



INITIAL INVESTIGATION FIELD REPORT

ERTS Number: 660846
Parcel #(s): 0625069100
County: King
FSID #: 1638
CSID #: 13028

SITE INFORMATION

Site Name (Name over door): Perrigo Park Phase 2A	Site Address (including City, State and Zip): 9011 196 th Ave NE Redmond, WA 98053	Phone/email:
Site Contact, Title, Business: Joseph O'Leary, Project Manager Redmond Public Works	Site Contact Address (including City, State and Zip):	Phone/email: 425-556-2738 jpoleary@redmond.gov
Site Owner, Title, Business: City of Redmond	Site Owner Address (including City, State and Zip): PO Box 97010 Redmond, WA 98073	Phone/email:
Site Owner Contact, Title, Business: Joseph O'Leary, Project Manager Redmond Public Works	Site Owner Contact Address (including City, State and Zip):	Phone/email: 425-556-2738 jpoleary@redmond.gov
Previous Site Owner(s):	Additional Info:	
Alternate Site Name(s):	Additional Info:	

Latitude (Decimal Degrees):	47.683501
Longitude (Decimal Degrees):	-122.081214

INSPECTION INFORMATION

Inspection Conducted? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Date/Time:	Entry Notice: Announced <input type="checkbox"/> Unannounced <input type="checkbox"/>
Photographs taken? Yes <input type="checkbox"/> No <input type="checkbox"/>		
Samples collected? Yes <input type="checkbox"/> No <input type="checkbox"/>		

RECOMMENDATION

No Further Action (Check appropriate box below):	LIST on Confirmed and Suspected Contaminated Sites List: <input 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 checked="" type="checkbox"/>	

COMPLAINT (Brief Summary of ERTS Complaint):

During construction of a parking facility with associated stormwater management system for Perrigo Park contractors came across contaminated soil suspected to have originated from an old heating oil tank from prior residential use of the Property.

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

Contamination was excavated to a depth of up to 11 feet below ground surface (bgs) during construction activities. Confirmation samples were collected during excavation suggesting that all contamination with TPH-D above the MTCA Method A cleanup levels was removed. Remedial excavation was backfilled, a stormwater detention tank and concrete vault was installed, and a parking lot was constructed over the entire area.

Investigator: T. Cardona	Date Submitted: April 5, 2016
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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.):

Documents reviewed:

- GeoEngineers, Cleanup Action Report Perrigo Park Phase 2A Remedial Excavation, November 11, 2015.
- GeoEngineers, Addendum to the November 11, 2015 Cleanup Action Report, April, 1, 2016.

