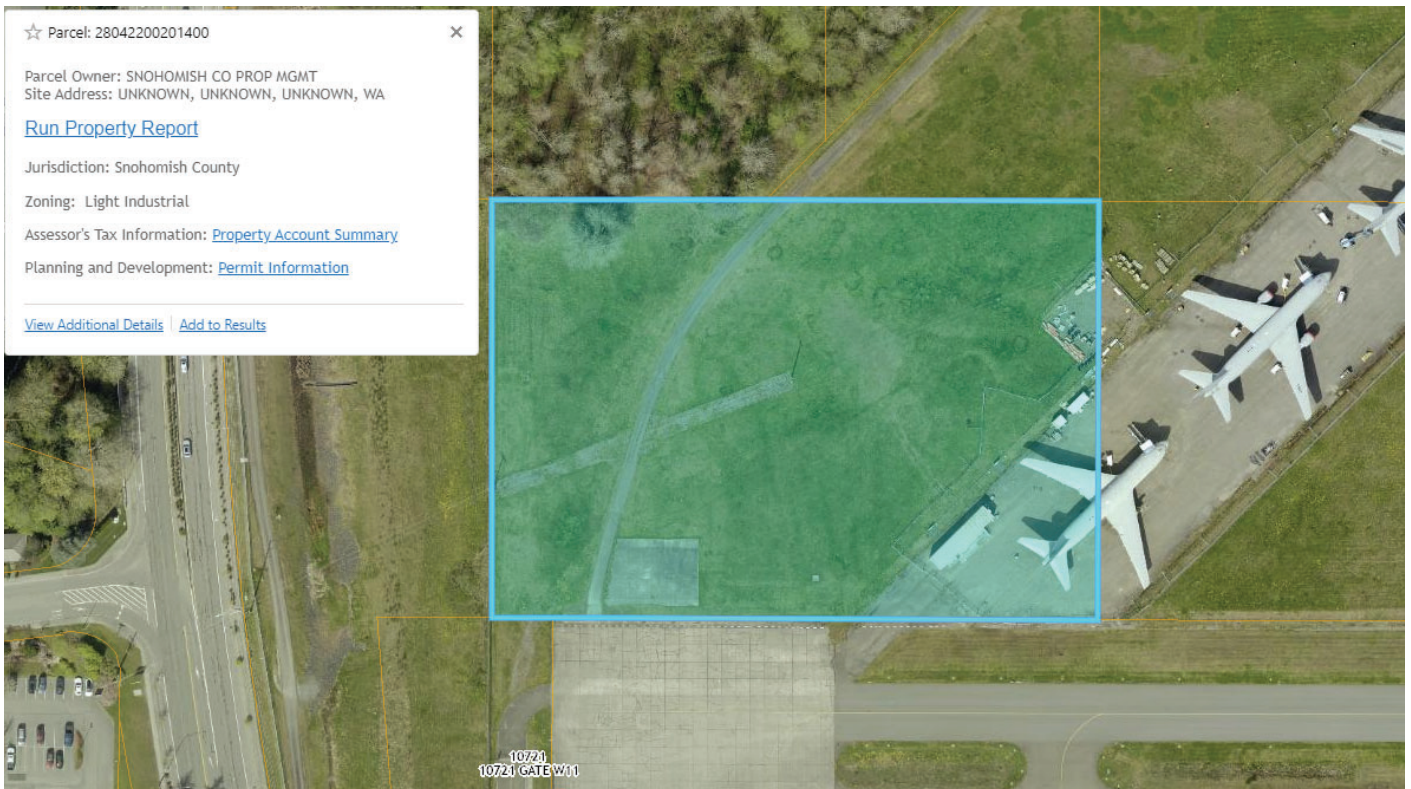
Jurisdiction: Snohomish County

Zoning: Light Industrial

Assessor's Tax Information: [Property Account Summary](#)

Planning and Development: [Permit Information](#)

[View Additional Details](#) | [Add to Results](#)



Additional or Supplemental Information from Observations Page

Please use this box for any text that requires special formatting

Results of groundwater PFAS sampling identifying approximate area of contamination identified to date. Figure from Snanon & Wilson 2023 Data Report.

