



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):	712211
Parcel #(s):	2824069165
County:	King
FSID #:	83936264
CSID #:	16581
UST #:	

SITE INFORMATION

<u>Site Name (Name over door):</u> Eastside Fire & Rescue Headquarters	<u>Site Address (including City, State and Zip):</u> 175 Newport Way NW Issaquah, WA 98027	<u>Phone</u> (425) 313-3200 <u>Email</u>
<u>Site Contact, Title, Business:</u> Jeff Clark, Fire Chief Eastside Fire & Rescue	<u>Site Contact Address (including City, State and Zip):</u> 175 Newport Way NW Issaquah, WA 98027	<u>Phone</u> (425) 313-3201 <u>Email</u> jclark@esf-r.org
<u>Site Owner, Title, Business:</u> King County Fire District 10 www.eastsidefire-rescue.org	<u>Site Owner Address (including City, State and Zip):</u> 7803 SE Newport Way Issaquah, WA 98027	<u>Phone</u> (425) 313-3200 <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> 47.53228
<u>Longitude (Decimal Degrees):</u> 122.04446

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 <input type="checkbox"/> No <input checked="" type="checkbox"/>	<u>Date/Time:</u>	<u>Entry Notice:</u> Announced <input type="checkbox"/> Unannounced <input type="checkbox"/>
<u>Photographs taken?</u> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Note: Attach photographs or upload to PIMS	
<u>Samples collected?</u> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Note: Attach record with media, location, depth, etc.	

RECOMMENDATION

No Further Action (Check appropriate box below):	LIST on Confirmed and Suspected Contaminated Sites List: <input checked="" type="checkbox"/>
Release or threatened release does not pose a threat <input type="checkbox"/>	
No release or threatened release <input type="checkbox"/>	
Refer to program/agency (Name: _____) <input type="checkbox"/>	
Independent Cleanup Action Completed (contamination removed) <input type="checkbox"/>	

COMPLAINT (Brief Summary of ERTS Complaint):

Perfluorooctane sulfonate (PFOS) and perfluorooctanoate (PFOA) were detected in groundwater pumped from City of Issaquah water supply well # 4 in 2013. Results of subsequent investigations indicated that apparent sources of the contamination were at Eastside Fire & Rescue (EFR) Headquarters (subject of this IIFR, CSID 16581), Issaquah Valley Elementary School and Dodd Fields Park (separate IIFR, CSID 16583), Memorial Field (separate IIFR, CSID 16584), and Rainier Trail (separate IIFR, CSID 16582).

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

Additional investigations at EFR Headquarters confirmed that soil and groundwater are contaminated with per- and polyfluoroalkyl substances (PFAS) due to fire fighting training activities. Petroleum hydrocarbons and polycyclic aromatic hydrocarbons may also be present but have not been analyzed. Recommendation: add to Confirmed and Suspected Contaminated Sites List.

Investigator: Priscilla Tomlinson	Date Submitted: 1/21/2022
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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 facility was constructed in 1982 by King County Fire Protection District 10 (Fire District 10), which operated it as a vehicle maintenance facility and fire station until 1999. In 1999, EFR was formed via an interlocal agreement among King County Fire Protection Districts 10 and 38 and Cities of Issaquah and North Bend. City of Sammamish entered the interlocal agreement in 2001. EFR now operates the facility, which is currently used as an administrative office and maintenance facility rather than as an active fire station, but the property is still owned by Fire District 10.

Training on the use of aqueous film-forming foam (AFFF) that contained PFOS, PFOA, and other PFAS was conducted at EFR from the early 1980s through the late 1990s at a frequency of up to 12 times per year. Typically one to three 5-gallon buckets of AFFF concentrate were expended during each training event. Training was conducted near the fire hydrant on the north-central portion of the property and on the western-most third of the property. Some AFFF may also have been sprayed at the base of the hillside west of the western property boundary. Residual AFFF was washed down with service water, some of which was captured by the property's stormwater management system that routed water to a detention pond on the eastern portion of the property.

To aid in interpretation of the data collected so far during site investigations, temporary investigatory levels (ILs) were developed using EPA's (2016a,b) health advisory levels and standard MTCA equations. Health advisory levels were established only for PFOS and PFOA, so these are the only two PFAS with ILs. The establishment of State Action Levels for drinking water for multiple PFAS (perfluorobutane sulfonate [PFBS], perfluorohexane sulfonate [PFHxS], PFOS, PFOA, and perfluorononanoic acid [PFNA]) in January 2022 is expected to result in the development of new screening levels for this site to replace the ILs as site investigations continue.

To date, 64 soil samples have been collected on the EFR property at depths ranging from surface to 15 feet below ground surface (bgs) and analyzed by modified EPA Method 537. PFOS and PFOA were detected at concentrations up to 1.2 and 0.067 mg/kg, respectively. The soil ILs for leaching in the vadose zone are 0.00088 mg/kg for PFOS and 0.00044 mg/kg for PFOA. Ten additional PFAS were also detected.

A total of 33 groundwater samples have been collected on the EFR property from nine monitoring wells and two temporary well points, completed in the shallow and intermediate aquifer zones at depths ranging from 13 to 75 feet bgs, and analyzed by modified EPA Method 537. Wells were sampled two to four times between October 2018 and October 2020. PFOS and PFOA were detected at concentrations up to 8.6 and 0.49 ug/L, respectively, in the shallow aquifer. The groundwater IL is 0.07 ug/L for the sum of PFOS and PFOA. Ten additional PFAS were also detected. The groundwater plume extends beyond the parcel boundaries to the east and possibly also to the north and likely comingles with the groundwater plume(s) from at least one other source area parcel. The full extent of groundwater contamination in the Lower Issaquah Valley has not yet been fully delineated.

Documents reviewed:

USEPA. 2016a. Drinking Water Health Advisory for Perfluorooctane Sulfonate (PFOS). EPA 822-R-16-004. Office of Water. May.

USEPA. 2016b. Drinking Water Health Advisory for Perfluorooctanoic Acid (PFOA). EPA 822-R-16-005. Office of Water. May.

Farallon. 2019. Per- and Poly-Fluoroalkyl Substances Characterization Study Summary Report, Lower Issaquah Valley, Issaquah, Washington. Prepared by Farallon Consulting, LLC, for Eastside Fire & Rescue. March 27.

Farallon. 2021. Per- and Poly-Fluoroalkyl Substances Additional Characterization Study Summary Report, Lower Issaquah Valley, Issaquah, Washington. Prepared by Farallon Consulting, LLC, for Eastside Fire & Rescue. April 14.

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, isopropranol, 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				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):

83936264

Cleanup Site ID No. (if known):

16581

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.

Eastside Fire & Rescue



King County, EagleView Technologies, Inc.

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Date: 1/7/2022

Notes:



King County