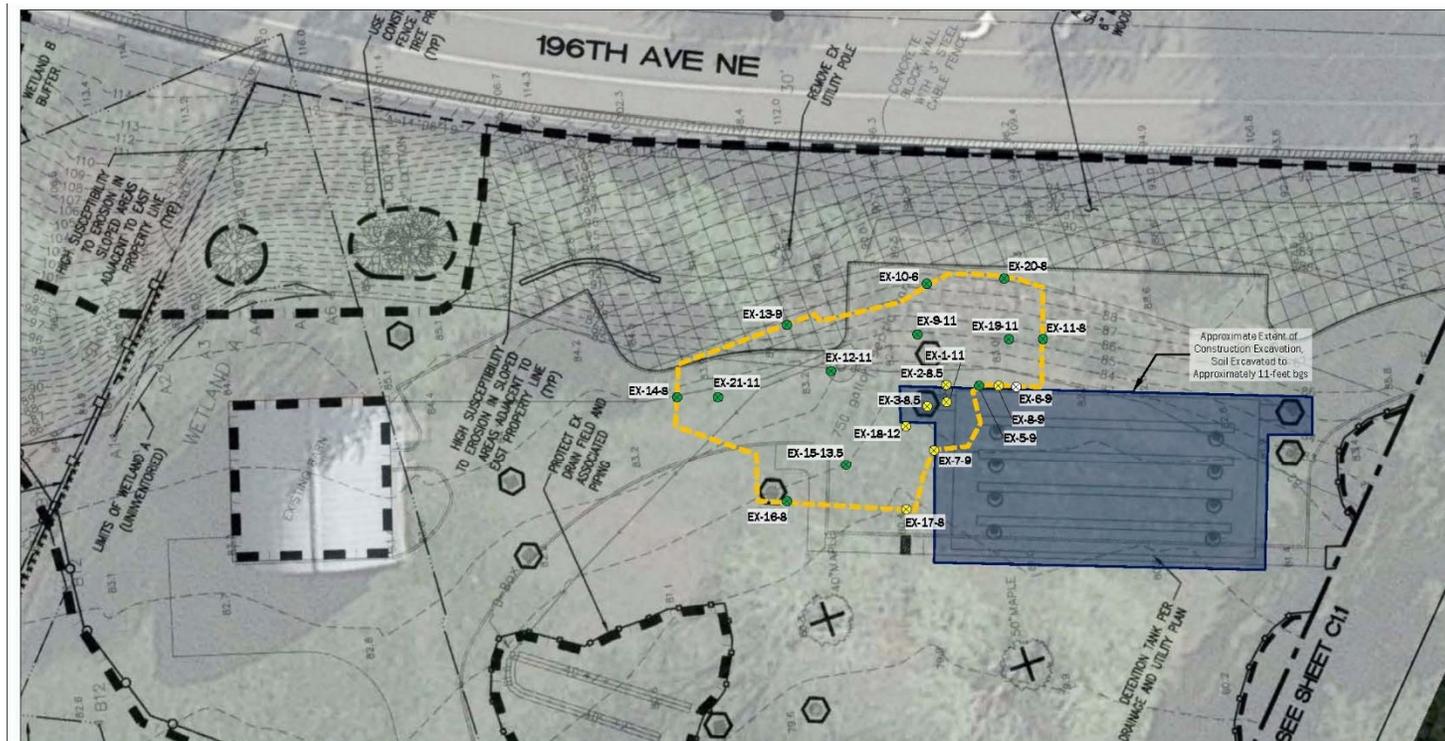
Summary

In August 2015 the City of Redmond began expansion of a parking lot and construction of a subsurface stormwater detention tank at Perrigo Park. During excavation, an area with petroleum contamination was identified that was determined to have likely been caused by a former heating oil tank from a prior residential use of the property. A heating oil tank was not located during the excavation.

The highest concentration of TPH-D was found at a depth of 8.5 feet bgs (8,700 mg/kg). Further excavation of this area was conducted to a depth of approximately 11 feet bgs. A sample collected 4 feet laterally from the highest sample, but at a depth of 11 feet bgs, had a TPH-D concentration of 640 mg/kg, suggesting that contamination above the MTCA Method A cleanup levels had been removed. The City elected to continue remedial excavation laterally to remove soil with contamination, even if it was below MTCA Method A cleanup levels as the area is within the City's wellhead protection zone.

Two groundwater samples were collected reportedly downgradient of the excavation. However, information regarding the construction of the wells was not provided, therefore it is unknown if the wells are screened at the appropriate interval.

A concrete vault housing the stormwater detention tank was constructed in this area. The surrounding area was backfilled and a parking lot was built.



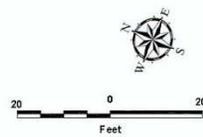
Legend

- Approximate Extent of Heating Oil Remedial Excavation
- ⊙ Approximate Location of Soil Sample Obtained

Notes:
 1. The locations of all features shown are approximate.
 2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Chemical Analytical Results

- Contaminants of concern were detected above laboratory reporting limits.
- COCs were not detected.
- Sample was not tested.



Remedial Excavation and Confirmation Soil Chemical Analytical Results	
Perrigo Park Phase 2A Remedial Excavation Redmond, Washington	
GEOENGINEERS	Figure 1

Data Source: Aerial photograph obtained from Google Earth. Basemap titled C10, TESC Plan - North, Perrigo Community Park, provided by the City of Redmond

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

CONTAMINANT GROUP	CONTAMINANT	SOIL	GROUNDWATER	SURFACE WATER	AIR	BEDROCK	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	RB					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						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	BEDROCK	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)

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 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 Ch. 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): 11/11/15 (Date Report Received)
 ERTS Complaint
 Other (please explain): _____

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

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
 Cleanup Started Cleanup Complete – Active O&M/Monitoring
 No Further Action Required

Site Manager (Default: Donna Musa): Donna Musa

Specific confirmed contaminants include:

_____ in Soil
_____ in Groundwater
_____ in Other (specify matrix: _____)

Facility/Site ID No. (if known):

1638

Cleanup Site ID No. (if known):

13028

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.