INITIAL INVESTIGATION FIELD REPORT

WASHINGTON STATE DEPARTMENT OF ECOLOGY

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

ERTS #(s):	N/A
Parcel #(s):	09950013000
County:	Thurston
FSID #:	
CSID #:	
UST #:	

SITE INFORMATION

Site Name (Name over door):	Site Address (including City, State and Zip):	Phone / Email
Former Plywood Facility	5700 Lacey Boulevard SE Lacey, WA 98503	
Site Contact, Title, Business: George Smith Economic Development Coordinator	Site Contact Address (including City, State and Zip): 420 College St SE Lacey, WA 98503	Phone Email
Site Owner, Title, Business: City of Lacey	Site Owner Address (including City, State and Zip): 1230 Ruddell Rd SE, STE 201 Lacey, WA 98503	Phone Email
Site Owner Contact, Title, Business:	Site Owner Contact Address (including City, State and Zip):	Phone Email
Previous Site Owner(s):	Additional Info (for any Site Information Item):	
Alternate Site Name(s):		

Latitude (Decimal Degrees):	47.0136392
Longitude (Decimal Degrees):	-122.808817

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.

Inspection Conducted? Yes ☐ No ☒	Date/Time:	Entry Notice: Announced ☐	Unannounced ☐
Photographs taken? Yes ☐	No ☐	Note: Attach photographs or upload to PIMS	
Samples collected? 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):

Site Discovery Report Received 10/10/2016

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

Soil contamination discovered at the subject site during a Phase II ESA.

Investigator: Kirsten Alvarez Date Submitted: 10/17/2016

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 Department of Ecology received a Soil Analysis and Ground Water Analysis report on October 10, 2016. The report documented a Phase I and Phase II completed at the site. The Phase I identified historic releases of halogenated organic compounds, which had been previously remediated, and a historic coal bin. The consultant reported that the contaminants of concern (COCs) analyses for this site were to be limited to gasoline, diesel, heavy oil, and volatile organic compounds.

Groundwater in the area had been documented at 30' bgs and flowing to the east/northeast direction; based on Woodland Creek's location to the east and a 1998 USDA survey. A historic on-site well log, however, documented groundwater at 75' bgs.

Four borings were completed at the site. The borings consisted of an up-gradient boring west of the building (SC1BR1), a boring within the existing warehouse (SC2BR2), and two down-gradient borings (SC3BR3 and SC4BR4). The borings were completed to 30' bgs; no groundwater was encountered.

- SC1BR1: An on-site and up-gradient boring completed to 30' bgs. No evidence of petroleum was noted in the boring. One sample was collected from 27' bgs. The sample results did not indicated the presence of any contaminants of concern (COCs).
- SC2BR2: A boring located within the existing warehouse completed to 30' bgs. No evidence of petroleum was noted in the boring. One sample was collected from 28.5' bgs. The sample results did not indicated the presence of any COCs.
- SC4BR4: A down-gradient boring located approximately 55' west of the eastern property boundary and 10' south of the northern property boundary. Discolored soil was documented at 17.5' bgs. Two soil samples were collected, the first at 17.5' bgs and the second at 28' bgs. The soil sample results did not indicate the presence of any COCs.
- SC3BR3: A down-gradient boring located 15' east of the east end of the warehouse and 65' east of SC2BR2. A 4" layer of petroleum contaminated soil (PCS) was observed at 16' bgs. Soil samples were collected from this layer and at the two deeper restrictive layers observed in the boring (22' and 30' bgs). The soil sample results indicated the presence of lube oil at 16' bgs above its MTCA Method A Cleanup Level (CULs) of 2,000 mg/kg. The soil sample results from 16' bgs indicated lube oil at 3,500 mg/kg. The sample results from the two restrictive layers (22' and 30' bgs) did not indicate the presence of any COCs.

Please see the Supplemental Page at the end of the report for additional information

Documents reviewed:

Skillings | Connolly, 5700 Lacey Boulevard SE - Soil Analysis and Ground Water Analysis, February 22, 2015

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	S	S				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). *Use this when TEX contaminants are present independently of gasoline.*
	Polynuclear Aromatic Hydrocarbons (PAH)	S	S				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	C					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). *Do not use for 'dibenzofuran', which is a non-chlorinated compound that is detected using the semivolatile organics analysis 8270*
Metals	Metals - Other	S					Cr, Se, Ag, Ba, Cd
	Lead	S					Lead
	Mercury	S					Mercury
	Arsenic	S					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 Ordinance						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
☐ Cleanup Started ☐ Cleanup Complete – Active O&M/Monitoring
☐ No Further Action Required

Model Remedy Used? ☐
If yes, was this a transformer spill? ☐

Site Manager (Default: Southwest Region**):** Southwest Region

Specific confirmed contaminants include:

lube oil in Soil

_____ in Groundwater

_____ in Other (specify matrix: _____)

Facility/Site ID No. (if known):
_____

Cleanup Site ID No. (if known):
_____

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.

Additional or Supplemental Information from Observations Page

Due to the sample results at SC3BR3 an additional four soil borings were completed at the site. The additional borings were completed to the northwest, west, southwest, and east of SC3BR3, respectively.

- SC5BR5: This boring was completed northwest of SC3BR3. Soil samples were collected from 16', 20', and 26' bgs. At 16' a 2" thick band of PCS was noted. At 20' bgs petroleum odors were noted. The only sample with indications of COCs was at 16' bgs (3,400 mg/kg), the other two soil samples did not exceed their respective CULs.
- SC6BR6: This boring was completed west of SC3BR3. Three soil samples were collected from the boring: at 16' bgs, 19' bgs, and 30' bgs. The soil sample results from this boring did not exceed their respective CULs.
- SC7BR7: This boring was completed southeast of SC3BR3.
    - Petroleum contaminated soil was encountered at 10' bgs in the form of a thin band of dark material. A soil sample from this depth indicated the presence of heavy oil at 3,800 mg/kg.
    - A thick bank of dark material was additionally encountered at 16' bgs. A soil sample from this location indicated the absence of COCs above their respective CULs.
    - An additional soil sample was collected from a restrictive layer at 27' bgs and indicated the presence of heavy oil at 3,000 mg/kg.
- SC8BR8: This boring was completed east of SC3BR3.
    - Soils at 7' bgs displayed a strong petroleum odor. A soil sample from this depth resulted in a lube oil detection of 19,000 mg/kg.
    - A slight petroleum odor was noted at 10' bgs. A soil sample from this depth resulted in a lube oil detection of 5,400 mg/kg.
    - A band of petroleum was noted at 16' bgs. A soil sample from this depth resulted in a lube oil detection of 2,200 mg/kg.
    - A final soil sample was collected from 27' bgs. Soil sample results from this depth indicated the absence of COCs.

Additional work was completed at the site to collect a groundwater sample. An on-site boring was completed to 90' bgs between SC5BR5 and SC8BR8. A groundwater sample was collected for gasoline and diesel analysis only. The groundwater sample results indicated the absence of petroleum contamination in groundwater at the site.

The soil contamination at the site appeared to be horizontally and vertically restricted and potentially resulting from the historic on-site coal bin.

Given the presence of petroleum contamination in subsurface soils at the site, I recommend this site be listed on the Confirmed and Suspected Contaminated Sites List as a site awaiting cleanup.